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On her own

Parsimonious Compositionality: Probing Syntax and Semantics with French *propre*

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Linguistics

by

Isabelle Charnavel

2012

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ABSTRACT OF THE DISSERTATION

On her own

Parsimonious Compositionality: Probing Syntax and Semantics with French *propre*

by

Isabelle Charnavel

Doctor of Philosophy in Linguistics

University of California, Los Angeles, 2012

Professor Dominique Sportiche, Chair

This dissertation focuses on the French word *propre* roughly meaning ‘characteristic-of’ and corresponding to English *own* found in ‘her own thesis’. This adjective makes extremely varied and complex contributions to the meaning and properties of sentences it occurs in. The present work addresses the question of how these contributions arise.

Parsimoniously assuming a unique lexical entry for *propre*, these contributions are compositionally derived by a specific DP-internal structure and different interactions with focus.

More precisely, *propre* is analyzed as taking as argument a possessive relation characterized as most specific. Unlike postnominal *propre*, prenominal *propre* exhibits

three main readings called restrictive, possessor and possessum *propre*: restrictive *propre* has a standard intersective truth-conditional effect; possessor and possessum *propre* do not, but induce focus alternatives respectively to the possessor and to the possessum; possessum *propre* moreover gives rise to scalarity effects. These readings are argued to derive from a principle of minimization and different interactions with focus; in particular, the behavior of possessum *propre* shows the presence of a covert focus operator akin to *even*.

When combined with a pronominal possessor like *son* ('his'), the behavior of *propre* provides probes bearing on binding theoretic issues. First, *son propre* exhibits complex correlations between focus, locality and animacy: possessor *propre* is subject to locality only when it is inanimate, unlike possessum *propre* not so constrained. The difference between possessor and possessum *propre* underscores an interaction between focus and binding. Moreover, the distribution of possessor *son propre* sheds new light on how to formulate condition A supporting the relevance of local binding domain (for non-exempt anaphors) and the need for exemption (from condition A). As inanimate French anaphors like *son propre* are never exempt, they provide a crucial tool for delimiting locality, allowing a reduction of condition A (at least in French) to phase theory based architectural principles.

The dissertation of Isabelle Charnavel is approved.

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Scientiae In Libertate, Libertati In Scientia

TABLE OF CONTENTS

INTRODUCTION

1. The project: parsimony and compositionality	1
2. Theoretical questions	3
3. Results.....	5
4. Outline	10

CHAPTER 1:

Describing the meaning and the distribution of *propre*

1. Roadmap	11
2. DP-internal distribution of <i>propre</i>	12
2.1. Postnominal <i>propre</i>	13
2.2. Prenominal <i>propre</i>	16
2.3. Syntactic analysis	22
2.3.1. A raising adjective selecting a possessive relation	23
2.3.1.1. Derivation of postnominal <i>propre</i> with complement.....	24
2.3.1.1. Derivation of prenominal <i>propre</i>	26
2.3.1.2. Derivation of postnominal <i>propre</i> without complement.....	28
2.3.2. Superlative	30
2.3.3. Summary: assumptions about prenominal <i>propre</i> for the rest of the study	31
3. The different readings of prenominal <i>propre</i>	32
3.1. Restrictive <i>propre</i> (truth-conditional <i>propre</i>)	33
3.2. Possessor <i>propre</i>	36
3.3. Possessum <i>propre</i>	41
3.4. Further readings	46
3.4.1. Agentive <i>propre</i>	47
3.4.2. Reflexive <i>propre</i>	47
3.4.3. Ownership <i>propre</i>	47
4. The sentential distribution of <i>son propre</i>	48
4.1. Possessor <i>son propre</i> : correlation between locality and inanimacy	50
4.2. Possessum <i>son propre</i> : no correlation between locality and inanimacy	54
5. Conclusion	57
6. Appendix: Questionnaire (possessor <i>son propre</i> : correlation between inanimacy and locality)	58
6.1. Design and material	59
6.2. Procedure	63
6.3. Results	64

CHAPTER 2:
Deriving the different readings of prenominal *propre*

1.	Roadmap	69
2.	Basic elements of the analysis: economy and focus	71
2.1.	Principle of minimization.....	72
2.1.1.	Principle of minimization: relevance	73
2.1.2.	Principle of minimization: focus (possessor <i>propre</i>).....	74
2.1.3.	Principle of minimization: focus and relevance (possessum <i>propre</i>).....	75
2.2.	Interaction of <i>propre</i> with focus	76
2.2.1.	The problem of possessor <i>propre</i>	76
2.2.2.	Readings and focus targets.....	78
3.	Theory of focus.....	79
3.1.	The questions	79
3.2.	Some influential theories of focus	82
3.2.1.	Rooth (1985, 1992)	82
3.2.1.1.	Focus semantic value.....	82
3.2.1.2.	The case of focusing adverbs	85
3.2.1.3.	The case of multiple foci.....	86
3.2.2.	Schwarzschild (1999).....	87
3.2.2.1.	Givenness.....	87
3.2.2.2.	F-marking and projection rules.....	89
3.2.3.	Büring (2006, 2008).....	92
3.2.3.1.	Issues in Rooth (1992)'s and Schwarzschild (1999)'s theories.....	92
3.2.3.2.	Büring (2008) and focus domain	93
3.2.3.3.	Büring (2006) and focus projection	94
3.2.3.4.	Büring (2008) and contrast.....	96
3.3.	Starting hypotheses: calibrating focus and focus projection.....	99
4.	<i>Propre</i> and focus.....	101
4.1.	Restrictive <i>propre</i>	102
4.1.1.	Truth-conditional <i>propre</i>	102
4.1.1.1.	Non-focused truth-conditional <i>propre</i>	102
4.1.1.2.	Focused truth-conditional <i>propre</i>	103
4.1.1.3.	Relevant truth-conditional <i>propre</i>	104
4.1.1.4.	Relevant and focused truth-conditional <i>propre</i>	105
4.1.2.	Non-truth-conditional <i>propre</i>	105
4.1.2.1.	Relevant <i>propre</i>	105
4.1.2.2.	Focused <i>propre</i>	106
4.1.2.3.	Focused and relevant <i>propre</i>	106
4.2.	Possessor <i>propre</i>	109
4.2.1.	The issues raised by possessor <i>propre</i>	110
4.2.1.1.	Specificity of the reading.....	111
4.2.1.2.	Problem of constituency.....	112
4.2.1.3.	Problem of focus domain	112
4.2.1.4.	Issue of F-marking a non-constituent.....	115
4.2.2.	Three hypotheses: focusing non-constituents, pragmatic restriction to the possessor, or FOC-marking?.....	117
4.2.2.1.	Focusing of non-constituent or double focusing?.....	117
4.2.2.2.	Pragmatic restriction to the possessor	120

4.2.2.3.	FOC-marking.....	120
4.2.3.	Summary about possessor <i>propre</i>	123
4.3.	Possessum <i>propre</i>	128
4.3.1.	The focus target in possessum <i>propre</i>	129
4.3.1.1.	Deriving the possessum as focus target.....	129
4.3.1.2.	The role of <i>propre</i> : relevant to focus association.....	131
4.3.1.2.1.	Justifying the condition of contrast.....	132
4.3.1.2.2.	Justifying unexpectedness.....	135
4.3.2.	The unexpectedness effect of possessum <i>propre</i> : evidence for E	136
4.3.2.1.	Against the pragmatic hypothesis	139
4.3.2.1.1.	Good prediction of the pragmatic hypothesis	141
4.3.2.1.2.	Wrong prediction of the pragmatic hypothesis.....	141
4.3.2.1.3.	The status of the pragmatic hypothesis in the case of E vs. O.....	144
4.3.2.2.	Against the lexical hypothesis	145
4.3.2.2.1.	<i>Propre</i> and the scalarity effect can be disconnected	145
4.3.2.2.2.	Two weaker arguments against the lexical hypothesis.....	151
4.3.2.3.	In favor of the operator hypothesis	153
4.3.2.4.	A second good prediction: intervention effects with overt focus particles.....	155
4.3.2.5.	Association of <i>propre</i> with E.....	159
4.3.2.5.1.	Placing the possessive DP at the end of a scale of expectedness.....	160
4.3.2.5.2.	Association with other focus particles	164
4.3.2.5.3.	E without <i>propre</i>	166
4.3.2.6.	Consequences for E.....	169
4.3.2.6.1.	Literature on E: interpretation of NPis.....	169
4.3.2.6.2.	The conditions for giving rise to E	172
4.3.2.6.3.	Comparison between E and <i>even</i>	177
4.3.2.6.4.	Comparison between E and O	182
4.4.	Further readings	187
4.4.1.	Association with focus operators	187
4.4.2.	Varying the size of the FOC constituent.....	189
5.	Conclusion	190
6.	Appendix: further readings of prenominal <i>propre</i>	193
6.1.	Description	193
6.1.1.	Agentive <i>propre</i>	193
6.1.2.	Reflexive <i>propre</i>	195
6.1.3.	Ownership <i>propre</i>	196
6.2.	Hypotheses: antecedent as focus target or VP as focus domain	197
6.2.1.	Contrasting the antecedent	197
6.2.2.	Agentive <i>propre</i> : a big FOC domain	198

CHAPTER 3 :
How *son propre* sheds light on binding theory

1.	Roadmap	201
2.	Two competing views of Binding Theory	203
2.1.	The classical view (Chomsky: 1981, 1986).....	203
2.2.	The coargument view	206
2.2.1.	Pollard and Sag: 1992	207

2.2.2.	Reinhart and Reuland: 1993.....	208
2.2.3.	Exempt positions.....	210
3.	Arguments from <i>son propre</i>	211
3.1.	Why the coargument view is too weak	212
3.1.1.	The case of possessor <i>son propre</i> under the coargument view	212
3.1.2.	Assessing c-command.....	216
3.1.3.	Calibrating binding domains	217
3.1.4.	Inclusive reference	221
3.2.	Why the coargument view is too strong.....	223
3.3.	Why the coargument view is not independently justified.....	224
3.3.1.	Anaphoricity of <i>son propre</i>	225
3.3.2.	Distinguishing between regular and exempt anaphors.....	226
3.3.3.	Independent criterion for locality.....	227
4.	Further arguments from <i>lui-même</i>	229
4.1.	<i>Lui-même</i> and locality.....	229
4.2.	<i>Lui-même</i> and the coargument view	233
5.	Rehabilitating the classical Binding Theory?	237
5.1.	Local domain and phase theory	238
5.1.1.	Defining binding domain	238
5.1.2.	The different cases of domain	240
5.1.2.1.	TPs.....	240
5.1.2.2.	Small clauses.....	244
5.1.2.3.	vPs.....	246
5.1.2.4.	DPs.....	247
5.1.3.	Some predictions.....	249
5.2.	Exemption	250
5.2.1.	Criterion for exemption.....	251
5.2.2.	Overlap between regular and exempt anaphors	253
5.3.	Further systems of anaphoricity	254
6.	Conclusion	259

CONCLUSION

1.	Summary.....	261
2.	Open questions.....	262

REFERENCES

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Introduction

1. The project: parsimony and compositionality

Language is a combinatory system: minimal parts such as morphemes combine according to general syntactic principles to yield complex structures whose properties, syntactic, interpretive, articulatory, should be fully deducible from the individual properties of these minimal parts together with general rules governing complex structures, a thesis known as that of linguistic compositionality.

It is known that in certain areas, such an approach fails in finitely many cases due to the existence of idiomatic results, e.g. in morphophonology (suppletion) or semantics (idioms). But linguistic structures being in principle infinitely many and readily producible or understandable by speakers, compositionality seems a necessary property of speakers' linguistic system.

The question then is what is the extent to which this compositional view is tenable, over the infinite range of linguistic structures that a speaker can lawfully create by linguistic generative procedures.

In this work, I have tried to apply this ambitious research program underlying a substantial amount of contemporary linguistic theorizing in every domain to a single word: the French adjective *propre*. As I will extensively document, *propre* makes extremely varied and complex contributions to the sentences it occurs in, bearing on many theoretical issues in syntax, semantics and pragmatics and at the interface between them.

Carrying out this research program means understanding how these complex contributions can be factored out in properties of *propre* proper on the one hand, and general properties of grammar on the other.

The focus of this dissertation, the small French word *propre*, roughly means ‘characteristic-of’ and is used in part as the corresponding English *own* found in ‘her own thesis’. As an adjective, *propre* is never mandatory to make a sentence grammatical, so that the question is to know what the contribution of *propre* in a sentence is:

- (1) Isabelle a écrit sa (propre) thèse.
‘Isabelle wrote her (own) thesis.’

Superficially, the data involving *propre* is extremely complex and one crucial, first step of this work has been to discover the relevant dimensions involved and to classify the data along these different dimensions.

In general terms, the adjective *propre* can occur pre- or post-nominally, with superficially different interpretive and distributional properties. In combination with focus properties, pronominal *propre* – which must co-occur with a possessor – triggers different readings; and when combined with the possessive pronoun *son* (‘her’), it imposes specific requirements on the antecedent of this pronoun. A necessary first step has thus been the construction of a map of the distribution and the uses of *propre*.

The second step has been to strive to understand what a grammatical theory ought to be like so that all the effects of the presence of *propre* could be derived from the combination of its intrinsic properties and of general properties of the sentence to which it is added. As this thesis will demonstrate, the behavior of *propre* has proved to have important

theoretical implications in different modules of the grammar: indeed, its behavior derives from a complex interaction of properties and principles that span syntax, semantics and pragmatics.

In sum, the goal of this study has been to support existing or discover new principles of linguistic structure that allow us to reduce the complexity of the data involving *propre* to the interaction of simple parts, adopting as parsimonious a generalized compositional approach to the analysis of our empirical findings as possible.

2. Theoretical questions

The richness and particularity of *propre* bears on many different theoretical issues.

First, the complex distribution of this word and its various readings constitute a theoretical and methodological challenge that linguists, like any other scientists, often face concerning the analysis of intricate data. As *propre* superficially behaves in several different ways, should we postulate multiple homonymous lexical entries? If not, how can we aim at unification? This thesis takes as starting point the idea that it is methodologically sound to adopt parsimonious hypotheses not multiplying entities unless necessary. This study thus only supposes the existence of one lexical entry for *propre* and it argues that the richness of its distribution and interpretation results solely from the interaction of independent properties and principles through compositionality, *a posteriori* justifying a parsimonious approach.

More specifically, the behavior of *propre* – especially when combined with *son* (‘her’) – involves the subtheories of focus and binding and thus provides crucial probes bearing on different issues at the interface between syntax and semantics.

Focus is clearly involved in the interpretation of *son propre*. The different readings this expression displays are, as we will show, clearly and systematically sensitive to focus properties: we are led to appeal to and reexamine theories of focus. In particular, the behavior of *propre* will provide a new argument in the debate on the existence of covert focus operators: operator-based theories (Chierchia, Fox and Spector: to appear) argue against neo-Gricean globalist accounts of scalar implicatures; *even*-like implicatures associated with *son propre* will allow us to compare these pragmatic and semantic theories. In syntax, the distribution of *propre* raises questions about the proper mapping between lexical properties and syntactic structures. In particular, the fact that prenominal *propre* must co-occur with a possessor requires a rather abstract syntactic analysis. Prenominal *propre* with a pronominal possessor – as in *son propre* (‘her own’) – can induce anaphoric properties on the pronoun. This leads us to investigate the question of the proper formulation of binding condition A. Classical condition A (Chomsky 1986) bases the distribution of anaphors on the definition of a structurally defined domain in which they need to be bound. This is challenged by predicate-based theories (Pollard and Sag 1992, Reinhart and Reuland 1993) that distinguish between anaphors that have to be anteceded by their coarguments and anaphors that are exempt from condition A because they do not have any coargument: coargumenthood and exemption are the key notions of this type of theories. The distribution of *son (propre)* sheds new light on this debate and allows us to

deepen our understanding of condition A by reducing it to basic architectural principles related to phase theory.

Not only will *propre* inform existing debates on binding and focus, but it will also raise a new question, that of the interaction between binding and focus. Even if these two modules appear to apply at different levels, the behavior of *son propre* will give evidence for the existence of a seemingly too close an interdependence between them to be accidental.

In sum, here are the main theoretical questions that will be investigated in this work and the behavior of *propre* will shed some light on:

- 1- Parsimony: how to unify multiple meanings and distributions?
- 2- Focus: how to analyze focus and how to derive implicatures?
- 3- Binding: how to describe and explain the distribution of anaphors?
- 4- Binding/focus: is there an interaction between binding and focus and how to explain it?

3. Results

To attempt to satisfy parsimony, a unique lexical entry for *propre* will be assumed and the variety of distributions and readings will be derived by a specific DP-internal structure and different interactions with focus.

As mentioned, *propre* can appear both prenominally and postnominally and presents different syntactic properties depending on its position: for instance, it can have a

complement headed by the preposition *à* only in postnominal position, and requires the presence of a genitive possessor in prenominal position (more generally when it does not have a complement):

- (2) a. Le langage propre à cette époque
 'The language peculiar to that time'
- b. Son langage propre
 'Its peculiar language'
- b. Le propre langage de cette époque
 'This time's own language'
- c. Son propre langage
 'Its own language'

The peculiar syntactic properties of (bare or) prenominal *propre* as compared to (unbare) postnominal *propre* will lead to the basic idea that prenominal *propre* resembles the adverb *proprement* ('specifically'). More precisely, I will propose that *propre* takes as argument a possessive relation which it characterizes as most specific: it is a raising adjective that selects a small clause headed by a possessive head; in addition, prenominal *propre* is a superlative: *propre* selects a possessive relation and characterizes it as most specific. This will in particular account for the fact that prenominal *propre* has to occur in definite possessive DPs.

Moreover, prenominal *propre* exhibits three main readings that I will call restrictive *propre*, possessor *propre* and possessum *propre*. Under the first reading, *propre* shrinks the denotation of the noun it combines with in context so that it has a truth-conditional effect (cf. example a below). The second one, i.e. possessor *propre*, is not truth-conditional but induces focus alternatives to the possessor (cf. example b below). As for the third one, i.e.

possessum *propre*, it does not have any truth-conditional effect either, but induces focal contrast with more expected possessa: it induces scalarity effects (cf. example c below).

a- Restrictive *propre*:

(3) Anne a pris sa propre voiture pour aller au travail.
'Anne took her own car to go to work.' (not her professional car)

b- Possessor *propre*:

(4) Paul a raccompagné ses propres enfants.
'Paul drove his own children home.' (not the neighbor's children)

c- Possessum *propre*:

(5) Médée a tué ses propres enfants !
'Medea killed her own children!' (not her enemies)

I will argue that these readings (and in fact many more readings) derive from a principle of minimization and different interactions with focus. According to the principle of minimization (close to Chomsky (1986)'s Full Interpretation principle requiring every contentful element to have interpretive effects), either *propre* has a truth-conditional effect or it has a pragmatic effect; its pragmatic effect can be related to focus or/and relevance.

Restrictive *propre* is truth-conditional so that no pragmatic effect is required (in particular, focus is not necessarily involved). Possessor and possessum *propre* however do present pragmatic effects since their presence do not have truth-conditional effects. The pragmatic effect of possessor *propre* is to induce alternatives by being focused; accent on it creates alternatives to the possessor by focus projection if the head noun is given (a slight revision of Rooth (1992)'s focus theory is necessary for that). Possessum *propre* however is not accented itself, but is only part of a focused constituent; therefore, its pragmatic effect is not directly focus, but relevance: due to its superlative meaning, it is relevant by justifying

association with scalar focus operators. In fact, the scope of the scalarity effects that it induces constitutes an argument for the association of the possessive DP with a covert focus operator akin to *even* (E). Thus it turns out that possessum *propre* supports operator-based theories against globalist accounts of implicatures.

A further difference between possessor and possessum *propre* is that the possessive pronoun of possessor *son propre* behaves like an anaphor as opposed to that of possessum *son propre*. More specifically, there is a correlation between the locality and the inanimacy of the antecedent of the pronoun only in the case of possessor *propre* as revealed by the results a quantitatively controlled experiment that I ran: inanimate possessor *son propre* must be locally bound by its antecedent, but animate possessor *son propre* need not be. Based on this observation, I argue that anaphors exempt from condition A must be distinguished from non-exempt anaphors, but this distinction does not rely on coargumenthood as proposed by predicate-based theories, but rather on interpretive properties of the anaphor's antecedent.

In particular, inanimate anaphors cannot be exempt so that inanimacy is a crucial tool for evaluating locality. Using this tool for French *son propre* and *lui-même* (lit. 'him-even/same', roughly 'himself'), I observe that the binding domain of non-exempt anaphors (at least in French) corresponds to the smallest XP with subject containing the anaphor, which is nearly the domain as defined by Chomsky (1986). This revised definition of domain allows me to motivate condition A by relating the binding domain of anaphors to phases: a non-exempt anaphor must be interpreted within the spellout domain containing it.

To sum up, here are the main results obtained in this work in relation to the five theoretical questions that I mentioned:

- 1- Parsimony: *propre* has a unique lexical entry. *Propre* is a raising adjective that selects a small clause headed by POSS, and it characterizes the possessive relation it selects as most specific. The rich DP-internal distribution of *propre* results from different possessive structures and the variety of its readings (e.g. restrictive, possessor, possessum) comes from different interactions with focus.
- 2- Focus: a revised Roothian theory of focus (incorporating focus projection) can account for possessor and possessum readings of *propre*, as well as further readings too depending on the size of the target of focus, and the principle of minimization justifies association with focus. Also, the scalarity effects induced by possessum *propre* and its various scope possibilities argue for the existence of a covert focus operator akin to *even* (E).
- 3- Binding: inanimate possessor *son (propre)* (unlike possessum *son propre* and animate possessor *son (propre)*, like other inanimate anaphors such as *lui-même*) cannot be exempted from condition A and thus provides a tool for evaluating locality. Its binding domain is the smallest XP with subject containing it and a phase-based condition A can be formulated as follows: a non-exempt anaphor must be interpreted within the spellout domain containing it.
- 4- Binding/Focus: the difference between possessor and possessum *propre* in terms of locality reveals the existence of an interaction between binding and focus: only possessor *son propre* (not possessum *son propre*) must be locally c-commanded by its antecedent when it is inanimate.

4. Outline

The arguments for these results will be presented as follows.

In the first chapter, I will describe the distribution and meaning of *propre*. The syntactic properties of prenominal and postnominal *propre* will be presented and a DP-internal structure will be proposed. The main readings of *propre* will also be informally described. Finally, the presentation of the distribution of *son propre* in relation to its antecedent (based on data collected with a systematically controlled questionnaire) will show a correlation between locality and inanimacy in the case of possessor *propre contra possessum propre*.

In the second chapter, I will derive the different readings of prenominal *propre* using the principle of minimization and focus. To this end, the theory of focus will be reexamined, and an argument will be made in favor of the existence of a covert focus sensitive operator similar to *even* (E).

In the third chapter, I will show how possessor *son propre* sheds light on binding condition A. I will argue for a distinction between exempt and non-exempt anaphors based on interpretive properties of the antecedent and I will define a new binding domain for anaphors that can be reduced to phase principles.

I will conclude by pointing out that the empirical findings on *son propre* suggest the existence of an interaction between focus and binding. Also, we need to investigate how exemption relates to logophoricity (roughly being a center of perspective) to further understand condition A.

Chapter 1 **Describing the meaning and the distribution of *propre* ('own')**

1. Roadmap

The aim of this chapter is to describe and organize the basic properties of *propre* ('own'). We observe that the data involving *propre* is extremely complex, both in terms of distribution and interpretation. The first step is thus to classify the data along the relevant dimensions to construct a map of the uses of *propre*. This is necessary to understand how the complex contributions of *propre* can be factored out in properties of *propre* proper on the one hand, and general properties of grammar on the other. In other words, this is a precondition for proposing a parsimonious compositional analysis of *propre*.

First (section 2), I will concentrate on the DP-internal distribution of *propre*. We will see that *propre* is an adjective that can occur pre- or post-nominally, with superficially different interpretive and distributional properties (subsections 2.1. and 2.2.). In section 2.3., I will propose a syntactic analysis that allows us to derive the complex DP-internal distribution of *propre* in a unified way: *propre* can be assumed to have a unique lexical entry and it can be analyzed as a raising adjective that selects a small clause headed by the predicate of possession POSS, which it characterizes as most canonical or specific. The rich DP-internal distribution of *propre* thus results from different possessive structures.

Second (section 3), I will examine the different readings of prenominal *propre*. The three main readings will be described, namely restrictive *propre*, possessor *propre*, and possessum *propre*, which can be distinguished by their truth-conditional or focus-related

effects. Under the first reading (section 3.1.), *propre* shrinks the denotation of the noun it combines with in context so that it has a truth-conditional effect. The second one, i.e. possessor *propre* (section 3.2.), is not truth-conditional but induces focus alternatives to the possessor. As for the third one, i.e. possessum *propre* (section 3.3.), it does not have any truth-conditional effect either, but induces focal contrast with more expected possessa: it induces scalarity effects. I will also mention further readings in section 3.4.. The detailed description of all these readings will allow me to propose a unified derivation of them in the next chapter: in chapter 2, the variety of these readings will be argued to come from different interactions with focus.

Finally, we will observe in section 4 that when combined with the possessive pronoun *son* ('his'), *propre* imposes specific requirements on the antecedent of this pronoun. In particular, there is a correlation between locality and inanimacy for possessor *propre*, but not for possessum *propre*: only in the case of possessor *propre* must inanimate *son*, unlike animate *son*, be locally bound by its antecedent. This observation is based on data collected with a systematically controlled questionnaire, which is presented in the appendix.

2. DP-internal distribution of *propre*

This first section describes the syntactic properties of *propre* within its DP. This will allow us to specify the target of the study, namely prenominal *propre*, and its peculiarity as compared to other French adjectives. Based on the empirical observations, a basic syntactic structure and a lexical entry for *propre* will be proposed. It will first be shown that postnominal *propre* resembles a regular postnominal adjective with a prepositional complement while prenominal *propre* presents more peculiar properties; then a unifying

hypothesis will be suggested: *propre* is a raising adjective that selects a small clause headed by POSS.

Propre originates from the Latin adjective *proprius* ('specifically belonging to') and as a first approximation it means 'characteristic of, specific/peculiar to' (*propre* which translates as 'clean' will be here ignored even though it is said to have the same origin). As an adjective, it serves as the basis for the nouns *propriété* ('property') and *propriétaire* ('owner'), and for the adverb *proprement* ('specifically').

Adjectival *propre* exhibits both prenominal and postnominal distributions.¹ In its postnominal use, it appears to behave like a regular adjective, but in its prenominal use, it presents more peculiar properties as will be illustrated.²

2.1. Postnominal *propre*

Like any adjective, postnominal *propre* agrees with the noun it combines with. More specifically, it agrees in number as it can take the plural marker *-s* as shown by the *liaison* phenomenon in (b): *liaison* is the pronunciation of a latent word-final consonant immediately before a following vowel.

¹ *Propre* also occurs in the expression *être le propre de* (lit. to be the own of: 'to be peculiar to'), in the adverbial expression *en propre* (lit. in own; 'individually'), and in compounds like *amour-propre* (lit. love-own; 'self-esteem') or *propre-à-rien* ('good-for-nothing').

- 1) La maison leur appartient en propre.
the house to-them belongs in own
'They are the sole owners of the house.'
- 2) Le rire est le propre de l' homme.
the laugh is the own of the human_being
'Laughing is peculiar to human beings.'

Moreover, several technical expressions contain it such as *sens propre* ('literal sense'), *nom propre* ('proper name'), *vecteur propre* ('eigenvector'), *mouvement propre* ('proper motion'), *biens propres* ('own property'), *en mains propres* (lit. in own hands; 'in person').

² English *own* is prenominal like any English adjective; nevertheless, it does not encompass properties of both prenominal and postnominal French *propre*, but behaves very similarly to prenominal *propre*. In this study, I will not systematically compare French *propre* and English *own*, but only make some remarks about it.

- (1) a. un budget propre intégré
 a budget own integrated
 b. des budgets propres intégrés
 (ind.pl) budgets own integrated

But it does not agree in gender, like other epicene adjectives in French (e.g. *remarquable* 'remarkable'):

- (2) a. une identité propre 'a specific identity'
 a(fem.sg) identity own
 b. un caractère propre 'a specific character'
 a(masc.sg) character own
- (3) a. sa fille remarquable 'his remarkable daughter'
 his(fem.sg) daughter remarkable
 b. son fils remarquable 'his remarkable son'
 his(masc.sg) son remarkable

Moreover, postnominal *propre* can take complements introduced by the preposition *à*.

- (4) le langage propre à cette époque 'the language peculiar to that time'
 the language own to this time
- (5) Voici des déclarations propres à rassurer les investisseurs.
 here_are some statements own to reassure the investors
 'These are statements liable to reassure investors.'

Note that nominal and clausal complements correspond to different meanings: in (4), *propre* means 'peculiar to', 'intrinsically related to', while in (5), it is better translated by 'liable to'.³

In case the complement is present, *propre* can be predicative:⁴

- (6) a. * Un langage est propre.
 a language is own
 'A language is peculiar.'

³ These uses are not necessarily attested in other languages such as English (*own*), Dutch (*eigen*), German (*eigen*)...etc. This is especially the case of the second one (5); therefore I will not focus on it. But the difference between the two uses seems to only rely on the presence of intensionality in the second case: in (4), *propre* means that the language corresponds to a property of this time; in (5), it means that the statements in question are properties of the fact that the investors be reassured; but this fact is not actual, it is only potential.

⁴ Predicative *propre* in the absence of complement is however possible if it means 'clean'. The same holds for the next property: *propre* without any complement is gradable when it means 'clean'.

b. Ce langage est propre à cette époque
 this language is own to this time
 'This language is peculiar to that time.'

(7) Ces déclarations sont propres à rassurer les investisseurs.
 these statements are own to reassure the investors
 'These statements are liable to reassure investors.'

Moreover, the presence of complements makes *propre* gradable: it is only when it is followed by *à*-complements that *propre* can appear in comparatives and superlatives or is compatible with degree adverbs as shown by the contrast between (8)-(9) and (10)-(11).

(8) *une identité plus propre 'a more specific identity'
 a(fem.sg) identity more own

(9) *une identité tout à fait propre 'a completely specific identity'
 a(fem.sg) identity completely own

(10) un langage plus propre à une situation qu' à une autre
 a language more own to a situation than to an other
 'a language more specific to a situation than to another'

(11) un langage tout à fait propre à une situation⁵
 a language completely own to a situation
 'a language completely specific to a situation'

Note that *propre* differs from *spécifique* ('peculiar') in this respect even if it is close in meaning:

(12) une décision plus spécifique 'a more specific decision'
 a decision more specific

(13) une décision tout à fait spécifique 'a completely specific decision'
 a decision completely specific

Finally like regular adjectives, postnominal *propre* can appear in DPs with different determiners and can coordinate with other adjectives.

(14) a. **une** identité propre 'a specific identity'
 a(fem.sg) identity own

⁵ However, *propre* is hardly compatible with *très* ('very') even if followed by a complement:

3) ??Un langage très propre à une époque
 a language very own to a time

- b. **le** langage propre à cette époque 'the language peculiar to that time'
 the language own to this time
- c. **quelques** problèmes propres à l'époque 'some problems peculiar to that
 some problems own to the time time'

- (15) un besoin étonnant mais propre à cette profession 'a strange need but
 a need surprising but own to this job peculiar to this job'

In sum, postnominal *propre* seems to behave like a regular postnominal adjective that can take complements.

2.2. Prenominal *propre*

Like postnominal *propre*, the target of the study, namely prenominal *propre*, presents number agreement (but no gender agreement).

- (16) a. son propre enfant [sõ pxopx ãfã] 'his own children'
 his(masc.sg) own child
- b. ses propres enfants [se pxopxə Zãfã] 'his own children'
 his(pl) own children
- (17) a. sa propre fille 'his own daughter'
 his(fem.sg) own daughter
- b. son propre fils 'his own son'
 his(masc.sg) own son

Otherwise, it exhibits properties different from postnominal *propre* and regular adjectives in general: its distribution is more constrained.

First, prenominal *propre* only occurs in possessive DPs, i.e. either DPs with a possessive pronoun or definite DPs with a possessive PP: it is ungrammatical in DPs lacking a possessor. Note that the possessor may correspond to a relative pronoun (cf. e) or in certain cases to an element of a relative clause complement of the noun combined with *propre* (cf. subject of the relative clause in f).

- (18) a. **son** propre chien 'his own dog'
 his own dog

- b. **le propre chien de Jean** 'John's own dog'
 the own dog of John
- c. ***le propre chien**
 the own dog
- d. ***propre Jean**
 own John
- e. un palais **dont** il est le propre architecte
 a palace whose he is the own architect
 'a palace he is the own architect of'
- f. ce sont les propres mots que **tu** as dits tout à l'heure⁶
 these are the own words that you have said earlier
 'These are the very words you said earlier.'

Also, as opposed to postnominal *propre*, prenominal *propre* cannot combine with *à*-PPs, but it can occur in possessive DP involving *de*-PP as follows:

- (19) a. le propre chien de Jean 'John's own dog'
 the own dog of John
- b. *le propre de Jean chien
 the own of John dog
- c. *le chien propre de Jean
 the dog own of John
- d. *le propre chien à Jean
 the own dog of John

Such a distribution is unexpected since usually, French adjectives requiring a complement (e.g. *apte à* 'capable of', *cher à* 'dear to', *exempt de* 'exempt from', *fier de* 'proud of...') either are postnominal as in (20) or lack their complement when they are prenominal as in (21) and (22).

- (20) a. un homme exempt du service militaire 'a man exempt from
 a man exempt from service military military service'
- b. *un exempt homme du service militaire
 an exempt man from service military
- (21) a. un homme fier de son fils 'a man proud of his son'
 a man proud of his son
- b. *un fier de son fils homme
 a proud of his son man

⁶ This example corresponds to a high register and is paraphrasable by *même* ('himself, exactly'): *ce sont les mots même que tu as dits tout à l'heure* 'these are the words **themselves** that you said earlier.' This is a case I will not analyse in this study, I leave it for further research.

- c. *un fier homme de son fils
a proud man of his son
- d. un fier homme
a proud man
- e. un homme fier
a man proud

'a proud man'

- (22)
- a. un enfant cher à sa mère
a child dear to his mother
 - b. *un cher à sa mère enfant
a dear to his mother child
 - c. *un cher enfant à sa mère
a dear child to his mother
 - d. un cher enfant
a dear child
 - e. un enfant cher
a child dear

'a child dear to his mother'

'a dear child'

Furthermore, prenominal *propre* can only combine with the definite determiner and the possessive pronoun: even when a possessor is available, other determiners such as indefinites or quantifiers are not compatible with prenominal *propre*.

- (23)
- a. le propre chien de Jean
the own dog of John
 - b. *un propre chien de Jean
a own dog of John
 - c. *quelques propres chiens de Jean
some own dogs of John
 - d. *deux propres chiens de Jean
two own dogs of John

'John's own dog'

The only way to express (b), (c) and (d) is by using a partitive:

- (24)
- a. l'un des propres chiens de Jean
b. quelques-uns des propres chiens de Jean
c. deux des propres chiens de Jean

'one of John's own dogs'

'some of John's own dogs'

'two of John's own dogs'

Even the possessor *de*-PP must be definite.

- (25)
- a. le bureau d' un professeur
the office of a professor
 - b. le propre bureau du professeur
the own office of the professor
 - c. *le propre bureau d' un professeur
the own office of a professor
 - d. *le propre bureau de quelques professeurs
the own office of some professors

'a professor's office'

'the professor's own office'

- e. *le propre bureau de trois professeurs
 the own office of three professors

In addition, prenominal *propre* does not seem to be gradable: just like postnominal *propre* without any complement, prenominal *propre* is not compatible with comparative or superlative morphology or degree elements:

- (26) a. *sa plus propre fille
 his more own daughter'
 b. *la plus propre fille de Jean
 the more own daughter of John
- (27) a. *sa tout à fait propre fille
 his completely own daughter'
 b. *la tout à fait propre fille de Jean
 the completely own daughter of John

Moreover, the predicative use is unavailable for prenominal *propre* as opposed to postnominal *propre* with a complement and other adjectives.

- (28) a. *son chien est propre
 his dog is own
 b. *le chien de Jean est propre
 the dog of John is own
 c. *le chien est propre de Jean
 the dog is own of John
- (29) Ce langage est propre à cette époque
 this language is own to this time
 'This language is peculiar to that time.'
- (30) a. Cet homme est exempt du service militaire.
 this man is exempt from service military
 'This man is exempt from military service.'
 b. Cet homme est fier (de son fils).
 this man is proud of his son
 'This man is proud (of his son).'
 c. Cet enfant est cher à sa mère
 this child is dear to his mother
 'This child is dear to his mother.'

Unlike prenominal *propre*, postnominal *propre* cannot be coordinated with any adjective,⁷ even adjectives like *premier* ('first') that occur in a high position in the DP (cf. Cinque (2010)'s hierarchy).

- (31) a. son premier petit chien 'his first small dog'
 his first small dog
 b. *son propre et premier chien
 his own and first dog
 c. *son premier et propre chien
 his first and own dog

It cannot combine with other modifiers either, whether adjectives or adverbs, if they intervene between the determiner and *propre*.⁸

- (32) a. son propre petit chien 'his own small dog'
 his own small dog
 b. *son petit propre chien
 his small own dog
 c. le propre petit chien de Pierre 'Peter's own small dog'
 the own small dog of Peter
 d. *le petit propre chien de Pierre
 the small own dog of Peter
 e. *son ancien propre chien
 his former own dog
 f. *l' ancien propre chien de Pierre
 the former own dog of Peter
 g. *son vraiment propre chien
 his really own dog
 h. *le vraiment propre chien de Pierre
 the really own dog of Peter

⁷ Some French speakers accept the coordination of *propre* with *unique* ('unique'), e.g. in % *sous son propre et unique nom* ('under his own and unique name').

⁸ Some French speakers however accept the following:

- 4) % *Son soi-disant/présumé propre fils*
 His supposed/ alleged own son

In any case, this suggests that *propre* appears in a high position within the DP, maybe in a focus position. This kind of hypothesis would need to be further explored in order to derive the behavior of *propre* (that I will relate to focus in the next chapter) from its DP-internal distribution (which I will not do in this study). In this respect, it would be worth comparing *propre* with focus-related adjectives like *seul* ('sole', 'only') or *simple* ('simple', 'only'):

- 5) *Le seul/simple fait de voir de la nourriture la dégoûte.*
 'The mere sight of food disgusts her.'

Note also that the few differences between French *propre* and English *own* could rely on their DP-internal position: *own* may be higher than *propre* (cf. **the own child of Peter vs. Peter's own child*).

Finally, whereas nouns can usually be elided in French when an adjective is present, this is not possible with *propre*:⁹ the DP *la tienne* ('yours') must be used instead of the possessive pronoun *ton* in (c) to license the elision of the head noun.

- (33) a. Tu préfères ton premier livre ou ton dernier \emptyset ?
 you prefer his first book or your last
 'Do you prefer your first book or your last one ?'
 b. * Tu préfères ta maison de vacances ou ta propre \emptyset ?
 you prefer your house of vacation or your own
 'Do you prefer your vacancy house or your own? '
 c. Tu préfères ta maison de vacances ou la tienne propre ?
 you prefer your house of vacation or yours own
 'Do you prefer your vacancy house or your own? '

In sum, even if prenominal *propre* resembles postnominal *propre* as it has number agreement and a similar meaning, it exhibits very specific distributional properties that set it apart not only from postnominal *propre* but also from French adjectives in general. The following table summarizes the syntactic properties of *propre* depending on its position:

⁹ The same holds for postnominal *propre* as in (a) and also for other adjectives like *personnel* ('personal') as in (b):

- 6) a. Là-bas, chaque Etat a une monnaie commune et sa *(monnaie) propre.
 'Over there, each state has a common currency and its own.'
 b. Chaque employé utilise sa voiture professionnelle et sa *(voiture) personnelle.
 'Each employee uses his professional car and his personal one.'

But adjectives other than *propre* are not compatible with *la sienne* ('his/hers'):

- 7) a. Là-bas, chaque Etat a une monnaie commune et la sienne propre.
 'Over there, each state has a common currency and its own.'
 b. ?? Chaque employé utilise sa voiture professionnelle et la sienne personnelle.
 'Each employee uses his professional car and his individual one.'

	Prenominal <i>propre</i>	Postnominal <i>propre</i>
Agreement	Number only	Number only
Complement	No complement or postnominal possessive PP headed by <i>de</i>	No complement or postnominal PP headed by <i>à</i>
Determiners	Possessive pronoun or definite determiner in the presence of the postnominal <i>de</i> -PP	Any determiner
Coordination with adjectives	Very rarely possible	Possible
Combination with other elements	Very rarely possible	Possible
Predicative use	Impossible	Possible in the presence of an <i>à</i> -PP
Gradability	No comparative and superlative, incompatible with degree elements	Compatible with degree elements, comparative and superlative morphology in the presence of an <i>à</i> -PP
Elision of head noun	Impossible	Impossible

2.3. Syntactic analysis

The behavior of prenominal *propre* that has just been described raises several questions: why do we observe this difference between prenominal and postnominal *propre*? How to explain the peculiar properties of prenominal *propre*? What is the structural position of *propre* in the DP?

To answer these questions, I will sketch a syntactic analysis that aims at deriving the different cases in a unified way. I will not go into all the details as this will not matter for the rest of the study.

2.3.1. A raising adjective selecting a possessive relation

Based on the distributional properties of *propre*, I will conclude that *propre* is like a raising adjective as an adjunct selecting a possessive relation; semantically, it conveys the idea that the possessive relation is specific.

We have observed that prenominal *propre* must occur in a possessive DP, whether it involves a possessive pronoun or a possessive *de*-PP. This suggests that *propre* selects a relation.¹⁰

- (34) a. **le propre bateau*
the own boat
b. *son propre bateau* 'his own boat'
his own boat
c. *le propre bateau de Pierre* 'Peter's own boat'
the own boat of Peter

Moreover, *propre* is not acceptable in DPs involving nominalizations lacking a subject:

- (35) a. *La propre description de Marie*
the own description of Marie
b. *sa propre photo*
her own picture
c. **La propre croissance de tomates*
the own growth of tomatoes

(a) is only acceptable if *Marie* is interpreted as the subject, i.e. the agent or possessor; *Marie* cannot correspond to the object of *description*. Similarly in (b), *sa propre photo* ('her own picture') licenses an agent or owner reading (the picture that she took or owns), but not a patient reading (i.e. a picture of her).¹¹ Furthermore, (c) involves an inaccusative predicate (*croissance* 'growth'), i.e. a predicate lacking a subject, and consequently, *propre* is not available. So it is not merely the presence of a relation between a head noun (e.g. *croissance*

¹⁰ Possessor raising is impossible in the presence of *propre*:

8) *Marc s'est marché sur le (*propre) pied.*
'Marc walked on his own foot.'

¹¹ This is so whether *propre* is stressed or not while Safir (1996: 572) reports that a patient reading for *own* is excluded (e.g. in *his own picture*) only when *own* is unstressed or uncontrasted.

‘growth’, *description* ‘description’) and some nominal (e.g. *de Marie* ‘of Mary’, *de tomates* ‘of tomatoes’) that licenses the presence of *propre*. Rather, there must be a more specific relation that I will define as interpretable as possession expressed by the predicate POSS.¹² I conclude from this that *propre* must appear in a DP involving the possessive predicate POSS, POSS determining the presence of a subject or possessor; more precisely, I hypothesize that *propre* selects a possessive relation.¹³ *Propre* thus resembles the adjective *former* that has been argued to modify the possession relation. *John’s former house* means that John formerly had a house if it does not modify the noun, but the possessive relation as schematized below (cf. Larson and Cho 2003: 235):

(36) [_{DP} **THE former** [_{PP}[_{NP} house] [_P *TO*[_{DP} John]]]¹⁴

2.3.1.1. Derivation of postnominal *propre* with complement

To derive the structure of postnominal *propre* with *à*-complement as in the following examples, I will take the preposition *à* to be a possessive head (possibly a simplification –

¹² The fact that *sa propre photo* (‘her own picture’) licenses both a possessive reading and an agent reading but not a patient reading must thus mean that relations with agents can be seen as a subcase of a loose “possessive” relation but relations with patients cannot. This has interesting implications for the syntax and semantics of nominals, which I will not explore here.

¹³ The requirement for the presence of a subject holds even if the noun that *propre* combines with is a relational noun:

- 9) a. *le propre fils
 the own son
 b. son propre fils ‘his own son’
 his own son
 c. le propre fils de Pierre ‘Peter’s own son’
 the own son of Peter

This suggests that *propre* does not just select a relation, even if it seems to lexically encode possession, but more specifically a relation headed by POSS (that determines the presence of a subject) and that DPs containing a relational noun and a subject also contain POSS. In other words, relational DPs with subject should be analyzed as having two layers (one of which can be POSS), a state of affairs probably responsible for the availability of different readings (e.g. *sa propre création* ‘his own creation’ has a possessive and an agentive reading).

¹⁴ I would analyze this structure as actually involving a relative clause (internally or externally) headed by *house*, and not as a D taking a PP complement.

as this structure could involve relativization of a structure headed by POSS, with *à* as complementizer - but this will be sufficient for our purposes here).

- (37) a. Cette organisation est propre à cette école.
 'This organization is peculiar to this school.'
 b. J'admire l'organisation propre à cette école.
 'I admire the organization peculiar to this school.'

In (a), *propre* selects a small clause headed by the possessive predicate *à* as illustrated below:

- (38) a. propre (cette organisation A/POSS cette école)
 own this organization POSS this school
 b. cette organisation est (propre (~~cette organisation~~ A/POSS cette école))
 this organization is own ~~this organization~~ POSS this school

Semantically, *propre* therefore modifies the possessive relation: (38)a literally means that the possession relation holding between this school and the organization is characteristic: this school specifically possesses this organization (*cette école a cette organisation en propre*). Syntactically, I assume that *propre* is a raising adjective and as expected from locality and closest attract, *cette organisation* ('this organization') raises to the subject position to yield (37)a as shown in (38)b. This means that *propre* does not select the subject itself *cette organisation* ('this organization'), but the whole small clause.

Given the position of the noun *organisation* ('organization') - which appears external to the small clause headed by POSS, (37)b must involve a relativization of *organisation* ('organization'), which can be roughly represented as follows:

- (39) a. propre (wh-organisation A/POSS cette école) →
 own wh-organization POSS this school
 b. organisation (propre (wh-~~organisation~~ A/POSS cette école))
 organization own wh-~~organization~~ POSS this school

The result has what looks like an AP (like e.g. *exempt du service militaire* ('exempt from military service')), but really is not at all. Further, postnominal *propre* does not seem to

have any special intonation of focal property, suggesting that this resulting structure is “normal”.

The other option for postnominal *propre*¹⁵ is to involve a clitic as possessor; in that case, the possessive head is silent and the possessor clitic combines with the definite determiner to yield the possessive pronoun as schematized below:

- (40) a. la-3sg organisation propre (~~wh-organisation~~ A/POSS 3sg) -->
 the-3sg organization own (~~wh-organization~~ A/POSS 3sg)
 b. son organisation propre
 ‘its characteristic organization’

That A/POSS (which is also the French dative marker) is silent when its complement is displaced is a general fact about French found also with e.g. cliticization of dative objects (viz. *Je parle à lui/Je lui parle* (*à) ‘I talk to him’).

2.3.1.1. Derivation of prenominal *propre*

As seen before, prenominal *propre* can combine either with a possessive pronoun or with a *de*-PP as illustrated below:¹⁶

- (41) a. Sa propre organisation ‘its own organization’
 b. La propre organisation de cette école ‘this school’s own organization’

¹⁵ In certain cases, postnominal *propre* can be followed by a *de*-PP :

- 10) a. l’ organisation propre de cette école
 the organization own of this school
 ‘the characteristic organization of this school’
 b. *le vélo propre de Jean
 the bike own of John

It seems that this obtains in cases like (a) where *propre* means ‘intrinsic’. I leave this for further research.

¹⁶ Prenominal *propre* followed by an *à*-PP is very marginal:

- 11) ?? la propre organisation à cette école
 the own organization to this school

The reason for this will be examined in future work.

I will (again simplifying in ways that do not affect this discussion) basically assume the same structures as in (39) and (40), except that *propre* is preposed and the possessive head corresponds to *de* in (b).¹⁷

Concerning (41)b, I take (here)¹⁸ *de* to be able to instantiate a possessive head as in the following derivation:

- (42) la propre organisation ~~propre~~ (~~wh-organisation~~ DE cette école)
 the own organization ~~own~~ ~~wh-organization~~ OF this school

Note that here as opposed to (39), *propre* has been preposed possibly due to its status as a superlative (see next section). In simplest terms, this means that *propre* is an adjunct to POSSP: were it taking POSSP as complement, the derivation in (39) would be tricky as further derivation would have to turn *propre* into a (remnant) constituent prior to its preposing.

In (41)a, the possessor clitic combines with the definite determiner to yield the possessive pronoun as schematized below:

¹⁷ It is a simplification to treat *à* and *de* as two instances of POSS because they do not put the same constraints on word order for *propre*:

- 12) a. l' organisation propre à cette école
 the organization own to this school
 b. ?? la propre organisation à cette école
 the own organization to this school
 c. la propre organisation de cette école
 the own organization of this school
 d. ?l' organisation propre de cette école
 the organization own of this school

This difference could be derived based on the hypothesis suggested in the next footnote, i.e. that *de* is a complementizer while *à* corresponds to POSS.

¹⁸ Based on Kayne (1994)'s hypothesis that *de* is a complementizer (which may also be true of POSS *à*), we could rather suppose the following derivation with a silent POSS:

- 13) a. de (cette école (propre (organisation POSS ~~cette école~~))) →
 of this school own organization POSS ~~this school~~
 b. propre organisation ~~POSS cette école~~ (de cette école (propre (~~wh-organisation~~ (~~organisation~~
 own organization POSS ~~this school~~ (of this school (own (~~wh-organization~~ (~~organization~~
 POSS ~~cette école~~))))))
 POSS ~~this school~~))))

In (a), *cette école* ('this school') raises to the complement position of the complementizer *de* (perhaps for case reasons). In (b), the relativized noun *organisation* – pied-piping *propre* - moves to the specifier position of *de*. This is probably necessary because while *propre à X* forms a constituent, *propre de X* does not.

- (43) la-3sg propre organisation propre (~~wh-organisation~~ POSS 3sg)
 the-3sg own organization ~~own~~ (~~wh-organization~~ POSS 3sg)

To further unify prenominal and postnominal *propre*, we could also suppose this derivation:

- (44) a. *propre* selects a small clause as follows: [organisation POSS 3sg] propre
 b. the noun is relativized: organisation [~~wh-organisation~~ POSS 3sg [propre]]
 c. the clitic incorporates into the definite article:
 - without pied-piping *propre* (postnominal *propre*)
 la [~~organisation~~ POSS 3sg] organisation [~~wh-organisation~~ POSS elle- [propre]]
 - or pied-pipes *propre* (prenominal *propre*)
 la [~~organisation~~ POSS 3sg [propre]] organisation [~~wh-organisation~~ POSS elle- [propre]]

2.3.1.2. Derivation of postnominal *propre* without complement

Finally, let's examine how to derive postnominal *propre* when it does not have any apparent complement as illustrated below.

- (45) Cette école a une organisation propre.
 'This school has a specific organization.'

The crucial point is that postnominal *propre* in a DP without possessor is only licensed in the presence of possessive verbs like *avoir* ('have') in (45). Some examples as the following seem to be different at first glance:

- (46) a. Il faut (se forger) une identité propre.
 'It is necessary to (give oneself by creating) one's own identity.'
 b. Il veut lui redonner une identité propre.
 'He wants to give him back his own identity.'
 c. Une identité propre est nécessaire à cela.
 an identity own is necessary for that

But in fact, all these cases also involve overt or covert possessive predicates: the expression *se forger* ('give oneself by creating'), and the donation verb *redonner* ('give back') contain a possessive verb, and the intensional predicate *nécessaire* ('necessary') requires a clausal predicate, here containing a possessive in (c) (recalling Larson et al. (1996)'s analysis of

John wants (to have) an apple as always having a covert *have*; see also Moulton 2013 on *necessary*).

The fact that postnominal *propre* without possessor only occurs with possessive verbs is important because possessive *have* constructions have been argued to be composed underlyingly from the copula *be* and a locative preposition like *à* (cf. Benveniste: 1966, Freeze: 1992, Kayne: 2000). This therefore suggests that postnominal *propre* also has to combine with POSS in this case.

Here is the derivation for (45)a:

- (47) a. ((une organisation A/POSS cette école) propre)
 an organization POSS this school own
 b. cette école est-A/POSS ((une organisation A/POSS ~~cette école~~) propre)
 this school is-POSS an organization POSS this—school own

We start with the same small clause as above in (a). (b) shows that the complement of POSS *cette école* ('this school') raises to the subject position of the sentence and A/POSS incorporates into the verb *be*, which is spelled out as *have*. Note again that to get the right word order, either we need to assume as discussed above that *organisation* has relativized preceding *propre* or that *propre* is to the right of the small clause as illustrated here.

To sum up, I hypothesize that *propre* is a raising adjective that selects a small clause headed by POSS. POSS generally instantiates as the preposition *à* in the case of postnominal *propre* (which can be contained in possessive verbs in some cases) and is silent in the case of prenominal *propre* (or corresponds to *de*). This hypothesis explains most of the syntactic properties that have been listed:

- *propre* must occur in a possessive DP since *propre* selects a possessive relation;

- prenominal *propre* does not have any complement since the apparent complement of postnominal *propre*, namely *à*-PP, is in fact part of a small clause that does not take the same form for prenominal *propre*, i.e. it is headed by silent POSS or *de*;
- *propre* cannot combine with other adjectives since it does not have the same selectional properties.

2.3.2. Superlative

So far, I have simply assumed that the semantic contribution of *propre* is to characterize the possessive relation as specific. More precisely, I would like to propose that prenominal *propre* is a(n irregular) superlative – thus introducing a scale of specificity or closeness of relation - while postnominal *propre* has an absolute meaning and simply means ‘intrinsic’.

The following minimal pairs illustrate the difference:

- (48) a. Son rythme propre ‘her own rhythm’
 b. Son propre rythme
- (49) a. Sa valeur propre ‘its own eigenvalue’
 b. Sa propre valeur

Assuming that we speak about Anne in (48), *son rythme propre* (‘her own rhythm’ with postnominal *propre*) corresponds to the rhythm that is intrinsic to her in an absolute way, while *son propre rythme* (‘her own rhythm’ with prenominal *propre*) designates the rhythm that is associated to her in the closest way, e.g. the rhythm that she has decided to follow (even if it is not intrinsic to her) as opposed to e.g. the rhythm imposed by her company. The same holds for (49): *sa valeur propre* (‘its eigenvalue’ with postnominal *propre*) corresponds to a value characteristic of the matrix under discussion while *sa propre valeur* simply designates the value most closely associated with this matrix (e.g. its value) as

opposed to other values (e.g. of other matrices). In other words, prenominal *propre* is interpreted as relative, i.e. introduces a scale of specificity, and corresponds to the end of the scale in a given context ('the most specific'), while postnominal *propre* is absolute ('intrinsic').

Besides the meaning difference, this hypothesis would explain other specific properties of prenominal *propre*:

- it must like French articleless superlatives be prenominal (cf. *le plus gros livre*/**le livre plus gros* 'the biggest book');
- it is not gradable as opposed to postnominal *propre*: it is because it already corresponds to a superlative;
- It only occurs in definite DPs like other French superlatives (**un plus gros livre* 'a biggest book')

But it remains to explain why the prenominal position would induce a superlative meaning on *propre* but not on other adjectives.

2.3.3. Summary: assumptions about prenominal *propre* for the rest of the study

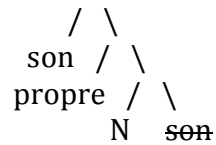
The rest of the study will concern prenominal *propre*. Here are the main conclusions of this section that will be important for us:

a- *propre* selects a possessive relation, more specifically a small clause headed by POSS.¹⁹

Importantly, this means that *propre* forms a constituent with the head noun, not with the possessive pronoun²⁰ as shown in the very simplified tree below:

¹⁹ The particularity of this structure accounts for the specificity of *propre*: no other adjective seems to exhibit a similar behavior. Adjectives with a similar meaning like *spécifique* ('specific'), *particulier* ('particular', 'peculiar'), *individuel* ('individual') or *intrinsèque* ('intrinsic') are not expected to behave the same as *propre*

(50)



b- *propre* indicates that the possessive relation it selects is the closest one: it is higher on a scale of specificity. Thus, I assume the following lexical entry for *propre*:

(51) $[[\text{propre}]]^g = \lambda f_{e,et}. \lambda x_e. \lambda y_e. f = \text{POSS}$ and $f(x, y) = 1$ iff y is related to x in the most specific way

3. The different readings of prenominal *propre*

Prenominal *propre* exhibits a variety of readings that will constitute the core of the study in the next chapter. It will be shown how these readings map into different logical forms due to different interactions with focus. In this section, I keep the description at an informal level: for reasons of clarity, only the main readings will be here presented and how they differ from each other. This will provide the empirical picture of the facts, which will be further refined and explained in the second chapter.

since they are only postnominal. Adjectives like *cher* ('dear'), *favori* ('favorite') or *respectif* ('respective') like *propre* occur in possessive DPs and appear to take complements; but as opposed to *propre*, they do not present the syntactic characteristics that make me hypothesize that *propre* selects a small clause; the PP they combine with is really their complement, it is not part of a small clause they select as in the case of *propre*.

²⁰ Besides what has been said, note that the following also shows that *propre* cannot form a constituent with the possessive pronoun:

- to assume that *son propre* forms a constituent, we would need to suppose that *son* contains the apparent complement of *propre* and combines with *propre* like in *propre à lui* ('peculiar to him') or *lui est propre* ('is peculiar to him'). But in French, we observe that a dative clitic cannot yield a possessive pronoun: for instance, *sa fidélité* ('his loyalty') cannot correspond to *fidélité à Jean* ('loyalty to John'), it cannot mean *la fidélité à lui* ('the loyalty to him').
- Moreover, when the possessor is expressed by a *de*-PP, the *de*-PP does not form a constituent with *propre* as *propre* and *de cette école* ('of this school') in *la propre organisation de cette école* ('this school's own organization').

Prenominal *propre* exhibits three main readings that I call restrictive *propre*, possessor *propre* and possessum *propre*. In a nutshell, while restrictive *propre* has a truth-conditional effect, possessor and possessum *propre* do not, but change the felicity conditions of the sentence by inducing contrast with alternatives, respectively with other possessors and other more expected possessa. In other words, possessor and possessum *propre* have focus-related effects as opposed to restrictive *propre* that does not have to; focus will be examined in detail in the next chapter, but as a first approximation, I take it as a prosodic means that induces contrast with alternatives.

The first line of the following table gives a preview of the effects of the three readings. The second line shows the corresponding LF for an English example (*his own children*), but this will only be explained in chapter 2.

Restrictive <i>propre</i>	Possessor <i>propre</i>	Possessum <i>propre</i>
Truth-conditional effect	Focus-related effect: contrast with other possessors	Focus-related effect: contrast with more expected possessa
her own children	[her _F OWN _F children] _{FOC} ~ C	(E)[her _F own _F CHILDREN _F] _{FOC} ~ C

Note that the readings can overlap (the same example can be compatible with several readings) but in my illustration, I will try to isolate the readings and present examples that are only felicitous under one reading.

3.1. Restrictive *propre* (truth-conditional *propre*)

Propre is restrictive: it has the semantic effect of narrowing the denotation of the noun it combines with; more precisely, it shrinks the denotation of the possessive relation it selects

(it indicates that it is most specific). *Propre* could be paraphrased by adjectives like *personal, individual, specific, characteristic, intrinsic...*

Therefore, *propre* can have a truth-conditional effect in context. This is what I will mean here by ‘restrictive *propre*’: *propre* is restrictive in the context in question, namely it alters the truth conditions of the sentence it occurs in. Here is an illustration:

- (52) (Context: Claire owns a personal car and also uses a professional car)
Claire_i a pris sa_i propre voiture.
Claire has taken her own car
‘Claire_i took her_i own car.’ (i.e. her personal car)

In this context where Claire uses a personal car and a professional car, *propre* impacts the truth conditions of the sentence: *sa propre voiture* (‘her own car’) only designates Claire’s personal car while *sa voiture* (‘her car’) could either refer to her personal car or her professional car. *Propre* is truth-conditional in that it contributes to identifying the referent of the possessive DP.

By shrinking the denotation of the DP in context, restrictive *propre* differs from possessor and possessum *propre* that do not have to: we will see that in these two cases, *son propre N* usually has the same denotation as *son N*.

But the crucial difference between restrictive *propre* and possessor *propre* is that restrictive *propre* does not require focus. Like any restrictive adjective, it can: in the previous example, *propre* can be focused and contrast with *professionnel* (‘professional’).

But unlike possessor *propre*, it does not have to, as illustrated by the following example:

- (53) Pourquoi est-ce qu’Anne préfère sa propre voiture à sa voiture professionnelle?
Anne préfère sa propre voiture parce qu’elle roule mieux.
‘Why does Anne prefer her own car to her professional car?
Anne prefers her own car because it drives better.’

In the answer, *propre* is not focused as it is given in the question and the focal part corresponds to the causal clause. Nevertheless, *propre* is felicitous because it contributes to identifying Anne's car that is in question here, i.e. her personal car.²¹

Similarly, *propre* is felicitous if it is given but the possessive pronoun is focused. We primarily observe this configuration in examples where *propre* qualifies something that is intrinsic: for instance, people can have a rhythm that is intrinsic to them, whether it happens to be the same as other people's rhythm or not; therefore, it makes sense to compare different people's own rhythm.

- (54) Chacun était convaincu qu'il avait un rythme qui lui était propre. Après avoir longtemps cherché, tout le monde trouva enfin son propre rythme à lui.
'Everyone was convinced that they have a rhythm that is peculiar to them. After looking for it for a long time, everybody finally found HIS own rhythm.'

Here, the contrast with other possessors is induced by clitic doubling of the possessive pronoun *son* and *propre* is given in the discourse; *propre* cannot be possessor *propre*, i.e. it cannot give rise to alternatives to the possessor 'everybody'. Here, its contribution is to specify the kind of rhythm in question, i.e. a rhythm that is intrinsic to the person: *propre* is restrictive in the context.

Restrictive *propre* can narrow the set denoted by the noun it modifies in two main ways depending on the type of head noun. If the noun is relational, *propre* indicates that the

²¹ Due to second occurrence focus, we could object that possessor *propre* can also appear in contexts where it is given. But the difference is that possessor *propre* does not have any truth-conditional impact as I said: in the following example, *sa propre voiture* ('her own car') designates exactly the same car as *sa voiture* ('her car') as opposed to the example with restrictive *propre*. Therefore, possessor *propre* will be completely redundant if given and thus hardly felicitous.

- 14) Pourquoi est-ce qu'Anne préfère sa propre voiture à celle de Jean?
Anne préfère sa (?propre) voiture parce qu'elle roule mieux.
'Why does Anne prefer her own car to John's?
Anne prefers her (?own) car because it drives better.'

relation expressed by the noun is most specific or tight. For instance, *le fils de Claire* ('Claire's son') or *son propre fils* ('her own son') refers to her biological son while *son fils* ('her son') can also correspond to her adoptive son or her stepson. Similarly, *son bras* ('her arm') could refer to the arm of her representation (i.e. in Madame Tussaud contexts) but *son propre bras* ('her own arm') can only designate her real arm. If the head noun is not relational, the relation at stake is possession. In this case, *propre* narrows the denotation of the DP by indicating that the possessive relation is exclusive. Thus in the previous example, *sa propre voiture* ('her own car') corresponds to the car Claire is the sole owner of, namely her personal car. Speaking of a country, *sa propre monnaie* ('its own currency') refers to the currency that is characteristic of this country, while *sa monnaie* ('its currency') can also denote a currency used in common with other countries. Similarly, *mon propre appartement* ('my own apartment') is an appartement that I do not share, but I can speak of *mon appartement* ('my apartment') if I have roommates.

To sum up, the two main characteristics of restrictive *propre* are that it has a truth-conditional effect (since it shrinks the denotation of the DP it occurs in) and it does not need to be focused (it does not necessarily involve contrast with alternatives).

3.2. Possessor *propre*

However, possessor *propre* does not impact the truth conditions of the sentence it occurs in, and requires focal stress.²² I call this reading possessor *propre* because the possessor is

²² Focal stress is noted with capital letters.

contrasted with (an)other contextual possessor(s); this is the semantic contribution of possessor *propre*, which is not truth-conditional, but focus-related.

- (55) a. Paul a raccompagné ses enfants.
'Paul drove his children home.'
b. Paul a raccompagné ses PROPRES enfants (et (pas) ceux de la voisine).
'Paul drove his OWN children home (and (not) the neighbor's).'

Thus (a) and (b) can be true in the same conditions: in both cases, *ses enfants* ('his children') and *ses propres enfants* ('his own children') refer to the same individuals, i.e. Paul's children (Paul does not have to have both biological and non-biological children). The contribution of *propre* in (b) pertains to the felicity conditions of the sentence, in the sense that (b) involves a contrast. For (b) to be felicitous, Paul's children must be contrasted with other children under discussion; in other words, the possessor Paul must be contrasted with a contextual possessor, e.g. the neighbor in (b): as suggested by the parenthesis, this condition can be satisfied in a context where the neighbor's children are compared to Paul's children. This is so whether Paul also drove the neighbor's children home or on the contrary he did not: the alternatives can be either true (additive reading) or false (exclusive reading). But they must be available: at least one alternative possessor must be under discussion in the context.

In fact, possessor *propre*, i.e. stressed *propre*, is not acceptable in contexts making any alternative possessor impossible, as illustrated in (56).

- (56) a. Justine a hoché la tête.
'Justine nodded her head.'
b. Justine_i a hoché sa_i belle tête.
'Justine_i nodded her_i beautiful head.'
c. *Justine_i a hoché sa_i PROPRE tête.
'*Justine_i nodded her_i OWN head.'

Given the meaning of the expression *to nod one's head*, it is impossible for Justine to nod someone else's head: no alternative possessor is available in (56). Moreover, even if *to nod one's head* constitutes an idiom, it licenses modification of the noun as shown in (b), so modification by an adjective is not precluded in principle.²³ Nevertheless, (c) demonstrates that *propre* cannot modify the noun *tête* ('head').²⁴ Therefore, (56) argues that the acceptability of possessor *propre* relies on the presence of alternatives that are under discussion in the context.²⁵

In sum, possessor *propre* differs from restrictive *propre* in two ways. First, it does not necessarily have any truth-conditional effect: *son propre N* and *son N* designate the same individual. Second, it must be stressed and thus induce alternatives to the possessor. These two facts are related: it is because possessor *propre* does not have any truth-conditional effect that it must have a focus-related effect (I will come back to this in more details in the next chapter).

²³ This contrasts with the following example:

- 15) a. Jeanne a perdu son sang-froid.
 'Jeanne lost her cool.'
 b. *Jeanne a perdu son PROPRE sang-froid.
 '*Jeanne lost her OWN cool.'
 c. ??Jeanne a perdu son admirable sang-froid.
 '??Jeanne lost her admirable cool.'

Here too like in (56), alternatives to the possessor are not available as it is impossible to lose someone else's cool. However, the idiom *to lose one's cool* does not license adjectival modification in general as shown in (c) (except with certain adjectives like *légendaire* 'legendary'). Therefore, this does not prove anything about the requirement of the presence of alternatives.

²⁴ Note that restrictive *propre* is not felicitous either as *sa tête* ('her head') can only refer to Justine's head, but restrictive *propre* needs to be able to shrink the denotation of the DP. However in a specific context like Madame Tussaud context, the sentence becomes felicitous as *sa propre tête* ('her own head'), which can only refer to Justine's head, can contrast with *sa tête* ('her head') that could also refer to the head of her statue.

²⁵ Concretely, this can happen in several ways as we will see in chapter 2 when examining focus: either the alternatives under discussion are explicitly mentioned in the discourse, or the context is so that it is obvious to retrieve them. Therefore, to test if a reading requires the presence of alternatives, we need to compare contexts where the relevant alternatives are salient and contexts where they are not retrievable (e.g. it would not be consistent or relevant to mention them).

Consequently, possessor *propre* can be paraphrased using other ways of focusing the possessor:

- (57) a. Paul a raccompagné SES enfants.
b. Paul a raccompagné ses enfants à lui.
'Paul drove HIS children home.'

(a) involves focal stress on the possessive pronoun while (b) exhibits doubling of it.

This means that possessor *propre* corresponds to a question pertaining to the possessor:

- (58) Whose children did Paul drive home?

As the answer of this question concerns the possessor and the target of the answer corresponds to the focal part, this confirms that possessor *propre* induces focus alternatives to the possessor.

Note that so far, the examples containing possessor *propre* have involved a possessive pronoun, but the same holds if the possessor is expressed as a prepositional complement introduced by *de*:

- (59) Ce type de publicité peut utiliser la PROPRES voiture **du commerçant** mais aussi celles de particuliers qui acceptent. [attested on Google: <http://www.pic-inter.com/pic/316/conseil.aspx>]
'This kind of advertisement can use **the storekeeper's** OWN car but also those of private individuals who agree.'

Here, the possessor is expressed by the PP *du commerçant* ('of the storekeeper') and similarly, *propre* contributes to contrasting the possessor, i.e. the storekeeper, with other contextual possessors, i.e. private individuals.

Finally, even if possessor *propre* does not have to shrink the denotation of the DP it occurs in as opposed to restrictive *propre* (since its contribution is different: it induces contrast with possessors), it still characterizes the possessive relation in question as a specific one. Recall from the first section that prenominal *propre* has been argued to select a possessive

relation and to be superlative (the relation is the closest one, the most specific one); we could imagine that in a context where the set of objects denoted by the head noun is a singleton one, *propre* can select a very loose relation. But this is not borne out: *propre* keeps its meaning of close relation even in the presence of focus, as shown in the following sentence involving possessor *propre*:

- (60) [Context: Jeanne and Lucie Dupont are two sisters going to a clinic; Jeanne has an appointment with the dentist and Lucie with the ophtalmologist.]
- a. Le dentiste pense que sa soeur à lui est plus sympathique que celle de l'ophtalmo.
'The dentist thinks that HIS sister is more friendly than the ophtalmologist's.'
 - b. # Le dentiste pense que sa propre soeur est plus sympathique que celle de l'ophtalmo.
'#The dentist thinks that his own sister is more friendly than the ophtalmologist's.'

Here, the possessive relation expressed in *sa soeur* ('his sister') corresponds to a loose relation that is not specific: *sa soeur* does not denote the dentist's biological sister but the Dupont sister that he examined. Moreover, focus is involved: the sister examined by the dentist is compared to the sister examined by the ophtalmologist, so that alternatives to the possessor are under discussion; in fact, doubling of the possessive pronoun in (a) is available. However, the use of *sa propre soeur* is not acceptable in such a context: *sa propre soeur* cannot denote the sister examined by the dentist but only his biological sister; the sentence is infelicitous if he does not have any one. This means that even in the presence of focus alternatives to the possessor, *propre* does not lose its meaning of specificity, expressing the idea of a close relation. This goes against the hypothesis that *propre* is underspecified or has several lexical entries depending on the presence of focus, but argues in favor of the uniqueness of meaning for *propre*. In all cases, prenominal *propre* characterizes the possessive relation as most specific. This implies that this relation must

be at least specific: too loose a relation does not qualify, *propre* does not fit in possessive DPs of all kinds.

To summarize, possessor *propre* does not necessarily have any truth-conditional effect (even if it means ‘specific’), but a focus-related one: by bearing focal stress, it induces contrast with alternative possessors.

3.3. Possessum *propre*

What I call possessum *propre* is similar in the first respect, but while possessor *propre* involves alternatives to the possessor, possessum *propre* gives rise to alternatives to the possessum. In this case, it is the head noun that receives focal stress and also a rising intonation.²⁶

- (61) (Context: Medea tragedy)
a. Médée_i a tué ses_i enfants !
‘Medea_i killed her_i children!’
b. Médée_i a tué ses_i propres ENFANTS !
‘Medea_i killed her_i own CHILDREN!’

According to the myth, Medea is a magician who fell in love with Jason, and when Jason left her, she took revenge of him by killing the children she had with him. In this context, (a) and (b) are truth-conditionally equivalent: *ses enfants* (‘her children’) and *ses propres enfants* (‘her own children’) refer to the same individuals (unlike the case of restrictive *propre* where *ses propres enfants* could for instance designate her biological children as compared to her adoptive children). Moreover, no other children are under discussion: as opposed to the case of possessor *propre*, Medea’s children are not contrasted with other

²⁶ Some French speakers put the stress on *propre* though, or on both *propre* and the noun. I will come back to this in chapter 2 while examining focus in detail.

contextual children. What (b) rather expresses is that Medea's children are the least expected individuals that she killed or could have killed. In other terms, it is not the possessor, but the possessum, i.e. Medea's children, that is contrasted with other individuals. Consequently, the corresponding question would not be *whose children did Medea kill?* as in (58) but the following one; the answer here concerns the possessum, not the possessor.

(62) Who did Medea kill?

Furthermore, the possessum in question is least expected: the alternative possessa are higher on a scale of expectations. For instance, given world knowledge, it is more expected that Medea killed her enemies rather than her own children: in the context, Medea had also killed Jason's enemies to help him, and after he left her, she murdered Jason's new wife Glauce; these characters are more expected to be killed by Medea than her children.

Therefore, the example containing possessum *propre* would be paraphrased in a different way from those involving possessor *propre*, i.e. by stressing the noun or associating it with the focus particle *même* ('even') that also induces unexpectedness effects:²⁷

- (63) (Context: Medea tragedy)
- a. Médée_i a tué ses_i ENFANTS !
'Medea_i killed her_i CHILDREN!'
 - b. Médée_i a tué même ses_i ENFANTS !
'Medea_i killed even her_i CHILDREN!'

Moreover, just like in the case of possessor *propre*, the alternatives may be true or false. (61) presents an additive reading since Medea also killed Jason's enemies and Glauce.

²⁷ As will be made clearer in the second chapter, the paraphrase with *même* however adds an additional component to the meaning, i.e. alternatives are presupposed to be true, which is not the case with possessum *propre*.

However, the same sentence could be felicitous in a different context where Medea did not kill any other people:

- (64) (Context: Medea never killed anybody)
Dans un moment de folie, Médée_i a tué ses_i propres ENFANTS !
'In a moment of madness, Medea_i killed her_i own CHILDREN!'

Also, like possessor *propre*, possessum *propre* can either combine with a possessive pronoun as in (61), or with a prepositional complement as in the following example:

- (65) Le meurtrier présumé qui a été placé en hôpital psychiatrique n'est autre que le propre fils **de la victime**. [attested on google:
<http://fidesjustice.free.fr/html/faitdiv3.html>]
'The presumed murderer who has been placed in a psychiatric hospital is no other than **the victim's** own son.'

Finally, note that the content of alternatives is not sufficient to distinguish possessum *propre* from possessor *propre* since possessor alternatives correspond to a subset of possessum alternatives: for instance, the possessor alternatives to Medea's children correspond to other children while the possessum alternative can be any individual; obviously, the set of children is included in the set of individuals. Therefore, it is crucial to take into consideration the unexpectedness effect to distinguish possessum *propre* from possessor *propre*; the different location of focal stress will also allow us to clearly distinguish between the two readings as will be made clearer in the next chapter. In fact, the following example is infelicitous in a stereotypical context:

- (66) Julie_i a invité ses_i propres ENFANTS.
'Julie_i invited her_i own CHILDREN.'

In such a context, it is expected to invite one's children as compared to other individuals: Julie's children are more expected to be invited by Julie than other individuals. Correlatively, the use of *propre* and the stress on the noun *enfants* ('children') is hardly

felicitous; the only way to accept the example is to accommodate a context where it is unexpected to invite one's children. This illustrates that possessum *propre* is necessarily associated with an unexpectedness effect.²⁸

To sum up, both possessor *propre* and possessum *propre* do not change the truth conditions of the sentence they occur in as opposed to restrictive *propre*. They contribute to the meaning of the sentence by affecting the felicity conditions through focus, i.e. by imposing a contrastiveness condition, whereas restrictive *propre* does not need to be focused. While possessor *propre* involves contextual alternatives to the possessor, possessum *propre* involves contextual alternatives to the possessum. In both cases, these alternatives must be under discussion in the context, whether they are true (additive reading) or false (exclusive reading). Furthermore, possessum *propre* additionally implies that the alternatives are more expected, i.e. it gives rise to a surprise or scalarity effect.

The following table summarizes the properties of the three readings that have been presented and that will be explained in the next chapter.

²⁸ We will examine and revise this claim in chapter 2.

	Restrictive <i>propre</i>	Possessor <i>propre</i>	Possessum <i>propre</i>
Truth-conditional effect	Yes [[<i>son propre N</i>]] ≠ [[<i>son N</i>]]	No [[<i>son propre N</i>]] = [[<i>son N</i>]]	No [[<i>son propre N</i>]] = [[<i>son N</i>]]
Focus alternatives	No (or adjective contrasting with <i>propre</i>)	Possessor(s) (alternatives may be true or false)	More expected possessa (alternatives may be true or false)
Focal Stress	None (or on <i>propre</i>)	On <i>propre</i>	On the head noun or on both the head noun and <i>propre</i>
Example (translation)	(53) Anne prefers her own car because it drives better.	(55)b Paul drove his OWN children home.	(61)b Medea killed her own CHILDREN.
Corresponding question	Why does Anne prefer her own car to her professional car?	Whose children did Paul drive home?	Who did Medea kill?
Paraphrase	Cf. (52): <i>sa voiture personnelle</i> (‘her personal car’)	(57)a: Paul a raccompagné SES enfants. (57)b: Paul a raccompagné ses enfants à lui. (‘Paul drove HIS children home.’)	(63)a: Médée a tué ses ENFANTS ! (‘Medea killed her CHILDREN’) (63)b: Médée a tué même ses ENFANTS ! (‘Medea killed even her CHILDREN’)
Arguments	<i>Propre</i> can be given	<i>Propre</i> is infelicitous in the absence of possessor alternatives	<i>Propre</i> is infelicitous in the absence of unexpectedness effect

Note that the same sentence can exhibit all three readings depending on the context:

- (67) Claire a blessé ses propres enfants.
‘Claire hurt her own children.’

- Reading 1: restrictive *propre*

This reading obtains e.g. if Claire has biological and adoptive children. In that case, *propre* does not need to be focused and *ses propres enfants* ('her own children') refers to her biological children.

- Reading 2: possessor *propre*

This reading requires that other children be under discussion in the context, e.g. Paul's children. *Propre* is focused and induces contrast between Claire's children and Paul's children.

- Reading 3: possessum *propre*

Under the possessum reading, Claire's children are the least expected individuals to get hurt by Claire. There are no other children under discussion, but more generally other individuals. The noun *enfants* ('children') is focused and *propre* may be too.

It will be shown in the next chapter how the presence of focus distinguishes between these readings and gives rise to different LFs in the three cases.

3.4. Further readings

Besides the three main readings that have just been presented and that will be concentrated on in the rest of the study, we observe three specific readings that are distinguishable from the previous readings (even if they can probably be subsumed under the same analysis as will be suggested in the appendix of chapter 2). I will not examine them in detail in this work, but I mention them briefly as they would be worth investigating further.

3.4.1. Agentive *propre*

The following sentence exhibits what I call an agentive reading.

- (68) Jérôme_i a créé son_i propre site internet.
'Jérôme_i created his_i own website.'

Under the most salient reading, (68) means that Jérôme created his website on his own, without any help: he did not buy it or had someone else make it for him. This can be paraphrased using *lui-même* ('himself'):

- (69) Jérôme_i a créé son_i site internet lui-même.
'Jérôme_i created his_i website himself.'

3.4.2. Reflexive *propre*

I call reflexive *propre* the use of *propre* in DPs where the possessum and the possessor corefer.

- (70) Julien_i est son_i propre ennemi.
'Julien_i is his_i own enemy.'

Here, both the possessum *son propre ennemi* ('his own enemy') and *son* ('his') refer to the same individual, namely Julien. This can be paraphrased using *lui-même* as possessor in a PP:

- (71) Julien_i est l'ennemi de lui_i-même.
'Julien_i is the enemy of himself_i.'

3.4.3. Ownership *propre*

What I call ownership *propre* is characterized by the fact that the possessive DP it occurs in is selected by a possession verb.

- (72) Lucie **a** son propre appartement.
'Lucie **has** her own apartment.'

(72) implies that Lucie is the sole owner of her apartment and presents an indefinite flavor as shown by a possible paraphrase: *Lucie a un appartement qui lui est propre* ('Lucie has an apartment that is specific to her').

To summarize this second section, *propre* exhibits three main readings: restrictive *propre* alters the truth conditions by restricting the set denoted by the noun it combines with; possessor and possessum *propre* do not change the truth conditions, but the felicity conditions of the sentence by involving contrast with contextual alternatives, respectively alternatives to the possessor or the possessum, and the latter case is associated with an unexpectedness effect. In chapter 2, we will examine in detail how to map these different readings with different LFs.

4. The sentential distribution of *son propre*

To complete the description of *propre*, I now turn to the distribution of *son propre* with respect to the antecedent, as in most cases, *propre* combines with *son*, and as we will see, *son propre* does not necessarily exhibit the same distribution as the pronoun *son*.²⁹

First, note that *son propre* does not license extralinguistic antecedents:

- (73) a. ?? Ne prends pas le manteau de Lucie, prends son _✓ PROPRE manteau.
'??Don't take Lucie's coat, take her _✓ OWN.'
- b. Ne prends pas le manteau de Lucie, prends SON _✓ manteau.
'Don't take Lucie's coat, take HER _✓ coat.'

²⁹ Unlike *his/her* in English, French *son/sa/ses* (masc.sg/fem.sg/pl.) agrees in gender with the noun it combines with, not with the possessor. However, in both English and French, the possessive pronoun agrees in number and person with the possessor.

In (a), *son propre* – just as SON in (b) – is deictic and should refer to an extralinguistic individual present in the situation. However, unlike (b), (a) is not felicitous. This suggests that *son propre* can only take discourse, i.e. non-extralinguistic, antecedents.

The antecedent of *son propre* can vary in number, person and gender; moreover, it can correspond to a definite description or a quantifier.³⁰

- (74) a. Lucie/Marc a lavé sa propre voiture.
'Lucie/Marc washed her/his own car.'
b. Lucie et Marc ont lavé leur(s) propre(s) voiture(s).
'Lucie and Marc washed their own car(s).'
c. Tu as lavé ta propre voiture.
'You washed your own car.'
d. Le garagiste a lavé sa propre voiture.
'The garage owner washed his own car.'
e. Chaque garagiste a lavé sa propre voiture.
'Each garage owner washed his own car.'

The constraints on the antecedent pertain to its position with respect to *son propre*. I will here concentrate on the distribution of possessor and possessum *son propre* (i.e. *son* when combined with possessor or possessum *propre*): restrictive *propre*, as a regular restrictive adjective without necessary stress on it, is not expected to change the behavior of *son*, just like postnominal *propre*.

In a nutshell, it will be shown that possessor *son propre* is subject to locality conditions while possessum *son propre* is not. More specifically, possessor *son propre* requires a locally c-commanding antecedent if the antecedent is inanimate: animacy and locality

³⁰ *Son propre* also licenses split antecedents:

16) Gilles dit à Laure que leurs propres enfants viennent d'arriver.
'Gilles tells Laure that their own children have just arrived.'

correlate; but possessum *son propre* does not impose such locality conditions on the antecedent even if it inanimate.

Interpretation of <i>propre</i>		Position of the antecedent with respect to <i>son propre</i>
Possessor	Inanimate	Local c-command
	Animate	No necessary local c-command
Possessum	Inanimate	No necessary local c-command
	Animate	

4.1. Possessor *son propre*: correlation between locality and inanimacy

When possessor *propre* combines with *son*, *son propre* requires a locally c-commanding antecedent when it is inanimate, but animate *son propre* does not. This correlation is based on introspective judgments and data collected with a systematically controlled questionnaire. Here, the main facts will be presented; the methodology of the questionnaire is described in the appendix. The consequences on binding theory will be examined in chapter 3.

The following contrasts show that inanimate possessor *son propre* needs to be c-commanded by its antecedent while animate possessor *son propre* does not:

- (75) a. [L'horloge interne]_i suit son_i (propre) rythme indépendamment du rythme social.
 '[The internal clock]_i follows its_i (own) rhythm independently of the social rhythm.'
- b. Le fonctionnement de [l'horloge interne]_i détermine son_i (*propre) rythme indépendamment du rythme social.
 'The functioning of [the internal clock]_i determines its_i (*own) rhythm independently of the social rhythm.'

- (76) a. Paul_i a sauvé sa_i propre maison des flammes ainsi que la maison des voisins.
 'Paul_i saved his_i own house and the neighbors' house as well.'
 b. Le courage de Paul_i a sauvé sa_i propre maison des flammes ainsi que la maison des voisins.
 'Paul_i's courage saved his_i own house from the fire and the neighbors' house as well.'

In (75), the antecedent *l'horloge interne* ('the internal clock') is inanimate and when it c-commands *son propre rythme* ('its own rhythm'), *propre* is acceptable as in (a), but when it does not c-command it as in (b), the sentence with *propre* is degraded. However in (76), the antecedent *Paul* is animate, and in this case, the sentence is grammatical whether Paul c-commands *sa propre maison* ('his own house') or not. Moreover, the explicit presence of alternatives to the possessor in all four examples guarantees that we deal with possessor *propre* (this will hold for all examples of this subsection). Therefore, these contrasts illustrate that inanimate possessor *son propre* requires a c-commanding antecedent.

Moreover, the same contrasts hold when the antecedent is not a subject, which shows that *son propre* is not subject-oriented.

- (77) a. J'ai lavé [la fontaine]_i avec sa_i (propre) eau par souci d'économie.
 'I washed [the fountain]_i with its_i (own) water out of concern for saving water.'
 b. J'ai lavé les rebords de [la fontaine]_i avec sa_i (*propre) eau par souci d'économie.
 'I washed the edge of [the fountain]_i with its_i (*own) water out of concern for saving water.'
- (78) a. J'ai déjoué [le voleur]_i avec sa_i (propre) arme, et non la mienne.
 'I foiled [the thief]_i with his_i (own) gun, not mine.'
 b. J'ai déjoué les intentions [du voleur]_i avec sa_i (propre) arme, et non la mienne.
 'I foiled the intentions of [the thief]_i with his_i (own) gun, not mine.'

Thus in (a), the antecedent of *son propre* is the object, but *son propre* is acceptable whether it is inanimate as in (77) or animate as in (78). But in (b), the antecedent is contained in the

object so that it does not c-command *son propre*, and in this case, the sentence is grammatical with *son propre* only when it is animate.

Furthermore, not only does the antecedent need to c-command *son propre* when it is inanimate, but it also needs to be local, i.e. in the same clause as *son propre* (locality will be examined in detail in chapter 3).

- (79) a. [Cet ordinateur]_i nécessite sa_i propre batterie.
'[This computer]_i requires its_i own battery.'
b. [L'ordinateur]_i signale qu'il ne faut jamais remplacer sa_i (*propre) batterie par celle d'un autre ordinateur.
'[The computer]_i indicates that one shouldn't replace its_i (*own) battery by the battery of another computer.'
- (80) a. [La maîtresse]_i présente son_i propre projet de voyage et celui de Pierre.
'[The schoolmistress]_i presents her_i own trip plan and Pierre's.'
b. [La maîtresse]_i se demande si les élèves hésiteront entre son_i (propre) projet de voyage et celui proposé par Pierre.
'[The schoolmistress]_i wonders whether the pupils will hesitate between her_i (own) trip plan and the one proposed by Pierre.'

Thus in (79), the inanimate antecedent *cet ordinateur* ('this computer') licenses the use of *son propre* when it is in the same clause as illustrated in (a), but not when it is not in the same clause as in (b). However in (80), *son propre* can have the animate *la maîtresse* ('the schoolmistress') as antecedent whether they are clausemate or not.

The same holds if *son propre* is not part of the object, but of the subject of an embedded clause:

- (81) a. [Cette auberge]_i met ses_i (propres) chambres à disposition ainsi que celles de particuliers.
'[This inn]_i makes its_i (own) rooms available and those of private individuals as well.'
b. [Cette auberge]_i bénéficie du fait que ses_i (*propres) chambres sont plus spacieuses que celles des auberges des alentours.
'[This inn]_i benefits from the fact that its_i (*own) rooms are more spacious than the rooms of the neighboring inns.'

- (82) a. Loïc_i préfère son_i (propre) studio à celui de ses amis.
 'Loïc_i prefers his_i (own) studio to his friends'.
 b. Loïc_i se réjouit du fait que son_i (propre) studio est mieux insonorisé que celui de ses amis.
 'Loïc_i is delighted about the fact that his_i (own) studio is better soundproofed than his friends'.'

The contrasts are similar if the subordinate clause is not a complement but an adjunct:

- (83) a. [Cette montagne]_i est autant célèbre pour son_i (propre) sommet que pour celui que l'on peut y voir lors de son ascension.
 '[This mountain]_i is as famous for its_i (own) summit as for that visible while climbing it.'
 b. [Cette montagne]_i attire beaucoup de gens parce que son_i (*propre) sommet est l'un des sommets les plus escarpés du pays.
 '[This mountain]_i attracts many people because its_i (*own) summit is one of the steepest summits in the country.'
- (84) a. Laure_i est fière de sa_i (propre) moralité et de celle de son mari.
 'Laure_i is proud of her_i (own) morals and her husband's'.
 b. Laure_i n'aura aucun problème parce que sa_i (propre) moralité compensera celle de son mari.
 'Laure_i will not have any problem because her_i (own) morals will compensate her husband's'.'

Furthermore, inanimate *son propre* also differs from animate *son propre* in this respect if it occurs in a small clause:

- (85) a. [Le tremblement de terre]_i a été autant dévastateur du fait de ses_i (propres) conséquences que de celles du manque d'organisation.
 '[The earthquake]_i has been devastating as much due to its_i (own) consequences as those of the lack of organization.'
 b. [Le tremblement de terre inattendu]_i a rendu les villageois furieux contre ses_i (*propres) conséquences et celles du manque d'organisation.
 '[The unexpected earthquake]_i made the villagers furious with its_i (*own) consequences and those of the lack of organization.'
- (86) a. Mireille_i explique sa_i (propre) souffrance et celle de sa famille.
 'Mireille_i explains her_i (own) suffering and her family's'.
 b. Mireille_i a rendu les voisins indifférents à sa_i (propre) souffrance et à celle de sa famille.
 'Mireille_i made the neighbors indifferent to her_i (own) suffering and that of her family.'

In both sentences, *son propre* appears in the small clause in (b) while the antecedent is outside of it. This makes *propre* unacceptable when the antecedent is inanimate as in (85), but not when it is animate as in (86).

In sum, this set of examples shows that clausemateness is a relevant criterion for inanimate (vs. animate) possessor *son propre*. More generally, it suggests the correlation between locality and inanimacy for possessor *propre*. I will examine in chapter 3 how this correlation allows us to better evaluate locality and which exact notion of locality is required to further account for the distribution of inanimate possessor *son propre*.

4.2. Possessum *son propre*: no correlation between locality and inanimacy

Based on both a traditional data collection and a quantitatively controlled questionnaire, we have observed in the previous section that possessor *son propre* needs to be locally c-commanded by its antecedent if it is inanimate, but not necessarily if it is animate. The following contrast between three sentences illustrates and summarizes this point:

- (87) a. [Ce pont]_i dispose de son_i (propre) architecte.
'[This bridge]_i has its_i (own) architect.'
- b. [Ce pont]_i a l'air très fragile. Son_i (*propre) architecte a reçu moins de moyens que les autres architectes de la région.
'[This bridge]_i looks very fragile. Its_i (*own) architect got less means than the other architects of the area.'
- c. [Cet enfant]_i a l'air très perturbé. Sa_i (propre) mère passe moins de temps à la maison que les autres mères de la classe.
'[This child]_i looks very disturbed. His_i (own) mother spends less time at home than the other mothers of the children in the class.'

(a) and (b) exhibit inanimate antecedents to *son propre*; only (a) is acceptable with *propre*, because unlike (b), the antecedent locally c-commands *son propre*. Conversely, (b) and (c) both present long distance non c-commanding antecedents, but contrast with respect to the

animacy of the antecedent; only (c) is acceptable with *propre*, because the antecedent is animate.

But crucially, this correlation between locality and inanimacy does not hold when *son* combines with possessum *propre*. As shown by the following example, possessum *son propre* need not be locally c-commanded by the antecedent even when it is inanimate.

- (88) [Ce pont]_i a l'air très fragile. Son_i (propre) architecte a demandé un contrôle de sécurité.
'[This bridge]_i looks very fragile. Its_i (own) architect asked for a safety check.'

Thus (88) contrasts with (87)b in that the relevant alternatives do not target the possessor, but the possessum: here, the architect of the bridge is compared to other individuals – not necessarily architects as in (87)b – that would be more likely to ask for a safety check. And this difference correlates with a contrast of acceptability for *propre*: in both (88) and (87)b, the antecedent is inanimate and does not locally c-command *son propre*, but *propre* is acceptable under the possessum reading in (88) but not under the possessor reading in (87). There is therefore no correlation between inanimacy and locality for possessum *propre*: unlike possessor *propre*, possessum *propre* does not require locality nor c-command of the antecedent since neither is satisfied in (88) but the sentence can contain *propre* though.

This does not mean that there is no constraint on the position of the antecedent with respect to possessum *propre*. First, the same conditions apply as for the pronoun *son*: discourse considerations are at stake, which precludes the availability of certain antecedents. For instance in the following sentence, *son* like *son propre* can only take *le nouveau musée* ('the new museum') as an antecedent, probably because it is the topic (but I will not go into the details here).

- (89) [Le nouveau musée]_i a été construit près [du pont]_j. Son_{i/*j} (propre) architecte avait pourtant déconseillé cet emplacement.
 '[The new museum]_i has been constructed near [the bridge]_j. Its_{i/*j} (own) architect had yet advised against this site.'

Also, possessum *propre* seems sometimes to be subject to intervention effects:

- (90) a. [Ce pont]_i a donné lieu à une multitude de légendes sur sa construction. Je me méfie de son_i (??propre) architecte à ce propos.
 '[This bridge]_i gave rise to a lot of legends concerning its construction. I distrust its_i (??own) architect on this topic.'
 b. [Ce pont]_i a donné lieu à une multitude de légendes sur sa construction. Son_i propre architecte a répandu plus d'un mensonge à ce sujet.
 '[This bridge]_i gave rise to a lot of legends concerning its construction. Its_i own architect spread more than a lie about this topic.'

Thus *propre* is ungrammatical in (a) where *je* ('I') intervenes but not in (b).

However, this is not always the case: in the following sentence, *on* ('one', 'people') intervenes between possessum *son propre* and its antecedent, but *propre* is acceptable though.

- (91) a. Médée_k veut qu'on tue ses_k propres enfants !
 'Medea_k wants that one kills her_k own children!'
 b. Le pont_k bénéficie du fait qu'on ruine son_k propre architecte !
 'The bridge_k benefits from the fact that one ruins its_k own architect!'

The exact constraints on the sentential distribution of possessum *propre* need further investigation, but the important point here is that with respect to binding requirements, possessum *son propre* crucially differs from possessor *son propre*: unlike the former, the latter is subject to locality, i.e. it requires a locally c-commanding antecedent, when it is inanimate.

5. Conclusion

In this chapter, I have strived to construct a map of the different distributions and uses of *propre*, and to classify its properties along the relevant dimensions. Specifically, we have examined the complex DP-internal distribution of *propre*, the different readings of prenominal *propre*, and its effects on the distribution of the possessive pronoun *son* when it combines with it.

We have reached a first step in the unification of the complexity of *propre* by proposing a unique lexical entry for *propre* and a syntactic analysis deriving the diverse DP-internal distributions of *propre*. The second step will be achieved in chapter 2, which will aim at deriving the various readings of *propre* from different interactions with focus.

Also, we have observed in this chapter that the possessive pronoun *son* when combined with *propre* imposes specific requirements on its antecedent. Specifically in the case of possessor *propre*, there is an interaction between locality and inanimacy: inanimate possessor *son propre*, unlike its animate counterpart, must be locally bound. We will see in chapter 3 how this difference in behavior between animate and inanimate possessor *son propre* will shed light on binding theoretic issues.

However, possessum *son propre* is not subject to such constraints: there is no interaction between locality and inanimacy in the case of possessum *propre*. Since the main difference between possessor and possessum *propre* relies on focus as we will see in more details in the next chapter, the difference between them in terms of locality underscores a systematic interaction between binding and focus.

Such an empirical link between binding and intensification has already been documented (cf. a.o. König and Siemund: 2005): in many languages from diverse languages families, the

elements that serve as reflexives are either identical to the elements serving as adnominal intensifiers (e.g. English *himself*, Chinese *ziji*) or partially overlap with adnominal intensifiers (e.g. Malayalam *avan tanne*, Dutch *zichzelf*). But this link between intensification and binding is usually claimed to be morphologically accidental or historically driven (cf. a.o. Bergeton and Pancheva: 2004 for English *himself*); more radically, Bergeton (2004) argues for the independence between binding and intensification. The behavior of *son propre* clearly demonstrates the presence of a synchronic link between binding and focus: first, as we have seen, *propre* combines with *son* in a compositional way (*son propre* does not form an opaque lexical entry separate from *son*); second, *propre* induces two main focus-based interpretations (possessor and possessum readings) and anaphoric properties only arise when the possessor, i.e. the referent of the antecedent, is targeted by focus. This recasts the question of the interaction between binding and focus in a synchronic light, which will would be worth investigating further in future work.

6. Appendix: Questionnaire (possessor *son propre*: correlation between inanimacy and locality)

The contrast between animate and inanimate possessor *son propre* depending on clausemateness has been tested with a systematically controlled questionnaire: the results have confirmed hypotheses coming from a traditional data collection using introspective judgments and informal surveys.³¹

³¹ For more details about the advantages and problems of quantitative methods in research in syntax and semantics, see a.o. Cowart: 1997; Myers: 2009; Gibson and Federenko: 2010.

The questionnaire presents three conditions relying on the contrast between *son* and *son propre*, that between animate and inanimate possessors and the syntactic position of the antecedent with respect to the possessive. The goal is to check the relevance of animacy for possessor *son propre* depending on the position of the antecedent. The control condition based on *son* is necessary to independently compare animate and inanimate *son* in the absence of *propre* in function of the position of the antecedent. Actually, it turns out that there is a contrast between animate and inanimate *son* when the antecedent is not clausemate; but crucially, there is an additional contrast when *propre* is present, which makes the point.

The details of the questionnaire will now be presented: the design and material, the procedure and the results.

6.1. Design and material

The questionnaire was made accessible on a dedicated website hosted by the LSCP (Laboratoire de Sciences Cognitives et Psycholinguistiques, Paris) and designed by Chemla.³²

It consisted of 120 target sentences including two main variables: the nature of the possessive (*son/son propre*) and the animacy of the antecedent (animate/ inanimate). This created four conditions: A: animate *son*, B: inanimate *son*, C: animate *son propre* and D: inanimate *son propre*.

Moreover, the four conditions were represented in 9 different syntactic contexts (the following examples only illustrate the condition *son propre*/animate; note that explicit

³² Thanks to Emmanuel Chemla who gave me access to the website that he created and manages.

alternatives to the possessor are mentioned in the sentences to make the possessor reading salient, which is the only reading to be considered here), so that the design was actually 2x2x9.

1- the antecedent (subject of the clause) locally c-commands *son propre* (in the object of the same clause) [CC: "**c-command**"]

Ex.: *L'instituteur a rénové sa propre salle et celle de son collègue.*

'The teacher renovated his own classroom and his colleague's.'

2- the antecedent (genitive of the subject of the clause) does not c-command *son propre* (in the object of the same clause) [NCCSg: "**no c-command, subject genitive**"]

Ex.: *Les pertes de mémoire du vieillard agissent autant sur son propre caractère que sur celui des infirmières.*

'The old man's memory losses affect as much his own mood as the nurses' mood.'

3- the antecedent (subject of the complement clause of the subject noun) does not c-command *son propre* (in the object of the same clause) [NCCSc: "**no c-command, subject complement clause**"]

Ex.: *Le fait que Luc soit si prévoyant a sauvé de la faillite son propre magasin ainsi que celui de son frère.*

'The fact that Luc is so far-sighted saved his own store and his brother's as well from bankruptcy.'

4- the antecedent (genitive of the object of the clause) does not c-command *son propre* (in a second object of the same clause) [NCCO: "**no c-command, object**"]

Ex.: *J'ai compris les talents du cuisinier à l'odeur de son propre repas et de celui de son apprenti.*

'I realized the talents of the cook based on the smell of his own meal and the meal of his apprentice.'

5- the antecedent (subject of the main clause) non-locally c-commands *son propre* (in the subject of the complement clause of the main verb or its complement noun *fait* 'fact') [NLS: "**no locality, subject**"]

Ex.: *Jeanne espère que sa propre fête sera aussi bien réussie que celle de Noé.*
'Jeanne hopes that her own party will be as successful as Noe's.'

6- the antecedent (subject of the main clause) non-locally c-commands *son propre*
(in the object of the complement clause of the main verb or its complement noun *fait* 'fact')
[NLO: "no locality, object"]

Ex.: *Sylvie souffre du fait que les médecins négligent sa propre maladie à cause de la maladie de sa sœur.*
'Sylvie suffers from the fact that the doctors disregard her own disease because of her sister's.'

7- the antecedent (subject of the main clause) non-locally c-commands *son propre*
(in the subject of the adjunct clause of the main verb) [NLSadj: "no locality, subject of adjunct clause"]

Ex.: *Ce boulanger a reçu un prix parce que ses propres croissants représentent les meilleures ventes de croissants de l'année.*
'This baker received a prize because his own croissants represent the best croissant sales of the year.'

8- the antecedent (subject of the main clause) non-locally c-commands *son propre*
(in the object of the adjunct clause of the main verb) [NLOadj: "no locality, object of adjunct clause"]

Ex.: *La fleuriste sourit parce que les clients préfèrent ses propres bouquets à ceux de sa concurrente.*
'The florist smiles because the clients prefer her own bunches of flowers to her competitor's.'

9- the antecedent (subject of the main clause) c-commands *son propre* (object in the small clause) [SC: "small clause"]

Note that the subject of the small clause is always a plural inanimate to avoid any intervention effect.

Ex.: *Ce propriétaire immobilier a rendu les alarmes incendies obligatoires dans ses propres bâtiments et dans les bâtiments attenants.*

'This home owner made the fire alarms mandatory in his own buildings and in the adjoining buildings.'

The sentences were separated in two lists (60 sentences/list): every sentence including *son propre* in one list contained *son* in the other list. Therefore, a sentence with *son propre* and the same sentence with *son* could be contrasted across participants without any participant hearing the two versions (which would have caused repetition effects).

Ex.: *L'instituteur a rénové sa propre salle et celle de son collègue.* (list 1)

L'instituteur a rénové sa salle et celle de son collègue. (list 2)

'The teacher renovated his (own) classroom and his colleague's.'

In all sentences, animates were proper names (e.g. *Julie*) or common nouns such as short descriptions (e.g. *le boulanger* 'the baker'). Organizations or machines were avoided for inanimates, because they are known to behave like animates in certain respects. Animals were not used for either category.

The order of the sentences was randomized within each list except for the first two sentences: first, a training sentence was presented so that the participant could get used to the task; then, a uncontroversially good sentence (called 'basis') involving *son propre* was presented, so that each participant could start with the same basis (*Jérôme comprend mieux son propre pays que celui de son ami* 'Jérôme understands his own country better than his friend's.'). Afterwards, the 60 target sentences (8 sentences by context)³³ were presented

³³ NCCSg and NCCSc were meant to belong to the same condition since they both represented the case with no c-command; therefore, they included 4 sentences each (thus 8 sentences for the context NCCS); CC, which was *a priori* less problematic also included only 4 sentences, in the perspective of keeping the task as short as possible and thus manageable.

separately and in a randomized order. No filler was included and the task was made explicit to the participants (grammaticality judgment task about possessives); I chose to do so to keep the length of the task reasonable (no more than 30 minutes). Since the number of target sentences had to be high given the number of conditions, it was impossible to add fillers at the standard minimum ratio of 1:1; with twice as many sentences, the task would have taken more than 30 minutes, which is considered too long for participants to remain concentrated and give reliable judgments during the whole task. Moreover, the nature of the task (grammaticality judgments) did not require the presence of fillers: informal checking suggested that awareness that the study involved *son* and *son propre* did not facilitate any strategy on the part of linguistically naive participants (based on c-command or animacy) that would yield the obtained results.

6.2. Procedure

This was an unsupervised judgment task. 86 French monolingual native speakers of French participated in the experiment (43 subjects/list). The link to the website and the password to access the experiment were sent to them by email. By clicking on the link, they could directly enter the questionnaire after typing in the password. First, they were presented instructions explaining the task: they had to give their intuitive judgments about different sentences by positioning a cursor on a continuous line going from *mauvais* 'bad' (corresponding to 0; but 0 was not apparent) to *naturel* 'natural' (corresponding to 100; but 100 was not apparent). I chose to present them a continuous scale so that the whole range of judgments was available (this methodology has been validated by several studies,

e.g. by Chemla and Spector 2011). The following picture illustrates what the line looks like once you click on it at about 75% good.



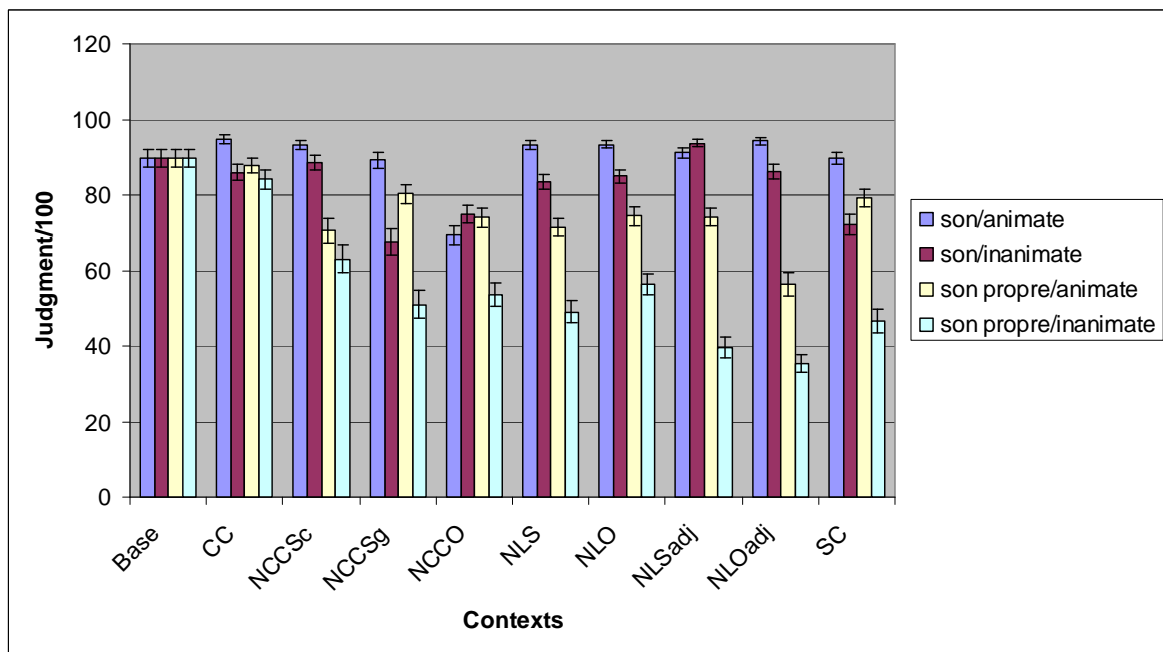
It was specified that the judgments are not meant to be prescriptive (no good or bad answer), and an example (not involving *son propre*) was provided to illustrate three kinds of judgments, i.e. three different points on the continuous scale (these sentences actually corresponded to bad, intermediate and natural sentences even if the continuous line did not make these classifications apparent). But the whole range of the scale was available in the actual target sentences.

Moreover, my assumption was that it is the contrast among judgments that is significant; that's why I focused on the contrasts between the judgments of the relevant sentences rather than taking into account absolute judgment scores.

6.3. Results

The results were calculated using SPSS and Excel software. One subject was excluded from further analysis because (s)he did not give any judgments for a third of the sentences. Moreover, judgments beyond 2 standard deviations across subjects were discarded, as well as all the judgments for one item that was pragmatically infelicitous. The mean of all the remaining judgment scores (out of 100) was calculated in the 9 syntactic contexts, for each condition (A: *son/animate* antecedent; B: *son propre/inanimate* antecedent; C: *son/animate* antecedent; D: *son propre/inanimate* antecedent). The results are reported in the following table and graph.

Mean	<i>son/ animate</i> antecedent	<i>son/ inanimate</i> antecedent	<i>son propre/</i> <i>animate</i> antecedent	<i>son propre/ inanimate</i> antecedent
Base	89,65	89,65	89,65	89,65
CC	94,71	85,88	87,77	84,11
NCCSc	93,34	88,41	70,67	63
NCCSg	89,28	67,59	80,22	50,95
NCCO	69,43	74,96	74,1	53,57
NLS	93,195	83,56	71,47	49,03
NLO	93,25	84,87	74,38	56,26
NLSadj	91,2	93,78	74,12	39,76
NLOadj	94,25	86,31	56,47	35,30
SC	89,76	72,20	79,25	46,56



A repeated measures ANOVA³⁴ across the nine syntactic contexts revealed a main effect of condition ($p < 0.01$), a main effect of context ($p < 0.01$) and a significant interaction between context and condition ($p < 0.01$).

A repeated measures ANOVA on each of the nine contexts also showed a main effect of condition (CC: $p = 0.013$; NCCSc: $p < 0.01$; NCCSg: $p < 0.01$; NCCO: $p < 0.01$; NLS: $p < 0.01$; NLO: $p < 0.01$; NLSadj: $p < 0.01$; NLOadj: $p < 0.01$; SC: $p < 0.01$).

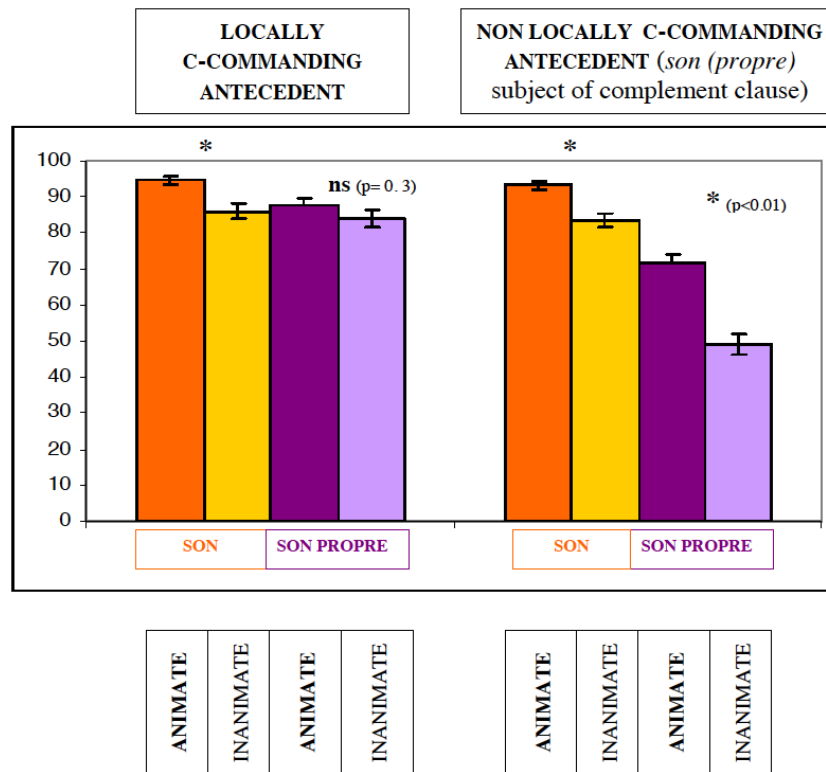
T-tests between pairs of conditions within each context revealed that most contrasts are significant (shaded cells):

	CC	NCCSc	NCCSg	NCCO	NLS	NLO	NLSadj	NLOadj	SC
A-B	$p < 0.01$	$p = 0.045$	$p < 0.01$	$p = 0.079$	$p < 0.01$	$p < 0.01$	$p = 0.075$	$p < 0.01$	$p < 0.01$
A-C	$p = 0.004$	$p < 0.01$	$p = 0.003$	$p = 0.125$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$
A-D	$p = 0.001$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$
B-C	$p = 0.769$	$p < 0.01$	$p = 0.008$	$p = 0.630$	$p < 0.01$	$p = 0.001$	$p < 0.01$	$p < 0.01$	$p = 0.012$
B-D	$p = 0.753$	$p < 0.01$	$p = 0.001$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$
C-D	$p = 0.298$	$p = 0.115$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$	$p < 0.01$

These statistical results are not sufficient to support the hypothesis of a difference between inanimate *son propre* and animate *son propre*: it would have been directly demonstrated if only the pairs C-D but not the pairs A-B had been significantly different in the expected contexts (all of them except CC). But the difference A-B is also significant in most conditions,³⁵ as illustrated below for the context where the possessive is subject of a complement clause.

³⁴ In its simplest form, ANOVA (analysis of variance) provides a statistical test of whether or not the means of several groups are all equal. ANOVAs are useful in comparing three or more means while t-tests compare two means.

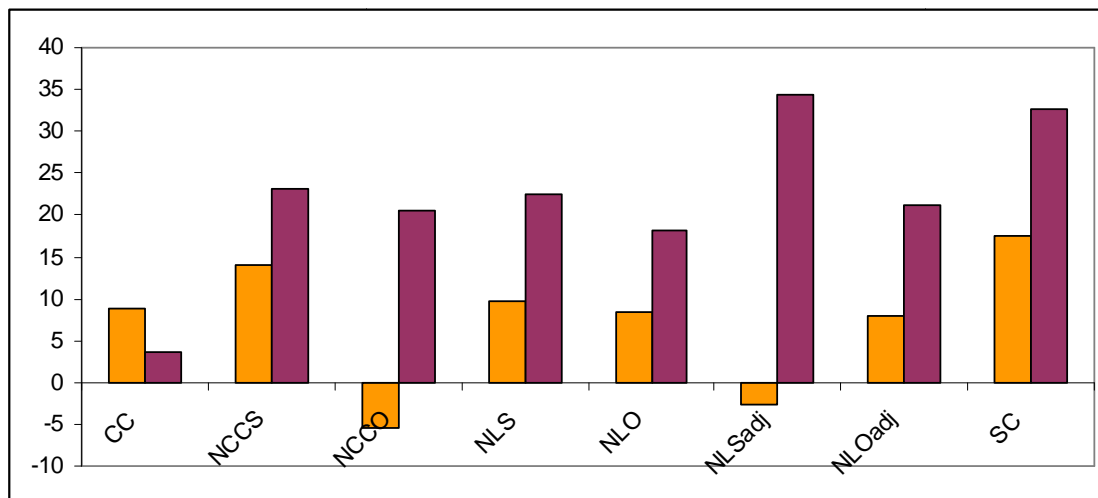
³⁵ This result does not directly concern the goal of this study; it is however interesting to notice that the animacy of the antecedent makes a difference in the acceptability of the pronoun *son*. This would be worth further investigating.



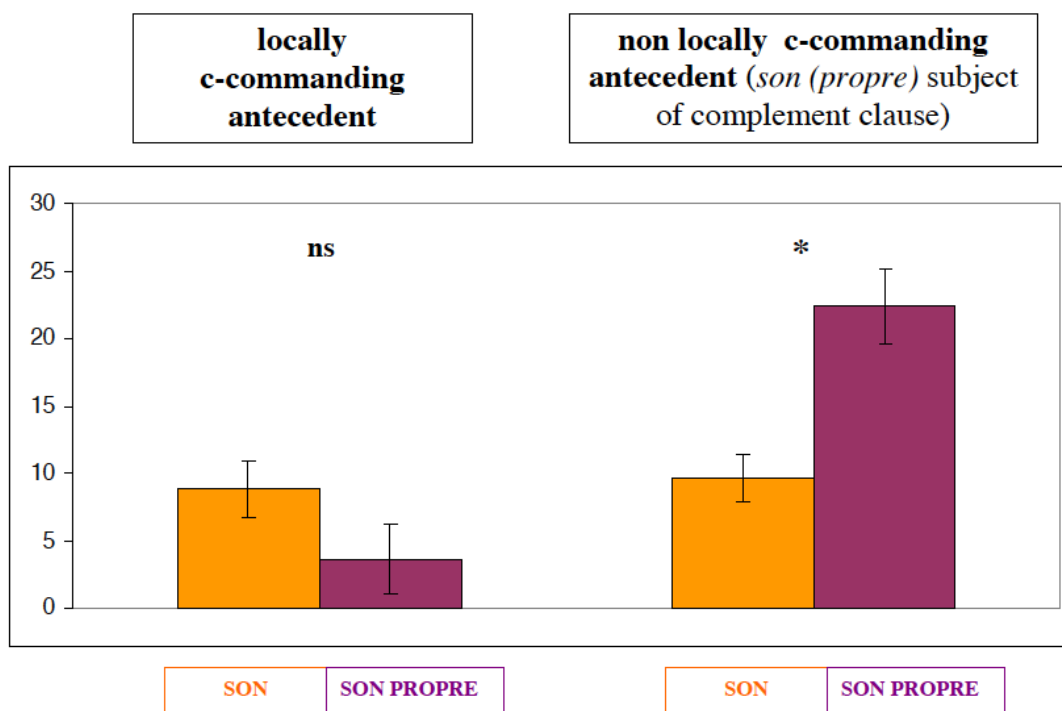
That's why it was necessary to compare the two differences (A-B and C-D) to check if the difference C-D is significantly bigger than the difference A-B.

The relevant t-tests show that all these differences are indeed significant, which supports the hypothesis. The following table and graph therefore display the crucial results for the study:

	CC	NCCS	NCCO	NLS	NLO	NLSadj	NLOadj	SC
(C-D)- (A-B)	p=0.098	p=0.014	p<0.01	p<0.01	p=0.004	p<0.01	p=0.001	p=0.001



As illustrated below for the same context as above, the important result is that the difference between the contrast in animacy (animate *minus* inanimate) for *son* and that for *son propre* is significant in non-local contexts but not in local contexts.



Chapter 2 Deriving the different readings of prenominal *propre*

1. Roadmap

The goal of this chapter is to try to understand how the different meaning contributions of *propre* can arise given the hypothesis that there is a unique lexical entry for *propre*.

I will thus propose an analysis for the different readings of prenominal *propre* that have been described in section 3 of chapter 1. Recall that three main types of reading were presented: restrictive *propre*, possessor *propre* and possessum *propre*. As the aim is here to derive all these readings in a unified way, i.e. without postulating homonymy, the variety of readings can only come from elsewhere. I will argue that they arise through the presence of focus, which can induce alternatives in several ways.

The problem in a nutshell can be described as follows. There is a unique syntactic structure composed of the very same lexical items. The different readings can only come from what else differs between them, namely:

- (i) the impact of different accent distribution (related to focus), or different interpretations of the same accentual pattern (through focus projection),
- (ii) the properties of the context in which these structures are uttered.

To evaluate how factor (i) can contribute to creating the relevant readings, we need to understand the relationship between accent (a phonological property) and focus (an interpretive property) and in particular how accent on a certain constituent can lead to

focus alternatives on this or some other constituent. To this end, I will discuss focus in section 3 of this chapter. I will first review the main existing theories of focus (section 3.2) namely Rooth's (1985, 1992), Schwarzschild's (1999) and Büring's (2006, 2008), discussing some of their strengths and weaknesses and conclude in section 3.3. by extending one of them (Rooth's) to include a mechanism by which the presence of an accented constituent can induce focus alternatives on a different constituent (focus projection). These will serve as a basis for deriving the kind of alternatives that are found with *propre* in possessor and possessum *propre* structures.

The relevance of factor (ii) becomes clear when adding *propre* to a structure seems not to affect the truth conditions of the utterance containing it in the context in which it is uttered. A consequence of Chomsky's (1995) economy principle of "Full Interpretation" is the hypothesis that any element with content must make a meaning contribution to the utterance containing it. What then licenses the presence of *propre*? This question, I will argue, goes to the heart of why focus *must* be involved in such contexts. Were focus not involved, the presence of *propre* would make no meaning contribution and would thus not be licensed. With focus involved, alternatives consistent with the theory of focus discussed in section 3 are evoked which lead to *propre* making, directly or indirectly, an interpretive contribution.

The particular implementation of Chomsky's Full Interpretation principle is a "principle of minimization" proposed in Schlenker (2004) which I present in section 2.1, informally illustrating its effects in various cases, namely those independently motivating it (section 2.1.1) and next possessor *propre* (section 2.1.2) and possessum *propre* (section 2.1.3).

Section 4 is a detailed look at how the various readings of DPs with *propre* are derived (restrictive *propre* in section 4.1, possessor *propre* in section 4.2 and possessum *propre* in section 4.3.) by marrying the internal syntax of *propre* DPs, the theory of focus developed in section 3, and the principle of minimization discussed in section 2. Section 3.4 examines some further readings.

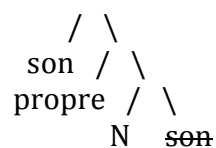
As we will see, it is the behavior of possessor *propre* that will lead me to propose a refined theory of focus, and the case of possessum *propre* will provide an argument for enriching the structures involved by postulating the existence of an implicit scalarity operator E similar to overt *even* (section 4.3.2.).

2. Basic elements of the analysis: economy and focus

Throughout, it is hypothesized that there is a unique *propre*. Recall that in chapter 1, the following was proposed for prenominal *propre*:

a- *propre* selects a possessive relation, more specifically a small clause headed by POSS: *propre* forms a constituent with the head noun, not with the possessive pronoun.

(1)



b- *propre* indicates that the possessive relation it selects is the closest one: it is highest on a scale of specificity. Here is the lexical entry of *propre*:

(2) $[[\text{propre}]]^g = \lambda f_{e,et}. \lambda x_e. \lambda y_e. f = \text{POSS}$ and $f(x, y) = 1$ iff y is related to x in the most specific way

Moreover, we observed that prenominal *propre* exhibits three main readings, restrictive *propre*, possessor *propre* and possessum *propre*. Unlike restrictive *propre*, possessor and possessum *propre* do not have truth-conditional effects but give rise to focus alternatives, respectively to contextual possessors or more expected possessa. Nevertheless, *propre* denotes a close, specific relation in all cases even in the presence of focus (cf. (60)).

To reconcile the uniqueness hypothesis (uniqueness of *propre*) with this observation (three readings), I suppose that the variety of readings comes from the presence of focus: *propre* is a single adjective that interacts with focus in different ways. The questions addressed in this section are as follows: first, why is focus mandatory under certain readings of *propre*? This is not generally the case with adjectives: usually, adjectives may be in focus, but need not be. Second, how does focus interact with *propre*?

2.1. Principle of minimization

To answer the first question, a pragmatic principle of minimization will be appealed to: the general idea is that when *propre* does not alter the truth conditions of the sentence it occurs in, it must contribute to the felicity conditions of the sentence,³⁶ and this is satisfied by the presence of focus. In other terms, focus justifies the presence of non truth-conditional *propre*, which thereby acquires a contribution in the sentence.

According to Schlenker's principle of minimization *Minimize Restrictors!* (2004: 3), "a definite description *the A B* is deviant if A could be dropped without affecting (i) the denotation of the description, and (ii) its various pragmatic effects". It is presumably a

³⁶ This is close to Chomsky (1986)'s Full Interpretation Principle, according to which every element of PF and LF (more generally: of any interface) must receive an appropriate interpretation, that is, must be licensed in the relevant sense. This is also close to Katzir (2007)'s maxim of manner.

special case of a Gricean principle, probably what Levinson (1998) calls the 'Maxim of Minimization', which he states as the following injunction: "Produce the minimal linguistic clues sufficient to achieve your communicational ends". For instance, *the small (American) President* is deviant if it is assumed that there is a single (American) President, as *small* contributes neither to (i) nor to (ii). Similarly, *Mary's tall mother* is deviant unless one assumes that Mary has several mothers (i) or the height of Mary's mother is likely to produce a significant pragmatic effect in the context (ii).

If we apply this principle to *propre*, it means that if *propre* does not have any truth-conditional effect, it should have a pragmatic effect.

2.1.1. Principle of minimization: relevance

Pragmatic effects can be of several kinds. First, non-restrictive adjectives, which do not have any truth-conditional effect, can in general play a pragmatic role by drawing the addressee's attention to relevant pieces of information. Relevance can correspond to various rhetorical functions, like explanation for instance in (3) (examples from Tim Leffel: 2012).

- (3) a. The savanna is a **beautiful** place to visit—many **colorful** cheetahs live there.
b. # The savanna is a **dangerous** place to visit—many **colorful** cheetahs live there.

As mentioned by Leffel, (a) and (b) are truth-conditionally equivalent but (b) is odd because the fact that cheetahs are generally colorful is irrelevant to the danger of the savanna; however, the non-restrictive adjective *colorful* is relevant in (a) because it justifies the statement that the savanna is beautiful.

The same holds in French:

- (4) Ma mère, Parisienne, ne supporte pas les insectes.
'My mother, who is Parisian, cannot stand insects.'

The non-restrictive adjective *Parisienne* ('Parisian') justifies the statement: the fact that my mother is from the capital explains why she is not used to nature and thus does not like insects.

Such a theory of relevance applies to non-restrictive *propre*. In the following sentence, I assume that only one mother is at stake, so that *ma mère* ('my mother') and *ma propre mère* ('my own mother') designate the same individual and *propre* is not truth-conditional.

- (5) Bien sûr que j'aime ma propre mère !
'Naturally, I love my own mother!'

Here, *propre* is relevant in explaining why love is natural in this case: it is because your mother is your own that you love her. *Propre* like any non-truth-conditional adjective can support a pragmatic theory of relevance.

2.1.2. Principle of minimization: focus (possessor *propre*)

Most readings of *propre* cannot simply be derived using the mere theory of relevance as they crucially involve focus. Focus can be argued to correspond to a second possible kind of pragmatic effect: if an element that does not have any truth-conditional effect is in focus, it will affect the felicity conditions of the sentence by inducing alternatives. This is for instance what Eckardt (2001) assumes for German *selbst* ('himself'). According to her (2001: 382), as *selbst* denotes the identity function, it does not have any truth-conditional effects, but only in focus will it contribute to the meaning of the sentence: "While *selbst* does not contribute anything to the meaning of the sentence, it will become meaningful exactly if it is in focus: focused *selbst* will, like any other focused item, evoke focus

alternatives that will enter in the meaning of the respective focus construction". For instance in the following sentence, *selbst* does not alter the truth conditions of the sentence as it denotes the identity function, but induces focus alternatives to the king by being stressed:

- (6) Der König SELBST öffnete die Gartentür.
'The king HIMSELF opened the garden door.'

Similarly, possessor *propre* gets a pragmatic effect by inducing alternatives to the possessor: under the possessor reading, *propre* does not alter the truth conditions, but by receiving focal stress, it acquires a contribution to the felicity conditions of the sentence. The details will be laid out below.

2.1.3. Principle of minimization: focus and relevance (possessum *propre*)

Furthermore, both the theory of relevance and focus can be combined to explain the pragmatic effect of non-truth-conditional *propre*. This is the case of possessum *propre* in particular, as will be explained in the next sections. The general idea will be that *propre* – due to its meaning characterizing a possessive relation as most specific – can be relevant in justifying why a constituent containing *propre* is associated with a focus operator: its superlative meaning contributes to placing the possessive DP it is part of at the end of a scale, which justifies association with scalar operators. More specifically, in the case of association with *even* or *E*, *propre* gives the justification for unexpectedness; in the case of association with *only*, *propre* accounts for exclusivity; and in the case of contrastive focus, *propre* can provide the criterion for contrast.

To summarize, I appeal to a pragmatic principle of minimization to derive the non-truth-conditional readings of *propre*. Restrictive *propre* simply impacts the truth conditions of the sentence due to its lexical entry expressing the idea that the possessive relation is most specific. But under the other readings, *propre* does not change the truth conditions of the sentence it occurs in, but its felicity conditions: the principle of minimization attributes either a truth-conditional or a pragmatic effect to adjectives. This pragmatic effect can come from relevance, focus or both. The following table summarizes how the principle of minimization applies to the main readings of *propre*.

	Restrictive <i>propre</i>	Possessor <i>propre</i>	Possessum <i>propre</i>
Principle of minimization	Truth-conditional effect	Pragmatic effect: focus (induces alternatives to the possessor) [son PROPREF noun]	Pragmatic effect: focus and relevance (justifies why the possessive DP is associated with focus operators) [son propre NOUN] _F

2.2. Interaction of *propre* with focus

The different pragmatic effects of possessor and possessum *propre* rely on the different target of focus, i.e. whether *propre* is focused itself (possessor *propre*) or part of a constituent in focus (possessum *propre*) as will be shown. This leads us to the second question of this chapter: how does focus interact with *propre*?

2.2.1. The problem of possessor *propre*

This question will require a detailed examination of the theory of focus, especially due to the problematic case of possessor *propre*. To give a preview of the issues, here are the predictions of a basic theory of focus:

- The case of possessum *propre* is not problematic: *propre* is not stressed, but the head noun is (cf. a below); due to focus projection rules, this directly predicts that the possessive DP has focus alternatives, which corresponds to alternatives to the possessum (cf. b below). The unexpectedness effect is a further issue that will be examined later on in this chapter.

- (7) a. Médée a tué ses propres ENFANTS.
'Medea killed her own CHILDREN.'
b. Médée a tué x.
'Medea killed x.'

- However, the case of possessor *propre* presents issues: in this case, it is *propre* that is stressed (cf. a below). Problematically, this predicts that it is *propre* that has alternatives, which corresponds to the meaning of restrictive *propre*, not possessor *propre* (cf. b below):

- (8) a. Paul a raccompagné ses PROPRES enfants.
'Paul drove home his OWN children.'
b. Paul a raccompagné ses x enfants.
'Paul drove home his x children.'

In (b), the form of the alternatives corresponds to those of restrictive *propre* (cf. *sa voiture professionnelle* 'her **professional** car' vs. *sa propre voiture* 'her **own** car'), not those of possessor *propre* (cf. *ses propres enfants* 'his own children' vs. *les enfants de la voisine* 'the neighbor's children'). Basic projection rules are not expected to apply to an adjunct like *propre*.

The meaning of possessor *propre* should derive from the following focus value:

- (9) Paul a raccompagné x enfants/les enfants de x.
'Paul drove home x children/x's children.'

But this representation raises several problems for current theories of focus: how can a non-constituent (namely *son propre*) be replaced by a variable for focus interpretation? How can focus project higher than stressed *propre* given that *propre* is an adjunct? Which

focus domain needs to be considered? An examination of the exact content of projection rules will prove to be crucial for accounting for possessor *propre*.

With these problems in mind, I will now review the theory of focus. This will allow me to provide hypotheses about how to derive the different readings of *propre*; in particular, some modifications of the theory of focus will be proposed to account for possessor *propre*.

2.2.2. Readings and focus targets

Before that, let me present the logical possibilities of focusing the possessive DP (e.g. *ses propres enfants* ('his own children'), namely Paul's own children) in an elementary theory of focus where F-marked elements are to be replaced by alternatives; the focus theory will of course be refined, but this provides a preview of my strategy. The goal of the rest of the chapter will be to understand which representation(s) the three main readings of *propre* correspond to:

Representation	Reading
ses propres enfants	The children that are his own, namely his biological children
ses_F propres enfants	Paul's own children as compared to someone else's own children
ses_F propres_F enfants	Paul's own children as compared to someone else's children
ses_F propres_F enfants_F	Paul's own children as compared to other individuals
ses_F propres enfants_F	Paul's own children as compared to someone else's relatives (e.g. Julie's own nephews)
ses propres_F enfants	Paul's own children as compared to Paul's children that are not his own (e.g. his biological vs. his adoptive children or his stepchildren)
ses propres_F enfants_F	Paul's own children as compared to other individuals associated with Paul (e.g. his neighbors)
ses propres enfants_F	Paul's own children as compared to other relatives of Paul's (e.g. Paul's own nephews)

Here are what effects the principle of minimization predicts for *propre* in each case:

Representation	Prediction of principle of minimization
ses propres enfants	Truth-conditional effect or/and relevance
ses_F propres enfants	Truth-conditional effect or/and relevance
ses_F propres_F enfants	Truth-conditional effect or/and focus
ses_F propres_F enfants_F	Truth-conditional effect or/and focus and/or relevance
ses_F propres enfants_F	Truth-conditional effect or/and relevance
ses propres_F enfants	Truth-conditional effect or/and focus
ses propres_F enfants_F	Truth-conditional effect or/and focus and/or relevance
ses propres enfants_F	Truth-conditional effect and/or relevance

Finally, here is a preview of the final upshot.

Representation	Type of <i>propre</i>
ses propres enfants	Restrictive <i>propre</i> (truth-conditional) or relevant
ses_F propres enfants	Restrictive <i>propre</i> (truth-conditional) or relevant
ses_F propres_F enfants	Possessor <i>propre</i>
ses_F propres_F enfants_F	Possessum <i>propre</i>
ses_F propres enfants_F	Restrictive <i>propre</i> (truth-conditional) or relevant
ses propres_F enfants	Restrictive <i>propre</i> (truth-conditional) or not truth-conditional
ses propres_F enfants_F	Subcase of possessum <i>propre</i>
ses propres enfants_F	Subcase of possessum <i>propre</i>

3. Theory of focus

3.1. The questions

The term *focus* is used to describe prosodic prominences serving pragmatic and semantic functions such as contrastiveness. The notion of alternatives is crucial for virtually any theory of focus. For many theories (cf. a.o. Bolinger 1961; Jackendoff 1972; Rooth 1985, 1992; Krifka 1992; Schwarzschild 1999; Büring 2008...), contrastiveness is the core of focus, while for others (cf. a. o. Halliday 1967, Chafe 1976, Vallduví & Vilkuna 1998...), it

only corresponds to one type of focus, the other main one being newness.³⁷ I will here concentrate on the former type of theories, i.e. unifying theories of focus that subsume all instances of focus (including newness) under the concept of contrastiveness or alternatives.

Informally, this means that within a certain domain, the meaning of focused elements is replaced by type-identical alternatives. This raises several questions to be answered by a theory of focus, which spans phonology, syntax, semantics and pragmatics; they will be illustrated by the example below.

- (i) How to identify the focused element, i.e. the element to be replaced by alternatives? In particular, what is the relation between accent and focus?
- (ii) How to identify the alternatives? Which element(s) can replace the focused element?
- (iii) What does it mean to be an alternative?
- (iv) In which domain should the alternatives be considered?

Let's consider the following sentence where the focused element is in bold:

- (10) John said that he saw **the little girl**.

Question (i) amounts to asking which clues must be used to identify *the little girl* as the focused constituent. In English, these clues are phonological and basically correspond to stress. The problem is to know which element must be stressed so that *the little girl* is understood as focused. Empirically, we observe that the stressed element here is *girl*,

³⁷ See for instance Kratzer and Selkirk (2009) for a discussion on the difference between the two types of theories and their respective arguments.

which raises the issue of how to derive the focus target *the little girl* from the stressed word *girl*.

From a semantic perspective, if *the little girl* is focused, it means that it can be replaced by alternatives. This can be schematized using the variable *x*:

(11) John said that he saw *x*.

Question (ii) consists in asking by what we can replace *x*. What kind of element qualifies? In which way does it need to contrast with the focused element? How are context and discourse involved? Should the alternatives correspond to a specific set of elements present in or implied by the context? For instance, it seems that (10) is felicitous if a journalist and a dog are under discussion and could have been seen by John.

Question (iii) concerns the status of alternatives. Is their truth relevant? For instance, assuming that the alternative is the dog, does it mean that it is false that John said that he saw the dog? Or are there several readings depending on the truth of the alternatives (i.e. exclusive reading if they are false, additive reading if they are true)? Or do the alternatives correspond to other possible answers to a question under discussion, e.g. 'who did John say that he saw'?

Question (iv) raises the issue of how to delimit the domain for alternatives. For example, if we pick the journalist as an alternative, which of the two possible domains in (a) or (b) is to be considered?

- (12) (John said that (he saw x)).
- a. John saw the journalist.
 - b. John said that he saw the journalist.

For instance, (a) would be felicitous in a context where John said that he did not see the journalist, but the little girl; (b) applies to a situation where John did not say that he saw the journalist, but he said that he saw the little girl. The corresponding questions are as follows:

- (13) a. Who did John see?
b. Who did John say that he saw?

This pertains to both syntax and semantics: what impact on meaning will the delimitation of domain have? Are there syntactic constraints on the choice of domain, e.g. must it correspond to a proposition or can it be any constituent or even element? Also, this question leads to that of association with focus particles and that of how to integrate elements like *even* or *only* into the theory of focus.

I will now examine some influential theories of focus to see how they answer these questions. One theory rarely investigates all these questions, each theory generally concentrates only on one or several aspects of them.

3.2. Some influential theories of focus

3.2.1. Rooth (1985, 1992)

3.2.1.1. *Focus semantic value*

In Rooth's theory (alternative semantics), the alternatives correspond to the focus semantic value: in the semantic computation, focus values are added to ordinary semantic values corresponding to the usual denotations. Informally, the focus semantic value for a

proposition is the set of propositions obtainable from the ordinary semantic value by making a substitution in the position corresponding to the focused phrase. For instance, the focus semantic value for the proposition $[[\text{Mary}]_F \text{ likes Sue}]$ is the set of propositions of the form 'x likes Sue', while the focus semantic value for $[\text{Mary likes } [\text{Sue}]_F]$ is the set of propositions of the form 'Mary likes y'.

The focus semantic value is generalized: for any phrase A, Rooth notes the ordinary semantic value as $[[A]]^\circ$ and the focus semantic value as $[[A]]^f$. $[[A]]^f$ is the set of elements of the same type as and including $[[A]]^\circ$. For instance, the focus value of Mary $[[\text{Mary}]]^f$ is a set of individuals $\{x / x \in D_e\}$.

Moreover, the set of alternatives is pragmatically constrained. Rooth defines a covert semantic variable C which corresponds to the set of alternatives and needs to find an antecedent in the context by anaphora resolution: C is a free variable whose value is to be fixed pragmatically as will be explained below. Rooth also introduces a focus interpretation operator \sim (squiggle operator) adjoined to a phrase A at LF (on the right) and thereby delimiting the domain for considering alternatives.

$$(14) \quad \begin{array}{c} \wedge \\ \text{Antecedent}_i / \backslash \\ A \quad \sim C_i \end{array}$$

The squiggle operator introduces the presupposition that:

- C is a subset of $[[A]]^f$ containing $[[A]]^\circ$ and at least one other element (set case), or
- C is an element of $[[A]]^f$ distinct from $[[A]]^\circ$ (individual case)

For instance in the previous example, the squiggle operator is the sister of [Mary likes [Sue]_F] and thus presupposes that the value of C belongs to the set of propositions { Mary likes x / x ∈ D_e}:

$$(15) \quad \begin{array}{c} \text{TP} \\ / \backslash \\ \text{Mary likes SUE}_F \quad \sim C \end{array}$$

The antecedent of C can take several forms. First (set case), assuming question-answer congruence (i.e. roughly consistency between question and answer), C can correspond to a question, e.g. *who does Mary like?* or *does Mary like Sue or John?*, which is salient in the discourse. Indeed, based on Hamblin (1973), the denotation of a question is the set of propositions that qualify as answers, so that the denotation of the question *who does Mary like?* is the set of propositions {Mary likes x / x ∈ D_e} and that of *does Mary like Sue or John?* is the set of propositions {Mary likes Sue, Mary likes John}. In this case, C is a subset of the focus value of the proposition *Mary likes SUE*, namely the set of propositions {Mary likes x / x ∈ D_e}.

C can also be an element of the set (individual case). The following dialogue could illustrate this case:

- (16) A: Mary likes Jenn.
 B: No, Mary likes SUE.

Here, the antecedent that gives the value to C is the proposition *Mary likes Jenn*, which is an element of the focus value of *Mary likes SUE*, i.e. the set of propositions {Mary likes x / x ∈ D_e}.

Here is a second example from Rooth to illustrate the theory. Note that as in other examples, he does not specifically justify the position of the squiggle operator (“focus is interpreted at the N’ level”; 1992: 87).

(17) An [AMERICAN_F farmer]~ met a [CANADIAN_F farmer]~.

The focus semantic value of *American farmer* (and symmetrically of *Canadian farmer*) is the set of properties of the form *P farmer* where P is an intersective modifier. *American farmer* is an element of the focus value of *Canadian farmer*, and vice-versa; these two phrases serve as antecedent of each other for the variable C introduced by focus interpretation.

3.2.1.2. *The case of focusing adverbs*

In the case of focusing adverbs (1992: 77) such as *only* or *even*, C corresponds to the domain of quantification for these adverbs, and the squiggle operator still introduces the same presupposition with respect to C.

(18) Mary is only [READING_F *the Recognitions*]~.

The focus value of the VP is the set of all properties of the form ‘R-ing *the Recognitions*’. Based on the lexical semantics of *only*, what (18) means is that if Mary has a property of the form ‘R-ing *The Recognitions*’, then it is the property ‘reading *The Recognitions*’. Given the infinity of properties of the form ‘R-ing *The Recognitions*’ including trivial ones and non-trivial ones that one does not wish to consider, a pragmatic process of constructing a domain of quantification needs to add further information by restraining the set: for instance, it can take C to be the set with just the two elements *reading The Recognitions* and *understanding The Recognitions*.

3.2.1.3. *The case of multiple foci*

Finally, note that in Rooth's theory, evaluation of focus alternatives is not selective (this will matter when examining multiple foci and possessum *propre*): Rooth's squiggle operator evaluates all foci in its scope unselectively; alternatives triggered by these foci are not passed on for the construction of alternative sets higher in the structure. Kratzer (1991) and Wold (1996) depart from this aspect of Rooth's theory by introducing variables to derive focus semantics values. Each Logical Form A is associated with an ordinary semantic interpretation $\llbracket A \rrbracket^g$ and a focus semantic interpretation $\llbracket A \rrbracket^{g,h}$. The focus feature is indexed and functions as a variable from a set of distinguished variables. A second variable assignment function h interprets distinguished variables. The ordinary semantic value of a focused constituent is the same as the interpretation of that constituent without a focus feature. The focus semantic interpretation is the value assigned to the distinguished variable by the variable assignment h .

- (19) a. $\llbracket \text{John}_{F1} \text{ left} \rrbracket^g = \lambda w. \text{John left in } w$
b. $\llbracket \text{John}_{F1} \text{ left} \rrbracket^{g,h} = \lambda w. h(1) \text{ left in } w$

Focus-sensitive operators evaluate the contribution of focus; in this framework, they bind the distinguished variables. This departure from Rooth's theory is particularly relevant in the case of multiple foci (cf. a. o. Krifka 1991; Beck 2006; Beck and Vasisht 2009...) since the two views make different predictions: in Rooth's theory, association with focus should never be possible across an intervening operator, but in Kratzer (1991)'s or Wold (1996)'s frameworks, this is possible since focus evaluation is selective. It is ultimately an empirical question to know if sentences like the following (from Rooth 1996, where *also* associates with an element across *only*) are available.

- (20) We also₁ only₂ introduced [Marilyn]_{F2} to [Bob Kennedy]_{F1}.
'Another person who we introduced only Marilyn to is Bob Kennedy.'

To sum up, Rooth's theory mainly concentrates on the semantics of focus and the crucial notion he makes use of is that of alternatives without appealing to the notion of contrast. Alternatives are defined both semantically (set of type-identical elements) and pragmatically (only part of the set that has a contextual antecedent is relevant).

But Rooth does not discuss the relation between focus and accent, nor the potential constraints on the insertion of the squiggle operator, i.e. on the domain of focus.

Schwarzschild (1999)'s theory tackles the first question, while Büring (2008) addresses the second one as we will see.

3.2.2. Schwarzschild (1999)

3.2.2.1. Givenness

Schwarzschild's goal is less to present a theory of focus than to characterize the relation between accent placement and discourse. The main idea is that the primitive of the theory of discourse appropriateness is not novelty, but givenness. Reconciling novelty focus and contrastive focus (and in fact all kinds of focus),³⁸ Schwarzschild only needs two constraints to account for accent placement (as will be seen below in detail, Schwarzschild is inspired by Selkirk (1984)'s F-projection rules; the basic rule is that an accented word is F-marked):

- (21) Givenness (1999: 155): if a constituent is not F-marked, it must be given.

- (22) AvoidF (1999: 156): F-mark as little as possible, without violating givenness.

³⁸ For instance, there is no need of specific rules of F-marking in question/answer pairs.

According to the first constraint, lack of prominence indicates givenness, and the second one has the effect of requiring a speaker to refrain from accenting material that is given. Thus lack of prominence directly correlates with givenness, but prominence indirectly correlates with novelty: an F-marked expression does not necessarily represent new information since old parts can be assembled in new ways.

This is based on the following definition of givenness in (23) that will be illustrated with example (24); the core intuition is that the utterance is already entailed by the discourse.

- (23) Givenness (1999: 151): An utterance U counts as GIVEN iff it has a salient antecedent A and
- a. if U is type e, then A and U corefer;
 - b. otherwise: modulo \exists -type shifting, A entails the Existential F-Closure of U.

The operation that generalizes the notion of entailment is existential type shifting where F-marked constituents are replaced by variables (i.e. existential F-closure). This is where Schwarzschild's theory relates to Rooth's theory: F-marked constituents must have alternatives, and these alternatives (of any category) are contextually determined. But while Rooth semantically defines the alternatives by introducing focus values and further constrains their set by context, Schwarzschild directly designates the alternatives as elements entailing F-marked elements; while Rooth assumes that focus provokes interpretation, Schwarzschild establishes givenness as the mainstay of his theory. Unlike Rooth's squiggle operator, the givenness constraint must apply to F-less material; also, unlike the \sim operator that applies once, the givenness constraint can apply to successive nodes of a tree. But both theories appeal to anaphoric recoverability, whose mechanisms

are not completely understood: the way to determine salient antecedents (overt or not) is relegated to pragmatics.

Let's consider a simple example to see how Schwarzschild's theory works.

- (24) Context: A: John ate a green apple.
 B: No, he ate a RED apple.

Here, *red* is accented and is therefore F-marked. Moreover, F-marking does not project in this case (according to Selkirk (1984)'s rules as we will see, since *red* is an adjunct) so nothing else is F-marked and thus the rest must be given:

- (25) John ate a [RED]_F apple.

Indeed, at the sentence level, *John ate a green apple* entails $\exists Y$ [John ate a Y apple], where the F-marked element has been replaced by a variable. Givenness is similarly satisfied for every constituent. For instance, with respect to the VP, *John ate a green apple* entails $\exists Y$ [$\exists x$ [x ate a Y apple]], or with respect to the NP, it entails $\exists Y$ [$\exists x$ [(Y apple)(x)]].

To give another example (cf. 1999: 150), in a discourse where *see John* has been used (e.g. someone saw John), *see [MARY]_F* should count as given and hence the VP itself need not be marked.

- | | |
|---|---------------------------------|
| (26) \exists -type shifting of [<i>see John</i>] yields: | $\exists y$ [y see John] |
| Replacing F-marked part of <i>see [MARY]_F</i> with variable: | [see X] |
| \exists -type shifting of [<i>see X</i>] yields: | $\exists y$ [y see X] |
| \exists -binding F-variables gives: | $\exists X \exists y$ [y see X] |
| $\exists y$ [y see John] <i>ENTAILS</i> | $\exists X \exists y$ [y see X] |

3.2.2.2. F-marking and projection rules

As I said, Schwarzschild is inspired by Selkirk (1984)'s work on F-marking but he discusses her syntactic F-projection rules:

(27) F-assignment rules (Schwarzschild 1999: 166, from Selkirk (1984) and Rochemont (1986))

Basic F-Rule: an accented word is F-marked.

F-Projection:

- a. F-marking of the head of a phrase licenses the F-marking of the phrase.
- b. F-marking of an internal argument of a head licenses the F-marking of the head.

The basic F-rule treats a pitch accent as a morpheme which appears on a word having the feature F. The rules of F-projection define possible paths from an accented word up to an F-marked c-commanding or dominating node. The rule in (a) is an instance of feature percolation, and the rule in (b) is meant to capture asymmetries observed between heads and arguments.

But Schwarzschild shows that this system of F-projection is too restrictive and concludes the following:

(28) F-marking is syntactically unconstrained. (1999: 167)

His argumentation is based on Büring (1996):

(29) Context: Jack said the American President drinks. What did Gilles_i say? (1999: 168, from Büring 1996)

- a. He_i said the FRENCH President drinks.
- b. HE_i said the FRENCH President drinks.

The problematic answer is (a). The discourse requires, and the phonology justifies, an F-marker on *French*. But F-projection rules do not allow for any higher F. Since *French* is not the internal argument of *President*, *President* should not be F-marked, which prevents any F-marking of higher phrases via projection. But this should semantically mean that the entire answer except *French* is given, requiring an antecedent that entails that Gilles said the X President drinks. Since this is not the case, the mentioned projection rules wrongly predict (a) to be infelicitous.

In fact, the embedded clause and the main verb are both given in the discourse. So according to Schwarzschild, the correct representation (obeying AvoidF) is as follows, since *Gilles said x* is entailed by the interrogative clause in the discourse; therefore, there is F-projection:

(30) He_i said [the [FRENCH]_F President drinks]_F.

But since it remains true that there are asymmetries in the accenting of heads and arguments, Schwarzschild proposes the following violable constraint:

(31) HEADARG: A head is less prominent than its internal argument. (1999: 170)

This accounts for the accenting of the following example, where both the verb and its complement are F-marked, but only the argument is accented:

(32) Context: What did Mary do?
A: She [[praised]_F [her [BROTHER]_F]_F].

Furthermore, Schwarzschild shows that we still need Foc-marking as defined by Selkirk (1996): a Foc-marked node is an F-node that is not immediately dominated by another F-marked node.

(33) FOC: A Foc-marked phrase contains an accent. (1999: 173)

This is illustrated by the following example:

(34) Context: What will they do if the American President resigns from the OSA?
They'll [nominate_F the FRENCH_{Foc} President]_F.

For all these reasons, Schwarzschild argues that F-projection is untenable but suggests the beginnings of an Optimality-Theoretic (cf. Prince and Smolensky: 1993) alternative account in which constraints like Givenness, AvoidF, Foc or HeadArg are violable and ranked with respect to one another.

Ultimately, this means with respect to F-markers that they have neither syntactic properties (cf. no projection rules) nor semantic properties (cf. only un-F-markedness corresponds to givenness). Schwarzschild concludes: “from the point of view of grammar overall, they are a nuisance... ultimately, they should be done away with.” (1999: 175).

3.2.3. Büring (2006, 2008)

3.2.3.1. Issues in Rooth (1992)’s and Schwarzschild (1999)’s theories

Rooth (1992)’s and Schwarzschild (1999)’s theories have been constructed from different perspectives: Rooth’s primary goal consists in providing a semantics to focus while Schwarzschild’s amounts to accounting for accent placement which gives the crucial role to the notion of givenness.

There remain issues in both theories. First, the exact content of F-marking and its relation to semantics, syntax and phonology is still unclear. In Rooth’s theory, F-marked elements are – roughly speaking – to be replaced by variables of the same semantic type (alternatives), so that F-marking seems to have a semantic content; but this theory does not explain how much is F-marked, i.e. what the relation is between phonology and F-marking. In Schwarzschild’s theory, F-marking does not have semantic content, it is only the complement of F-markedness that corresponds to givenness, so that F-marked elements can be either given or new; moreover, Schwarzschild shows that Selkirk’s projection rules are too restrictive and sketches an alternative account with an OT flavor, ultimately concluding about the “nuisance” of F-markingness in the theory; thus the phonological content of F-markedness is not clear either.

Second, neither of these theories provides a clear account of focus domain. In Rooth's theory, the focus domain, i.e. the domain in which alternatives are considered, corresponds to the sister of the squiggle operator. But Rooth does not explain how to determine the scope of his operator and rather seems to stipulate where to insert it in each example. On the contrary, Schwarzschild's theory does not use the notion of focus domain, but since the givenness constraint must apply to every node, this amounts to saying that every constituent is a focus domain, which ultimately deprives this notion of all meaning.

3.2.3.2. *Büring (2008) and focus domain*

Büring (2008) strives to address the second issue and proposes a way to determine focus domains, adding the constraint *Maximize F-Domains* to Schwarzschild's *AvoidF* constraint. It has the effect of building as many domains as possible, as big as possible, and containing F-marked as well as F-less constituents. This is based on a principle (close to Williams (1997): *Don't overlook anaphoric possibilities*) that says that it is good to have as many anaphoric constituents in a focus domain as possible. This constraint will make the whole sentence a focus domain, unless the entire sentence would then need to be F-marked.

The following example illustrates this idea.

- (35) Did Zelda's mom recommend Mike for the job?
 No, she recommended PAUL for the job.
- (36) a. [She recommended Paul_F for the job] ~ C
 b. *[She recommended Paul_F] ~ C for the job domain could be bigger
 c. *[She recommended Paul_F for the job_F] ~ C F could be avoided
 d. * She recommended Paul for the job domain could be bigger

3.2.3.3. *Büring (2006) and focus projection*

Concerning the first issue, i.e. the issue of F-marking, Büring (2006) like Schwarzschild (1999) tries to eliminate focus projection rules by marshalling more evidence against it. To this end, i.e. to know independently which nodes are in fact F-marked and compare them with accented elements, he uses the following theory of F-interpretation (2006: 2, from Selkirk 1996):

- (37) a. Focus of a sentence (FOC): an F-marked constituent not dominated by any other F-marked constituent.
b. FOC interpretation: 'A *wh*-question expression focuses a constituent, and an appropriate answer to *wh*-question must focus the same constituent.'

Based on that, Büring disproves the two types of focus projection rules (2006: 2):

- Vertical focus projection: F-marking of the head of the phrase licenses F-marking of the phrase.
- Horizontal focus projection: F-marking of an internal argument of a head licenses the F-marking of the head.

In other words, these rules say that F-marking on a phrase can never be licensed by an accent on an adjunct or specifier alone: only heads and arguments can project focus. But in fact, Büring shows that any subconstituent can project focus: he gives examples of projection from AP to NP (cf. (17), (29), (38)), from transitive subjects to CP (39) from indirect objects to VP (40), from adverbs to CP (41), from initial conjuncts to VP (42)... etc.

- (38) I know that John drove Mary's red convertible. But what did Bill drive?
He drove her BLUE convertible. (Büring, 1996)

- (39) Q: Why did Helen buy bananas?
A: [Because JOHN bought bananas]_{FOC}.

- (40) Q: Man warf Sinatra vor, er habe der Mafia Geld gegeben. Was hat Dean Martin getan, um nicht auch ein schlechtes Image zu bekommen? (German)

‘They accused Sinatra of having given money to the mob. What did Dean Martin do, to avoid having his image ruined, too?’

A: Er [hat der HEILSARMEE Geld gegeben]_{FOC}.

He has the salvation army money given

‘He gave money to the Salvation Army.’

(41) Q: Why were you so upset about missing the bus?

A: [Because one should NEVER miss the bus]_{FOC}.

(42) Q: What will you do if Bill doesn’t want to be hooked up with Mary?

A: I’ll [hook up JOHN and Mary]_{FOC}

Moreover, concerning horizontal focus projection, Büring shows that is an effect of the way prominence, rather than focus, is standardly assigned: if a larger constituent is to be made prominent, the default pattern for English (and other Germanic languages) happens to be such that predicates don’t receive a pitch accent if their argument(s) do (this is called *integration*).

(43) a. (news headline) [JOHNSON_F died_F]_{FOC}

b. (What’s that noise in the background?) [A DOG_F is barking_F]_{FOC}.

c. (Why are you in such a hurry?) [I’ve got a PLANE_F to catch_F]_{FOC}.

d. (Why are you late?) [I met_F a GIRL_F I knew_F]_{FOC}.

Thus, there is no need of focus projection rules but only one of focus prominence:

(44) Focus Prominence (FP) (cf. Truckenbrodt, 1995):

Focus needs to be maximally prominent.

A prosodic category C that contains a focussed constituent is the head of the smallest prosodic unit containing C.

Ultimately, this means that in this theory again, F-marking ends up being obsolete if the focus interpretation rules are conflated with the effect of focus prominence, which is more general since this system also accounts for accent placement outside of the focus (default prosody in prefocal structures); this theory provides a more subtle account of accent domain formation. It is less clear however how it deals with interpretation of focus since the interpretation rule (FOC) based on question-answer congruence seems stipulated. Also,

note an uncertainty with respect to Büring's other paper (2008): here, there is no mention of focus domains. Given that FOC is supposed to correspond to the *wh*-word of the counterpart question and can contain given elements, it seems that it corresponds to the focus domain as in (a) below. On the other hand, it is more intuitive to think that the whole proposition corresponding to the question is the domain in which to consider alternatives; this would mean that FOC is an intermediate level between F-marking and focus domain as in (b).

- (45) I know that John drove Mary's red convertible. But what did Bill drive?
 a. He drove [her BLUE_F convertible]~ C.
 b. [He drove [her BLUE_F convertible]_{FOC}]~ C.

In both cases, F-marked *blue* corresponds to what is replaced by a variable since it is new and has a contextual alternative *red*. But in (a), the alternatives are considered at the DP level (*her blue convertible vs. her red convertible*) while they are considered at the propositional level in (b) (*he drove her blue convertible vs. he drove her red convertible*); in (b), the FOC level additionally indicates that what is under discussion is not the color of a convertible, what Bill did or what happened, but what Bill drove. These issues are crucial for possessor *propre* as we will see.

3.2.3.4. *Büring (2008) and contrast*

Furthermore, both Rooth and Schwarzschild define a weak notion of alternative, which does not involve any contrast. But actually, examples provided by Wagner (2006) and Kehler (2005) argue for a stronger, contrastive notion of alternative (this will matter for possessum *propre*):

- (46) Mary's uncle, who produces high-end convertibles, is coming to her wedding. I wonder what he brought as a present.

- a. He brought a [CHEAP convertible].
- b. #He brought a [RED convertible]
- c. He brought a red convertible.

In this example from Wagner (2006), the challenge for Rooth and Schwarzschild is that (b) is predicted to be well-formed since the context provides an antecedent *high-end convertible* that is suitable: indeed under Rooth's theory, *high-end convertible* denotes a property belonging to the focus value of *red convertible* (set of properties of the form *X convertible*); in Schwarzschild's framework, it entails that $\exists Y [\exists x[(Y \text{ convertible})(x)]]$. Wagner argues that (b) is in fact infelicitous because an expression and its alternatives must contrast, and while *high-end convertible* and *cheap convertible* contrast, *high-end convertible* and *red convertible* do not. Wagner's theory is quite different from other theories by proposing that grammar marks G(ivenness) and not F(ocus), but Büring (2008) suggests that the contrast requirement could be added to older theories, in particular to Rooth's conditions. He tentatively frames the idea using the notion of issue: basically, the alternatives must form an issue (cf. *#Is the convertible that he brought a red convertible or a high end convertible?*).

The following examples from Kehler (2005) further support the need for the notion of contrast in the theory (and also the difference between one focus and two foci, and gives reasons to choose F-marking over G-marking).

- (47) John cited Mary, but. . .
 - a. he DISSED SUE.
 - b. ?he dissed SUE.

- (48) Fred read the menu and then. . .
 - a. he ordered a HAMburger.
 - b. #he ORDERed a HAMburger.

(a) is felicitous in (47) because John didn't quote Sue and didn't diss Mary while (b) is not acceptable in (48) because it is not correct that he didn't read a hamburger and didn't order the menu. We deal with two separate contrasts or issues in (47) (*did he diss Sue or did he quote Sue? And did he diss Sue or did he diss Mary?*) unlike (48) (*#did he order a hamburger or did he read a hamburger? And did he order a hamburger or did he order the menu?*) which is not captured by theories like Schwarzschild's. Each focus introduces an alternative relative to the ordinary meaning of its sister, even though that sister is itself focused. This also shows that we need to be able to selectively access foci in a domain as possible in Wold (1996)'s theory indexing foci as seen above.

(49) [John quoted Mary, but) [[he dissed_{F1} Sue_{F2}] ~₁] ~₂

Moreover, as shown by Wagner (2006), note that this argument on contrast demonstrates that not every constituent needs to be a focus domain. Consider the following variant on answer to (45):

(50) [He brought [a red convertible]_F]~

It is problematic if *red* needs to be a focus domain on its own as argued by Schwarzschild, because *red* neither has a salient antecedent nor is it contrastive (but *red convertible* in turn is contrastive, since it contrasts with other possible things the uncle could have brought). This supports the necessity of defining focus domains.

In sum, Büring shows some shortcomings of the two main theories of focus, i.e. Rooth's and Schwarzschild's: predictions about accenting need to be more fine-grained and encompass

non-focal accenting; something must be said about focus domain; and the notion of contrast is required to correctly define alternatives.

3.3. Starting hypotheses: calibrating focus and focus projection

Recall the questions I asked about focus in the perspective of understanding data with *propre*:

- (i) How to identify the focused element, i.e. the element to be replaced by alternatives, based on prosody? In particular, what is the relation between accent and focus?
- (ii) How to identify the alternatives? Which element(s) can replace the focused element?
- (iii) What does it mean to be an alternative?
- (iv) In which domain should the alternatives be considered?

Given my review of some of the literature, I will mainly adopt alternative semantics (cf. Rooth 1992) that attributes a semantics of focus based on the notion of alternatives, but I will amend it or complete it based on the shortcomings that have been identified, and also on the problems that *propre* will raise.

Concerning question (i), i.e. the relation between prosody and focus, it will be sufficient for me to adopt Schwarzschild (1999)'s idea that non F-marked constituents are given and to integrate into the theory projection rules *à la* Selkirk (1984) as modified by Schwarzschild (1999) and Büring (2006)'s observation before they give them up: focus can project from adjuncts. However, I cannot treat the general problem of focus projection as described by Schwarzschild and Büring here. Similarly, I cannot address prosodic marking of focus in

details for two reasons. First, as shown by Büring (2006), deriving all kinds of accenting requires a fine-grained study of the prosody of sentences, which is not my aim here. Moreover, prosody is different in French and English (see a.o. Jun and Fougeron: 2000 for a phonological model of French intonation), so that even if projection rules in fact hold, it is highly possible that they differ in French and English. Féry (2001) argues that focus is not marked at all by stress in French, but phrasing, which is indicated by lengthening or tonal movements. But it will be sufficient for the issues examined here to minimally assume that some F-marked element must be prosodically marked (e.g. by accent or phrasing).

Concerning questions (ii) and (iii), I will consider that the focused element (that I will F-mark) is the element that is to be compared with (true or false) alternatives under discussion. I will adopt Rooth (1992)'s view that these alternatives are semantically defined and pragmatically restrained, but I will add the notion of contrast advocated by Büring (2008) or Wagner (2006).

As for the issue of focus domain, I will follow Büring (2008) concerning the maximizing of focus domains. Nevertheless, I believe that this issue needs further investigation and I will try to use the phenomenon I study, i.e. how to derive the meanings of *propre*, to shed light on this question.

In sum, the theory of focus I will adopt mixes elements from Rooth (1992)'s, Schwarzschild (1999)'s and Büring (2006, 2008)'s theories. Based on the possessor reading of *propre*, I will propose a trivalent distinction between F-marking, FOC marking and focus domain. Here are the notations I will use as illustrated below for my initial simple example:

- the element to be replaced by a variable (focused element) will get the subscript F;

- the constituent containing all F-marked elements and corresponding to the *wh*-phrase of the question under discussion will be FOC-marked (FOC and F-markings are not distinguishable in the following simple example, but I will explain why to distinguish them when examining possessor *propre*);
- the prosodically marked element will be in capital letters;
- the focus domain will be in brackets and delimited by the squiggle operator.

(51) [John said that he saw [the little GIRL]_{F/FOC}] ~

4. *Propre* and focus

Recall that my goal in this chapter is to derive the different readings of *propre*. I have assumed that there is a unique lexical entry for *propre* and focus is involved due to the principle of minimization: the variety of readings comes from the presence of focus that can induce alternatives in several ways depending on the exact target of focus. Based on this hypothesis, I will examine in turn each reading that I described in chapter 1; furthermore, we will uncover readings that may be included or not in what I called restrictive, possessor and possessum *propre*; the classification of readings will therefore be refined and reviewed.

4.1. Restrictive *propre*

4.1.1. Truth-conditional *propre*

4.1.1.1. *Non-focused truth-conditional propre*

Recall that the main characteristics of what I called restrictive *propre* is that it has a truth-conditional effect: it is restrictive in the context in question.

This follows from the definition of restrictivity: a restrictive modifier shrinks the denotation of the noun it combines with. In the case of *propre*, which is restrictive,³⁹ this means that the denotation of *propre* intersects with the denotation of the possessive relation it selects: *propre* indicates that the relation is most specific. In pertinent contexts, this will give a truth-conditional effect to *propre*: *propre* contributes to identifying the referent of the possessive DP it is part of as follows:

- (52) (Context: Claire owns a personal car and also uses a professional car)
Claire_i a pris sa_i propre voiture.
'Claire_i took her_i own car.' (i.e. her personal car)

Here, *sa propre voiture* designates Claire's personal car, while *sa voiture* can either denote Claire's personal car or Claire's professional car.

Thereby, restrictive *propre* obeys the principle of minimization since it satisfies the first condition: it affects the denotation of the description it is part of.

³⁹ Given its lexical meaning and its syntax, *propre* is always restrictive (but not necessarily restrictive in context as I explain here). This is corroborated by the fact that if not followed by *à-PP*, *propre* cannot cooccur with *d'ailleurs* ('besides') which characterizes non-restrictive elements:

- 17) *J'ai découvert son identité, d'ailleurs propre.
'*I discovered his identity, own for that matter.'

This is however possible when *propre* appears to be completed by *à-PP*:

- 18) J'admire cette organisation, d'ailleurs propre à cette école.
'I admire this organization, peculiar to that school for that matter.'

But as I hypothesized in chapter 1, *à-PP* is in fact not a complement to *propre*, but part of the small clause it selects. The difference between these two examples may come from the fact that *d'ailleurs* phrases constitute an island from which parts of the small clause cannot escape.

4.1.1.2. *Focused truth-conditional propre*

Nevertheless, this does not mean that truth-conditional *propre* cannot also have pragmatic effects. In particular, like any restrictive adjective (e.g. *personnel* ‘personal’), it can be focused:⁴⁰

- (53) (Context: Claire owns a personal car and also uses a professional car)
Claire_i a pris sa_i [*propre*]_F voiture.
‘Claire_i took her_i [*own*]_F car.’ (i.e. her personal car vs. her professional car)

Here, *propre* is focused: according to alternative semantics, the focus meaning of *propre* is a set of properties matching *propre* in type and constrained by the context; here, the relevant set of alternatives contains the property *professional* present in the discourse. The difference between focused truth-conditional *propre* and unfocused truth-conditional *propre* is that alternatives must be under discussion in the former case; in the latter case, the same alternatives may be present in the context as in (52) (cf. Claire’s professional car), but they do not need to be explicitly under discussion.

Furthermore, in the case of focused truth-conditional *propre*, it is not sufficient that the alternatives are under discussion, they must also obey the condition of contrast (cf. Wagner (2006)’s and Büring (2008)’s arguments in favor of contrast reviewed above). In (53), it is

⁴⁰ However, non-restrictive adjectives cannot receive intonational focus according to Umbach (2006) as illustrated below:

- 19) a. In Anna’s garden there are colorful flowers.
b.# In Anna’s garden there are [*COLORFUL*]_F flowers.

In this English version of Umbach’s German example, the adjective *colorful* is not restrictive since given world knowledge, the set denoted by *colorful flower* is the same as the set denoted by *flower* (all flowers are colorful). This explains why focusing *colorful* is odd: since focus evokes alternatives, focus on *colorful* would mean that non-colorful flowers are under discussion, which contradicts world knowledge.

Based on the following example, we may however wonder whether non-restrictive really cannot be focused in case they are relevant:

- 20) A: Did you know that the Chinese invented everything hundred of years before everyone else?
B: The *INDUSTRIOUS* Chinese invented everything.

Here, *industrious* is not restrictive (according to B, all Chinese are industrious); nevertheless, it seems felicitous to focus it because it is relevant to the discussion. This would mean that the alternative (the non-industrious Chinese) belongs to possible worlds, not actual worlds, since in the context, all Chinese are actually industrious.

not sufficient that other cars in relation to Claire are under discussion, but the contextual alternative set of cars and Claire's own car must form an issue. *Professional* satisfies this condition since it implies that it is not owned by Claire, so it is an issue to ask whether the car is her own or professional. But just like Wagner (2006)'s example involving high-end and red convertibles, the following example is not felicitous unless the context is strongly accommodated:

- (54) #Claire n'a pas pris la voiture rouge, elle a pris sa [propre]_F voiture.
'#Claire did not take the red car, she took her [own]_F car.'

This sentence is only felicitous if we assume – or the context says – that the red car is a car that Claire is associated with but does not own: in this case only, it constitutes an issue to ask whether the car Claire took is her own or red.

4.1.1.3. Relevant truth-conditional propre

The previous examples show that truth-conditional *propre* can also have the pragmatic effect of inducing focus alternatives. Can it also have other pragmatic effects? In particular, can it be relevant?

The following example suggests that it can:

- (55) (Context: Paul's professional car has broken down.)
Pour montrer son zèle au patron, Paul a pris sa propre voiture pour sa mission.
'To show his zeal to the boss, Paul took his own car for his mission.'

Here, *propre* impacts the truth conditions of the sentence since it helps distinguish between Paul's personal car and Paul's professional car. *Propre* also has a relevance effect: it justifies the statement that Paul shows his zeal to his boss; the fact that the car Paul takes for his professional mission is his own demonstrates that he is particularly zealous.

4.1.1.4. Relevant and focused truth-conditional *propre*

Finally, truth-conditional *propre* can be both focused and relevant. The same example as above can exhibit focused *propre*:

- (56) (Context: Paul's professional car has broken down.)
Pour montrer son zèle au patron, Paul a pris sa PROPRE voiture pour sa mission.
'To show his zeal to the boss, Paul took his OWN car to go to work.'

The only difference is that in this case, Paul's professional car must be explicitly under discussion in the context.

In sum, what I called restrictive *propre* obeys the principle of minimization since it has a truth-conditional effect. In addition, it can also be focused and/or relevant.

Recall that by 'restrictive *propre*', I meant readings where *propre* is restrictive in context, therefore truth-conditional (henceforth, I will call it truth-conditional *propre*). But strictly speaking, even if it is restrictive, *propre* need not be truth-conditional;⁴¹ this is in particular the case of possessor and possessum *propre*, as we will see in the next sections. This is also the case of other readings that I have ignored so far and that I briefly present here.

4.1.2. Non-truth-conditional *propre*

4.1.2.1. Relevant *propre*

Recall example (5):

⁴¹ In this respect, only non-restrictive elements form a natural class: they are never restrictive, whether in principle or in context. However, restrictive elements may or may not be restrictive in context. Correlatively, only non-restrictive elements seem to be specifically marked by languages (i.e. non-restrictive relatives can have specific relative pronouns, e.g. *lequel* ('which') in French).

(57) Bien sûr que j'aime ma propre mère !
'Naturally, I love my own mother!'

In a stereotypical context, *propre* is not truth-conditional: I only have one mother. Therefore, it must follow the second condition of the principle of minimization. Its pragmatic effect is here relevance: the meaning of *propre* justifies the statement that it is natural to love my mother; it is because she is my own.

4.1.2.2. *Focused propre*

Similarly, non-truth-conditional *propre* can acquire a pragmatic effect by being focused:

(58) (Context: Paul has only one car, i.e. a personal car.)
Anne a pris sa voiture professionnelle pour aller au travail. Paul, lui, a pris sa PROPRE voiture.
'Anne took her professional car to go to work. As for Paul, he took his OWN car.'

In this context, *propre* does not impact the truth conditions since Paul only has one car: *his car* has to denote his personal car, just like *his own car*. But it is focused and thus has a pragmatic effect by inducing alternatives: specifically, *propre* alternates with *professional*.

4.1.2.3. *Focused and relevant propre*

Finally, non-truth-conditional *propre* can be both focused and relevant:

(59) (Context: Paul has only one car, i.e. a personal car.)
Anne a pris sa voiture professionnelle pour sa mission. Paul, lui, a pris sa PROPRE voiture pour montrer son zèle au patron.
'Anne took her professional car for her mission. As for Paul, he took his OWN car in order to show his zeal to the boss.'

This example combines the effects of (58) and (56).

To sum up, what I called restrictive *propre* in chapter 1 is strictly speaking truth-conditional *propre*: it impacts the truth conditions of the sentence by constraining the denotation of the noun it combines with in context; in addition, it can have pragmatic effects related to focus and/or relevance.

But even if it is restrictive, *propre* does not necessarily have truth-conditional effects. In that case, it must have pragmatic effects, i.e. it must be focused or/and relevant. The readings I have reviewed are summarized in the following table:

Type of <i>propre</i>	Principle of minimization	Basic representation	Example
Truth-conditional <i>propre</i>	Truth-conditional effect	son propre noun	(52) (Context: Claire owns a personal car and also uses a professional car) Claire a pris sa propre voiture. 'Claire took her own car.' (i.e. her personal car)
	Truth-conditional effect + relevance	son propre noun	(55) Pour montrer son zèle au patron, Paul a pris sa propre voiture pour aller au travail. 'To show his zeal to the boss, Paul took his own car to go to work.'
	Truth-conditional effect + focus	son propre _F noun	(53) Claire a pris sa PROPRE voiture. 'Claire took her OWN car.' (i.e. her personal car vs. her professional car)
	Truth-conditional effect + Focus + relevance	son propre _F noun	(56) Pour montrer son zèle au patron, Paul a pris sa PROPRE voiture pour aller au travail. 'To show his zeal to the boss, Paul took his OWN car to go to work.'
Non-truth conditional <i>propre</i>	Relevance	son propre noun	(57) Bien sûr que j'aime ma propre mère ! 'Naturally, I love my own mother!'
	Focus	son propre _F noun	(58) Anne a pris sa voiture professionnelle pour aller au travail. Paul, lui, a pris sa PROPRE voiture. 'Anne took her professional car to go to work. As for Paul, he took his OWN car.'
	Focus + relevance	son propre _F noun	(59) Anne a pris sa voiture professionnelle pour aller au travail. Paul, lui, a pris sa PROPRE voiture pour montrer son zèle au patron. 'Anne took her professional car to go to work. As for Paul, he took his OWN car to show his zeal to the boss.'

It emerges from this that the final classification will not distinguish between restrictive and possessor or possessum *propre*; rather, the primitive elements of classification will be the effects of *propre*, and what the target of focus is. In particular, possessor *propre* and possessum *propre* are in fact specific due to the content of the focus alternatives they induce; this gives rise to specific pragmatic effects. Let's turn to them.

4.2. Possessor *propre*

Recall the example of possessor *propre* that I presented in chapter 1:

- (60) Paul a raccompagné ses PROPRES enfants (et (pas) ceux de la voisine).
'Paul drove home his OWN children (and (not) the neighbor's).'

The main characteristic of this reading is that focused *propre* induces alternatives to the possessor (Paul's own children vs. the neighbor's children).

This section is devoted to refine the focus theories I have examined in order to be able to account for this reading; in other words, this reading shows certain shortcomings of such theories. First, I will adopt the idea presented by Schwarzschild (1999) and Büring (2008) (even if they end up casting doubt on it) that F-marking can project from an adjunct (given that *propre* seems to be an adjunct and we will need to project focus on *son propre* from accent on *propre*). Moreover, the reading of possessor *propre* suggests that a non-constituent (namely *son propre*) can be the target of focus (F-marked) in the sense that a non-constituent is replaced by a variable when considering alternatives (**his own children** alternates with **someone else's children**). I will argue that an intermediate level (FOC-marking) between F-marking and the focus domain is required to solve this problem.

Thus, it is the representation of possessor *propre* that will need investigation. Concerning its effects, they are straightforward. Given the fact that possessor *propre* is focused and

thus induces alternatives to the possessor, it obeys the second condition of the principle of minimization (pragmatic effect, which comes from focus). That's why possessor *propre* need not be truth-conditional as we saw in chapter 1. But it can: (60) is felicitous whether Paul also has adoptive children or stepchildren (his children that are not his own) or he only has biological children (his own children). Similarly, nothing prevents it from having an additional pragmatic effect related to relevance. As I will explain in more details when examining possessum *propre* (cf. p. 187), possessor *propre* can for instance justify association with scalar operators:

- (61) Julie a cambriolé son PROPRES appartement.
'Julie burglarized her OWN apartment.'

Here, focused *propre* induces alternatives to possessors (other people's apartment); in addition, it is relevant by justifying the unexpectedness effect of the sentence: it is because the apartment Julie burglarized is her own that it is unexpected that she did so.

4.2.1. The issues raised by possessor *propre*

In (60), informal examination of prosody suggests that focus is on *propre*. But we have just shown (cf. (53) or (58)) that focus on *propre* yields a reading distinct from a possessor reading: focus on *propre* induces alternatives matching *propre* in type, e.g. *professionnel* ('professional'). Focusing *propre* in (60) would imply that Paul drove home his own children as compared to her children that are not her own, e.g. his adoptive children or his stepchildren. But this is not what is meant here, Paul's children are not contrasted with other children of Paul's, but with someone else's children, namely the neighbor's children. Intuitively, this means that the possessive pronoun must also be replaced when

constructing alternatives: the intended alternatives to *her own children* under the possessor reading are not *her x children* but *x's children* or *the children of x*.⁴²

4.2.1.1. *Specificity of the reading*

But it does not mean that the reading is the same as when the possessive pronoun is focused. Recall the following paraphrase of (60):

- (62) Paul_i a raccompagné SES_i enfants.
'Paul_i drove HIS_i children home.'

There is a difference in interpretation between (60) and (62). The target in (62) corresponds to Paul's children that do not need to be his own: we could deal with his adoptive children or his stepchildren as compared to the neighbor's children; this is not possible in (60).

Conversely, the alternatives need to be someone else's **own** children in the following sentence, which also corresponds to a different reading:

- (63) Paul_i a raccompagné SES_i propres enfants.
'Paul_i a raccompagné HIS_i own children.'

Here, the focus alternatives must be the neighbor's own children. On the contrary in (60), the alternatives need not correspond to the neighbor's own children, the neighbor's adoptive children or stepchildren would also qualify as alternatives. This is clearer in the following example:

⁴² Given that the possessive pronoun consists of a definite determiner and a possessor pronoun (*son* basically amounts to *le_lui*), it would be more precise to say that *les_lui propres enfants POSS* (the **him own** children POSS) contrasts with *les enfants POSS x*, i.e. *les enfants de x*, *les enfants à x* or *les_x enfants* ('x's children') depending on the form of POSS. In other words, it is not the possessive pronoun and *propre* that are to be replaced by alternatives, but rather, the possessor pronoun contained in the possessive pronoun and *propre*. I will ignore this detail for reasons of simplicity as it does not impact the argument.

(64) Je ne suis pas dans mon propre appartement en ce moment, je suis dans l'appartement de Julie.
'I am not in my OWN apartment right now, I am in Julie's apartment.'

Here, the salient reading is the possessor reading of *propre* and *Julie's apartment* is the relevant alternative to *my own apartment*. But clearly, the sentence is still felicitous if Julie does not own her apartment but rents it or even shares it.

To recapitulate, the possessor reading of *propre* does not only differ from the reading resulting from mere focusing of *propre*; it also differs from readings resulting from focusing of the possessive pronoun, whether *propre* is present or not: in the possessor reading of *propre*, *propre* is only part of the target, not of the alternatives; but if the possessive pronoun is focused, either *propre* is included in both the target and the alternatives or in neither.

4.2.1.2. Problem of constituency

All in all, it seems that semantically speaking, we need to replace both the possessive pronoun and *propre* by a variable - thus considering alternatives to *son propre* - to get the right reading. Given that *son propre* does not form a constituent (cf. syntax presented in chapter 1), this raises a question that does not explicitly appear in my review of the literature: does the focused element need to be a constituent?

4.2.1.3. Problem of focus domain

Following Rooth (1992) and assuming that *son propre* has to be replaced by a variable, we get one of the following representations for (64), depending on where we insert the squiggle operator:

- (65) a. Je suis dans [mon_F PROP_FRE_F appartement]~ C.
 I am in [my_F OWN_F apartment]~ C.
 b. [Je suis dans mon_F PROP_FRE_F appartement]~ C.
 [I am in my_F OWN_F apartment]~ C.

In (a), focus is interpreted at the DP level and at the propositional level in (b). In both cases, contextual alternatives are available, i.e. the DP *l'appartement de Julie* 'Julie's apartment' or the proposition *je suis dans l'appartement de Julie* 'I am in Julie's apartment' (assuming that we retrieve the proposition without negation, for instance by scoping the negation over the rest of the proposition). Note that in the second case, the alternative is false, while in the first case, the question of the truth of the alternative does not make sense. Semantically speaking, it is tricky to decide between these two representations, or even other representations where the squiggle operator is the sister of other constituents containing *mon propre* (e.g. PP, VP) as below; note that crucially, the squiggle operator cannot be the sister of *mon propre* since it is not a constituent.

- (66) a. Je suis [dans mon_F PROP_FRE_F appartement]~ C.
 b. Je [suis dans mon_F PROP_FRE_F appartement]~ C.

Other examples make it easier to decide between several focus domains. First, overt focus particles like *only* or *even* seem to delimit the domain.

- (67) a. Dr. Svenson only [rejected the proposal that [John_F] submitted]~ C. (from Rooth, 1996: 11)
 b. Dr. Svenson rejected only [the proposal that [John_F] submitted]~ C.
 (68) a. Medea killed even [[her children<sub>F]]~ C.
 b. Medea even [killed [her children_{F]]~ C.}</sub>

Other cases involving ellipses make the difference in meaning clearer:

- (69) I did not say that John loves [Mary_F] more than [Sue_F].
 a. I did not say that John loves [Mary_F] more than [John loves [Sue_F]].
 b. I did not say that John likes [Mary_F] more than [I said that John likes [Sue_F]].

While (a) is about comparing degrees of love (the domain is the embedded clause), (b) is about comparing number of mentions of love (the domain is the whole sentence).

But in (65), we have no such clues. We could try to identify the question under discussion,⁴³ i.e. *where are you? In which apartment are you?*, and apply Selkirk (1984)'s focus interpretation rule:

(70) FOC interpretation: 'A *wh*-question expression focuses a constituent, and an appropriate answer to *wh*-question must focus the same constituent.'

These questions would suggest that the focused constituent is the PP as in (66)a. But what does it mean to be the focused constituent in terms of Rooth's theory? Does it correspond to the focus domain? Since the topic under discussion is the whole proposition, it is not clear why we would not include the whole proposition in the focus domain. Does it correspond to the F-marked element to be replaced by variables and contrasting with alternatives? Since (65) is about apartments, we do not want to say that the PP *dans mon propre appartement* ('in my own apartment') alternates with other PPs unrelated to apartments (*#je suis dans mon propre appartement, je ne suis pas au parc* 'I am in my own apartment, I am not in the park'). We cannot say that *mon propre* is the focused constituent either since it is not a constituent and thus cannot correspond to the *wh*-phrase; note that we observe pied-piping in the question *in which apartment are you?*

In fact, what the interpretation of this sentence suggests is that *son* and *propre* are both F-marked (to be replaced by variables) since the alternatives really target the possessor as we have seen, and the focus domain corresponds to the whole proposition as it is really

⁴³ This notion is crucial in Roberts (1996)'s theory since in her model, the ultimate goal of participants in a discourse is to answer the question *what is the way things are?* A question that is proffered and mutually accepted by the interlocutors as the most immediate goal of the discourse becomes the Current Question. This notion plays a crucial role in pragmatic theories of focus such as Beaver and Clark's (2008).

about where I am (in the context, comparing different possessors of apartments only makes sense with respect to which of these apartments I am in); this satisfies Büring (2008)'s constraint about maximizing domains, which actually expresses the same idea: to really target the question under discussion, we need to choose the biggest domain that is anaphorically recoverable. For these reasons, I consider the focus domain as in (65)b.

4.2.1.4. Issue of F-marking a non-constituent

But once the problem of focus domain temporarily settled, the case we deal with still raises an issue as Rooth (1992) never examines examples where the F-marked element does not form a constituent; or in cases that do appear so, there are actually two F-marked constituents targeted by two different focus operators. Here however, we really deal with one contrast (*son propre* vs. alternatives), not two (*son* vs. alternatives; *propre* vs. alternatives).

Schwarzschild (1999)'s prediction

In Schwarzschild (1999)'s theory, the question of focus domain does not arise since the givenness constraint must apply to every node. Two hypotheses are possible to predict the possessor reading:

- (71) a. Je suis dans [mon PROP_FRE_F appartement]_F.
 b. Je suis dans mon_F PROP_FRE_F appartement.

(a) obeys the givenness constraint:

- *mon* is given since even disregarding the specificity of the first person, it is a pronoun with *je* as antecedent.

- DP is F-marked since $\exists X \exists P / P(\text{my } X \text{ apartment})$ is not entailed by *Je suis dans l'appartement de Julie*, and *my own apartment* and *Julie's apartment* do not corefer.

- Moreover, *Je suis dans l'appartement de Julie* ('I am in Julie's apartment') entails:

- NP: $\exists X \exists P / P$ (X apartment)

- PP: $\exists X \exists P / P$ (in X)

- VP : $\exists X \exists y / y$ is in X

- TP : $\exists X / I$ am in X

(b) also obeys the givenness constraint:

- *mon* is given for the same reason as above. It can be F-marked though, since non F-marked constituents must be given but the reverse is not necessarily true.

- Moreover, *Je suis dans l'appartement de Julie* ('I am in Julie's apartment') entails:

- NP: $\exists X \exists P / P$ (X apartment)

- DP: $\exists X \exists Y \exists P P(\text{the } X \text{ apartment of } Y)$

- PP: $\exists X \exists P / P$ (in the X apartment of Y)

- VP: $\exists X \exists Y \exists z z$ is in the X apartment of Y

- TP: $\exists X \exists Y I$ am in the X apartment of Y

In sum, we can apply Schwarzschild (1999)'s theory using two F-marking, either on *propre* and the possessive pronoun or on *propre* and the DP. But in both cases, we somehow lose the intuition that the target of the alternative is the possessor: in (a), *propre* and the DP are replaced by variables in two steps, so the possessor itself does never correspond to an alternative; in (b), it does, but independently of *propre* which is replaced by another variable. In other words, if we take the bigger F-marked constituent to be the equivalent of Rooth (1992)'s alternative, we do not get the right interpretation in either case, since in (a),

it corresponds to the possessum, and in (b) it looks like there are two different alternatives, namely one alternative to the possessive pronoun and one to *propre*.

4.2.2. Three hypotheses: focusing non-constituents, pragmatic restriction to the possessor, or FOC-marking?

Let's go back to Rooth (1992)'s theory, which captures the intuition that there is a unique alternative, because there is one focus domain delimited by the squiggle operator. As explained above, the following representation seems to be the most adequate as contrasting different possessors' apartments only makes sense with respect to which apartment I am in, so the whole proposition is under consideration when examining alternatives (cf. Büring (2008)'s *Maximize F-Domains*).

(72) [Je suis dans mon_F PROP_F appartement]~ C

But we need to add something to Rooth (1992)'s theory as he does not treat examples where the F-marked element to be replaced by a variable does not form a constituent. Three hypotheses are possible. I will adopt the third one which incorporates insights of the first two ones without their shortcomings.

4.2.2.1. Focusing of non-constituent or double focusing?

First, we could simply suppose that this configuration is acceptable. This predicts that in general, an alternative can correspond to a non-constituent. Indeed, this is possible in examples that do not involve *propre*:

(73) (Context: Paul has a small car and a big one; Claire has one car.)
A: Quelle voiture tu préfères ? La voiture de Claire ?
B: Non, je préfère la petite voiture de Paul.
'Which car do you prefer? Claire's car?
No, I prefer Paul's small car.'

Here, it seems that *de Claire* is the alternative to *petite...de Paul* which does not form a constituent:

(74) [Je préfère la petite_F voiture de Paul_F]~ C

But this sentence again involves NP-modifiers. What about other categories? For instance, this hypothesis predicts that the subject and the verb can be F-marked without the object being part of the alternative as illustrated by the following sentence:

(75) (Qu'est-ce qu'il est arrivé au vélo ? Est-ce que finalement, Jean a vendu le vélo ?)
 ?Mais non, Claire l'a cassé !
 '(What happened to the bike? Did finally John sell the bike?)
 No, Claire broke it!'

(76) [Claire_F l'a cassé_F]~ C
 [Claire_F broke_F it]~ C

Here, the non-constituent *Jean a vendu* 'John sold' is supposed to be the alternative to *Claire a cassé* 'Claire broke'.⁴⁴ Two empirical questions arise. First, the sentence has an intermediate status with respect to felicity. Second, only a detailed examination of prosody can indicate if we only deal with one focusing or two as in Kehler (2005)'s example repeated below:

(77) (John quoted Mary, but) [[he dissed_{F1} Sue_{F2}] ~1] ~2

(78) [[Claire_{F1} l'a cassé_{F2}]~1] ~2
 [[Claire_{F1} broke_{F2} it]~1] ~2

Actually, if two focus operators are at stake here, it could explain why the sentence has an intermediate status since this would clash with the contextual question (i.e. *what happened*

⁴⁴ If we consider that focus is sensitive to reconstruction, the case can be more complicated in terms of constituency: assuming that the subject reconstructs in the VP, *Claire a cassé* ('Claire broke') could actually form a constituent with the trace of the clitic. I will ignore the problem for now as the sentence is worse if we replace the clitic by a full DP: *Claire a cassé le vélo !* ('Claire broke the bike!').

to the bike?). And indeed, the fact that the example improves if modified as follows supports this idea:

- (79) (Et le vélo ? Pierre l'a vendu à Marie ?)
Non, Jean l'a acheté à Marie.
'(What about the bike? Did Peter sell it to Mary?)
No, John bought it from Mary.'

Here, the verbs *buy* and *sell* clearly contrast, i.e. they form an issue in Büring (2008)'s terms. Moreover, Peter and John also constitute alternatives. So I believe this example does not illustrate focusing of a non-constituent, but double focusing.

Here is another sentence that seems to exemplify focusing of a non-constituent:

- (80) (Qu'est-ce que Jean a décidé à propos des tableaux ? Est-ce que Jean a acheté trois tableaux ?)
?Mais non ! il a vendu quatre tableaux.
'(What did John decide about the paintings? Did John buy three paintings?)
?No! He sold four paintings.'

Here, what is intended to be in focus is the non-constituent *vendu quatre* 'sold four' alternating with *acheté trois* 'bought three'. This may again correspond to double focusing as *buy* and *sell* form an issue just like *three* and *four*; however, prosody seems to make it harder to independently mark focus on both elements in this example.

To sum up, unless further study of prosody proves the contrary, there is no obvious independent evidence that a non-constituent can indeed be the target of focus; moreover, such a hypothesis seems to massively overgenerate: not anything can be F-marked. The third hypothesis that I will adopt will introduce relevant constraints and thus clarify the intermediate felicity of these examples.

4.2.2.2. *Pragmatic restriction to the possessor*

A second hypothesis would be that the semantic alternative is the possessum – which is a constituent – but it is the pragmatic restriction of the set of alternatives that makes the possessor the true alternative as the head noun is given.

(81) [Paul drove [his OWN children]_F home]~ C

Here, the constituent to be replaced by a variable is *his own children*: the focus value of the sentence is the set of propositions of the form: ‘Paul drove home x’. But since the contextual alternative is someone else’s children, namely the neighbor’s children, there is pragmatic restriction of the set and x ranges over children. In Schwarzschild (1999)’s terms, this is so because *children* is given.

This would mean that the distinction between the possessor reading and the possessum reading of *propre* is only pragmatic; this may be problematic as we have seen that possessor *son propre* and possessum *son propre* exhibit different behaviors with respect to binding. Also, this distinction seems to be present in the grammar as the prosody is distinct in both cases (cf. accenting of *own* or *children*).

4.2.2.3. *FOC-marking*

I propose and adopt a third hypothesis that in a sense merges the previous two ones by putting this distinction in the grammar. To this end, we need to add an intermediate level that I call FOC between F-marking and the squiggle operator:

(82) [Paul drove [his_F OWN_F children]_{FOC} home]~ C

Under this representation, the focus domain is still the whole proposition following *Maximize Anaphoricity!* and the F-marked elements, namely those to be replaced by a

variable and having alternatives in the discourse, correspond to *her own*; this parallels the first hypothesis where the focal meaning of the proposition also corresponds to the set of propositions of the form *Paul drove x children home*. Note that it is the condition of contrast (cf. Wagner 2006, Büring 2008) that will predict that the alternatives are possessors and not other properties attributable to the noun: if *Paul drove the tall children home* is not an alternative to *Paul drove his own children home*, it is because whether the children in question are the tall ones or her own does not form an issue (unless the context is accommodated so that *the tall children* do in fact correspond to the children of someone else clearly identifiable in the context, but in this case, this amounts to saying that the contextual alternative involves a contrastive possessor).

The FOC element is the possessum *his own children*, that is a constituent; this will circumvent the problem raised by the first hypothesis. It contains both new and given elements: *children* is given and is not to be replaced by a variable; *own* is new and is to be replaced by a variable, while *her* is given (since it is a pronoun) and is to be replaced by a variable. Note that prosodically speaking, *own* is marked unlike *his* and *children*, and even if *his* and *children* are both prosodically unmarked, they have a different status: *his* is given and F-marked, while *children* is given and not F-marked. My aim is not to account for prosody here, but to note that we could explain this by assuming phonologico-syntactic rules similar to Selkirk (1984)'s projection rules: *his* is not accented even if it is F-marked because it is not the most embedded F-marked element; *children* however would need to be accented if it was F-marked because it is the most embedded element (cf. possessum reading).

With respect to the interpretation of focus, the FOC-marked element (e.g. *his own children*) is the one that has contextual alternatives: as claimed in (70), it corresponds to the *wh*-phrase in the question under discussion (e.g. *which children did Paul drive home?*). But this does not mean that it needs to be replaced by a variable as a whole (cf. Paul drove x home): given elements inside the FOC-constituent should not (cf. Paul drove x's children home).

Syntactically speaking, the FOC-element corresponds to the smallest constituent containing all F-marked elements involved in one focusing;⁴⁵ this supposes that focus is subject to syntactic structure and can only target constituents. This hypothesis could open the door to a unified analysis of focus marked by movement and focus marked by prosody: the second case may amount to covert movement and that's why constituency is crucial to focus. Also, this parallels *wh*-question where *which children* undergoes pied-piping: the question is really about the type of children, but it is the smallest constituent containing it that moves because of syntactic constraints.

In most cases, the FOC-marked constituent will just correspond to the F-marked element. But what examples involving possessor *propre* reveal is that it is not necessarily the case and we need to define an intermediate level between F-marked elements (what is to be replaced by variables) and the focus domain (domain in which alternatives are considered) subject to semantics, which obeys a syntactic requirement on constituency.

Let's apply this hypothesis to the previous examples examined under the first hypothesis and this will clarify their various status. Indeed, this third hypothesis, unlike the first one, amounts to saying that we can focus non-constituents (in the sense that a non-constituent

⁴⁵ It may be the case that the FOC-constituent is not the smallest constituent but that corresponding to the *wh*-phrase of the question under discussion.

may be replaced by variables when considering alternatives), but only if the target of the alternative is a constituent (in the sense that it is the corresponding *wh*-phrase of the question under discussion). This last point was not controlled in the previous examples, but if it is, they largely improve.

(83) [Je préfère [la petite_F voiture de Paul_F]_{FOC}]~ C
 'I prefer Paul's small car.'

(84) (Qu'est-ce que Jean a décidé à propos des tableaux ? Est-ce que Jean a acheté trois tableaux ?)
 [Il a [vendu_F quatre_F tableaux]_{FOC}]~ C
 '(What did John decide about the paintings? Did John buy three paintings?)
 ?No! He sold four paintings.'

(85) (Qu'est-ce qu'il est arrivé au vélo ? Est-ce que finalement, Jean a vendu le vélo ?)
 [[Claire_F l'a cassé_F]_{FOC} ~ C
 '(What happened to the bike? Did finally John sell the bike?)
 No, Claire broke it!'

In (83), the FOC constituent is the DP *la petite voiture de Paul* ('Paul's small car'), which corresponds to the *wh*-phrase of the question under discussion, i.e. *quelle voiture tu préfères* ('which car do you prefer?'). In (84), the FOC constituent should be the VP *vendu quatre tableaux* ('sold four paintings'); and indeed, the sentence is perfectly felicitous if the question under discussion is modified as follows: *what did John do about the paintings?* Finally, in (85), the smallest constituent containing the subject and the verb has to be the whole proposition *Claire l'a cassé* ('Claire broke it'). And in fact, the sentence largely improves if we change the contextual question into: *what happened?*

4.2.3. Summary about possessor *propre*

To sum up, I adopt the third hypothesis (i.e. adding an intermediate level FOC between F-marking and the squiggle operator) because it makes better predictions about the felicity of

the examples and is more consistent with the theoretical view – desirable to me – according to which the interpretation is mediated by the syntactic structure due to compositionality. Three main notions are required to interpret focus:

- F-marking, which has a semantic content: an F-marked element is replaced by a variable when considering alternatives.
- FOC-marking, which has a syntactic and semantic content: the FOC-marked element is the constituent containing all F-marked elements and corresponding to the *wh*-phrase of the question under discussion.
- Focus domain delimited by the squiggle operator: semantically, it is the domain in which alternatives are considered. So far, I have considered that it must be as big as possible, i.e. it corresponds to the biggest anaphorically recoverable domain. But syntactic constraints remain to be further examined.⁴⁶

In sum, the theory of focus I adopt based on my case study mixes elements from Rooth (1985, 1992)'s, Schwarzschild (1999)'s and Büring (2008)'s theories: the main spirit comes from Rooth (1985, 1992)'s alternative semantics where alternatives to the focused target are considered within a domain delimited by the squiggle operator; I retain from Schwarzschild (1999) the idea that non F-marked constituents are given; finally, I follow Büring (2008) concerning the maximizing of focus domains.

Furthermore, projection rules *à la* Selkirk predicting the right prosody of focus remain to be integrated into the theory. We have seen that projection rules seem to apply; in

⁴⁶ In particular, given that we have seen that the difference between possessor and possessum *propre* in terms of binding suggests an interaction between binding and focus, it would be worth investigating whether focus domains can be related to binding domains.

particular for possessor *propre*, this would explain why the possessive pronoun does not appear to be prosodically marked albeit F-marked. But in the review of the literature, we have also noticed that Selkirk (1984)'s rules undergenerate. Concerning *son propre*, Schwarzschild (1999) and Büring (2008)'s observation that focus can project from adjuncts will be sufficient: this predicts that accent on *propre* can yield F-marking on *son propre*. I leave the more general problem of projection rules for further research, as it requires a fine-grained study of prosody that is not my purpose here. Here, I minimally assume that some F-marked element must be prosodically marked (by accent or phrasing or other clues depending on the language under study); but not every F-marked element is necessarily prosodically marked; this is the content of projection rules to predict how the relation between F-marking and prosodic marking works. Otherwise, non F-marked constituents are not prosodically marked.

The possessor reading of *propre* has proved to refine the theory of focus as it makes clearer the necessity of distinguishing between F-marking, FOC marking and focus domain. In most cases, this trivalent distinction is not visible within one sentence (cf. (16) that makes unclear the distinction between F-marking and FOC-marking, and (17) that between FOC marking and focus domain) but only if comparing several ones; however, the reading of possessor *propre* (cf. (60), (59)) requires the three notions to be correctly derived. This is illustrated in the following table.

	F-marking	FOC marking	Focus domain
(60) Paul drove his OWN children home.	his own Cf. Paul drove x's children home.	his own children Cf. <u>Which children</u> did he drive home?	Paul drove his own children home. Cf. Which children did he drive home? He didn't drive the neighbor's children home.
(59) This kind of advertisement can use the storekeeper's OWN car, but also those of private individuals who agree.	storekeeper's own Cf. this kind of advertisement can use x's car	the storekeeper's own car Cf. <u>which car</u> can this kind of advertisement use?	This kind of advertisement can use the storekeeper's own car. Cf. Which car can this kind of advertisement use? This kind of advertisement can also use those of private individuals who agree.
(16) Mary likes SUE.	Sue Cf. Mary likes x.	Sue Cf. <u>Who</u> does she like? Mary likes Jenn	Mary likes Sue. Cf. Who does she like? Mary likes Jenn
(17) An American farmer met a CANADIAN farmer	Canadian Cf. x farmer	American farmer Cf. Which farmer (is under discussion)?	American farmer Cf. Which farmer (is under discussion)? Canadian farmer

Finally, here is a summary of all readings reviewed in this section.

Type of reading	Principle of minimization for <i>propre</i>	Representation of the possessive DP	Example
Possessor <i>propre</i>	Pragmatic effect: focus	[his _F OWN _F children] _{FOC}	(60) Paul a raccompagné ses PROPRES enfants (et (pas) ceux de la voisine). 'Paul drove his OWN children home (and (not) the neighbor's).' NB: Paul only has biological children.
	Truth-conditional effect + pragmatic effect: focus	[his _F OWN _F children] _{FOC}	(60) Paul a raccompagné ses PROPRES enfants (et (pas) ceux de la voisine). 'Paul drove his OWN children home (and (not) the neighbor's).' NB: Paul not only has biological children, but also adoptive children or/and stepchildren.
	Truth-conditional effect + pragmatic effects: relevance and focus	[his _F OWN _F children] _{FOC}	(61) Julie a cambriolé son PROPRE appartement. 'Julie burglarized her OWN apartment.'
Focused <i>son</i>	n/a	[HIS _F] _{FOC} children	(62) Paul a raccompagné SES enfants. 'Paul drove HIS children home.'
	Truth-conditional effect and/or relevance	[HIS _F] _{FOC} own children	(63) Paul a raccompagné SES propres enfants. 'Paul drove HIS own children home.' Cf. (54)p. 35: Chacun était convaincu qu'il avait un rythme qui lui était propre. Après avoir longtemps cherché, tout le monde trouva enfin SON propre rythme. 'Everyone was convinced that they have a rhythm that is peculiar to them. After looking for it for a long time, everybody finally found HIS own rhythm.'

4.3. Possessum *propre*

So far, we have seen how to derive the truth-conditional reading and the possessor reading of *propre*; a difference between them relies on the targets of focus (but focus is not required in the former case). To recapitulate, let's represent the same sentence under the two readings:

(86) Truth-conditional focused *propre*:
[Paul drove his [OWN_F]_{FOC} children home]~ C

(87) Possessor *propre*:
[Paul drove [his_F OWN_F children]_{FOC} home]~ C

How to derive the possessum reading? Recall examples of this reading:

(88) (Context: Medea tragedy)
Médée_i a tué ses_i propres ENFANTS !
'Medea_i killed her_i own CHILDREN!'

(89) Le meurtrier présumé qui a été placé en hôpital psychiatrique n'est autre que le propre fils **de la victime**. [attested on google]
'The presumed murderer who has been placed in a psychiatric hospital is no other than **the victim's** own son.'

We observed that in such cases, *propre* induces alternatives to the possessum; moreover, the alternatives are more expected than the target. Thus in (88), Medea's children are contrasted with other individuals that are more likely to be killed by Medea, i.e. her rival Glauce or Jason's enemies. Two points are to be explained: how to derive the right target of focus (i.e. possessum)? How to account for the unexpectedness effect? To answer the first question, I will examine which representations predict the right focus alternatives and conclude that in the case of possessum *propre*, the whole DP is F-marked. Concerning the second issue, I will hypothesize that the DP is associated with a covert focus operator E similar to *even*. As a preview, here is the final representation of typical possessum *propre*:

- (90) Possessum reading:
E [Medea killed [her_F own_F CHILDREN_F]_{FOC}]~ C

4.3.1. The focus target in possessum *propre*

4.3.1.1. Deriving the possessum as focus target

There are two main differences between possessor and possessum readings of *propre*: first, under the possessor reading, it is *propre* that is prosodically marked while under the possessum reading, it is the noun (certain speakers seem to also prosodically mark *propre* in the latter case); second, the contextual alternatives correspond to the possessor in the first case, but to the possessum in the second case. Given the theory presented in the previous section, this is predicted by the following representation where the whole DP containing *propre* is F-marked:

- (91) Possessum reading:
[Medea killed [her_F own_F CHILDREN_F]_{FOC}]~ C

In this representation, the FOC-marked constituent corresponds to the DP possessum, meaning that the question under discussion is: *Who did Medea kill?* Moreover, the focus domain includes the whole proposition and crucially, all elements of the possessum DP are F-marked, so the focal meaning of the proposition is the set of propositions of the following form: *Medea killed x*; the exact value of C is fixed by the context, e.g. by the fact that Medea also killed Glauce or Jason's enemies in the myth.

As in the case of possessor *propre*, it is the possessum DP that is FOC-marked: in both cases, it is the smallest constituent containing all F-marked elements and corresponding to the *wh*-phrase of the question under discussion (*who/which children did Medea kill?*). Here is

the representation of the possessor reading of (88): in this case, the sentence would mean that Medea killed her children as opposed to other people's children.

- (92) Possessor reading:
[Medea killed [her_F OWN_F children]_{FOC}]~ C

The main difference between (91) and (92) is that *children* is F-marked under the possessum reading but not under the possessor reading. This reflects the fact that *children* is given in (92) but not in (91), and correctly predicts that the focus meaning of (91) is the set of propositions of the form *Medea killed x*, while that of (92) is the set of propositions of the form *Medea killed x children*; consequently, the question under discussion is *who did Medea kill?* in the first case, but *which children did Medea kill?* in the second case. Given projection rules, this also accounts for the different prosodic pattern: under the possessor reading, *children* is not prosodically marked because it is given and un-F-marked; under the possessum reading however, it is F-marked, new and crucially, unlike *her*, it is the most embedded F-marked element of the FOC constituent, that's why it needs to be prosodically marked.⁴⁷

Note that the same sentence can get other readings, deriving from three representations other than (91):

- (93) a. [Medea killed her [own_F CHILDREN_F]_{FOC}]~ C
b. [Medea killed her own [CHILDREN_F]_{FOC}]~ C
c. [Medea killed [her_F own CHILDREN_F]_{FOC}]~ C

⁴⁷ The variation of accenting for possessum *propre* is not surprising: given that *enfants* ('children') is the most embedded F-marked constituent of the FOC constituent, it has to be accented; *propre* is the second most embedded F-marked constituent, therefore it does not need to be accented, but can; as for *ses* ('her') it is not sufficiently embedded to bear focal stress even if it is F-marked.

In (a), the focus meaning is the set of propositions of the form *Medea killed her x*, in (b), the set of propositions of the form *Medea killed her own x*, and in (c), the set of propositions of the form *Medea killed x's own y*. This is illustrated by the following examples:

- (94) Did Medea kill her neighbors?
No, she killed her own CHILDREN.
- (95) Did Medea kill her own siblings?
No, she killed her own CHILDREN.
- (96) Did Medea kill Glauce's own siblings?
No, she killed her own CHILDREN.

These three readings are included in the possessum reading in the sense that the focus meaning of the propositions in (94) and (95) is a subset of the focus meaning of (91). Indeed, *Medea killed her own x* entails that *Medea killed her x* which entails that *Medea killed x*, and *Medea killed x's own y* also entails that *Medea killed x*. In cases such as (95), we guarantee that the representation is as in (93)b and not (91) by two means: first, we said that the FOC-marked constituent must be the smallest one containing all F-marked elements; second, we adopt Schwarzschild (1999)'s constraint *AvoidF!*.

4.3.1.2. The role of *propre*: relevant to focus association

In addition to the unexpectedness effect, there remains to explain what the role of *propre* is in (94) or (91). Indeed, I supposed that focus serves the principle of minimization: when *propre* does not impact the truth conditions, it should have a pragmatic effect, and this is satisfied if it is in focus as it will induce alternatives. But under the possessum reading,

propre is neither truth-conditional⁴⁸ nor FOC-marked itself, but only part of a FOC-marked constituent. Therefore, I appeal to the theory of relevance presented above for non-truth-conditional adjectives (cf. a.o. (3)) and integrate it to focus: I hypothesize that *propre* is relevant in justifying the alternatives.

4.3.1.2.1. *Justifying the condition of contrast*

Let's examine the following example that does not involve any unexpectedness effect to separate the two problems:

(97) (Note: Sonia only uses one car)

Ce matin, Sonia n'a pas pris les transports en commun pour aller en ville, elle a pris sa propre voiture.

'This morning, Sonia did not take public transportation to go to town, she took her own car.'

Propre and *voiture* ('car') are not given (note that even if roughly speaking, *car* entails *transportation*, the reverse is not true) and the FOC-constituent is the possessum *sa propre voiture* ('her own car') that alternates with *les transports en commun* ('public transportation'). Here is the representation of the sentence:

(98) [Sonia took [her_F own_F CAR_F]_{FOC}]~ C

⁴⁸ So far, I have described possessum *propre* as non-truth-conditional, because typically it is not, and this is the puzzling case where it gives rise to unexpectedness effects in particular. But nothing prevents *propre* from being truth-conditional when the possessum is contrasted. In this case, the pragmatic effects related to relevance that I will explain (e.g. justification for the unexpectedness effect) are possible but not required, since the principle of minimization is already satisfied by truth-conditionality. Here is an example where possessum *propre* is truth-conditional but does not have any specific pragmatic effect:

21) Marie n'a invité ni ses beaux-enfants, ni ses amis, ni les voisins, ni les amis de sa fille pour son anniversaire, elle a invité ses propres ENFANTS.

'Marie did not invite her stepchildren, her friends, the neighbors or her daughter's friends for her birthday, she invited her own CHILDREN.'

The possessum *ses propres enfants* ('her own children') is contrasted with alternatives (her stepchildren, her friends, the neighbors, her daughter's friends) and there is no unexpectedness effect. Given that Marie has stepchildren, *propre* has a truth-conditional effect: *ses propres enfants* ('her own children') are distinct from her stepchildren. Therefore, *propre* satisfies the principle of minimization and need not have pragmatic effects.

This rightly predicts that the focus meaning of (98) is the set of propositions of the form *Sonia took x*. The question under discussion is then *what did Sonia take to go to town?*. Given the context, *x* will be pragmatically set to range over means of transportation. Moreover, *propre* is not truth-conditional as Sonia only uses one car in this context: *Sonia's car* and *Sonia's own car* denote the same entity. What I propose is that *propre* is relevant in specifying the criterion for the condition of contrast due to its lexical meaning: *her own car* and *public transportation* do form an issue in terms of the specificity of the relation with Sonia. Basically the issue is as follows: did Sonia take a private or a public vehicle? The use of *propre* makes clearer that we deal with this issue. Note that usually, the type of issue is indicated by the lexical entry of the head noun when a DP is FOC-marked. This cannot be the case here as *transportation* is an hyperonym for *car*; that's why *propre* can play a role by specifying the criterion for contrast. In fact, the same example modified as follows is degraded:

- (99) (Note: Sonia only uses one car)
 ?Ce matin, Sonia n'a pas pris le bus pour aller en ville, elle a pris sa propre voiture.
 'This morning, Sonia did not take the bus to go to town, she took her own car.'

This time, the head noun corresponding to the alternative is *bus*, which does form an issue with *car* as the set of buses does not include or overlap with the set of cars. So since *car* is the F-marked head of the FOC-marked constituent, it is expected to give the criterion for the condition of contrast: the issue at stake concerns the type of transportation taken by Sonia and *bus* is an alternative to *car* in this respect. *Propre* seems to add another issue that is not necessarily included in the first one since a car may be public (cf. taxi) and a bus may be private. Therefore, the presence of *propre* is odd here as it adds a second issue while there is only one focusing.

To sum up, one of the possible pragmatic effects of *propre* under the possessum reading is to provide the criterion for the condition of contrast. This is possible only if the head noun cannot do so, which is the case if it is a hyponym of the alternative noun (it cannot be an hyperonym, otherwise, it would be given).

What about the three other readings derived by the representations in (93): what is the role of *propre* in those cases? Here are the equivalent readings corresponding to (97):

(100) (Note: Sonia only uses one car)

a. Pour aller en ville ce matin, Sonia n'a pas pris son bus, elle a pris sa propre voiture.

'To go to town this morning, Sonia did not take her bus, she took her own car.'

b. [Sonia took her [own_F CAR_F]_{FOC}]~ C

(101) (Note: Sonia only uses one car)

a. Pour aller en ville ce matin, Sonia n'a pas pris son propre vélo, elle a pris sa propre voiture.

'To go to town this morning, Sonia did not take her own bike, she took her own car.'

b. [Sonia took her own [CAR_F]_{FOC}]~ C

(102) (Note: Sonia only uses one car)

a. Pour aller en ville ce matin, Sonia n'a pas pris le propre vélo de Paul, elle a pris sa propre voiture.

'To go to town this morning, Sonia did not take Paul's own bike, she took her own car.'

b. [Sonia took [her_F own CAR_F]_{FOC}]~ C

In (100), *propre* is not truth-conditional since Sonia only uses one car, and *propre* does not give rise to focus alternatives since the head noun is accented: as in (97), *propre* satisfies the principle of minimization by relevance: *sa propre voiture* ('her own car') contrasts with *son bus* ('her bus') and the presence of *propre* indicates that the issue is whether Sonia took public transportation (the possessive pronoun expresses a very loose relation in *son bus*

(‘her bus’), i.e. the bus she usually takes) or a private vehicle (her own car). In (101), *propre* is similarly neither truth-conditional nor accented. But as opposed to (100), it is not part of the focused constituent, therefore its pragmatic effect cannot be related to focus: it cannot be relevant by justifying the condition of contrast. It can only be relevant unrelated to focus: for instance, this could be felicitous in a context where John has just said that he did not borrow his sister’s bike, but his brother’s car to go to town; it is therefore relevant to specify that Sonia’s bike and car that are mentioned are her own. As for (102), *propre* is neither truth-conditional nor accented, but it is part of the focused constituent. Therefore, its pragmatic effect can be related to focus as in (100) or not as in (101).

That said, in representations like (101) and (102), *propre* will usually have a truth-conditional effect since it is not F-marked. This is also possible in (100) albeit less usual: in that case, *propre* need not have pragmatic effects related to focus.

In sum, *propre* can be relevant by providing the criterion for the condition of contrast only when it is part of the focused constituent.

4.3.1.2.2. *Justifying unexpectedness*

When the possessum reading induces an unexpectedness effect, *propre* can get another pragmatic effect: its lexical entry justifies unexpectedness. This is what I will argue for, but before that, I will show that the unexpectedness effect comes from the presence of the silent focus operator E (similar to *even*) associating with the possessum DP. This long section (3.3.2.) will at the same time constitute an argument for the existence of E.

4.3.2. The unexpectedness effect of possessum *propre*: evidence for E

I said that the possessum reading of *propre* raises two main issues: how to derive the right target of focus? How to account for the unexpectedness effect? I have answered the first question in the previous section, and the present section is devoted to the second one. My analysis will rely on the presence of a scalarity operator E (akin to overt *even*) associated with the DP containing *propre*.

Besides the exhaustivity operator O or Exh (akin to *only*), a silent focus sensitive operator E has already been proposed, mainly to account for readings involving NPIs, in particular minimizers (cf. Heim 1984, Krifka 1995, Chierchia 2006). E is a presuppositional operator scoping over a proposition p containing some focused constituent: it presupposes that p is less expected than its contextually given alternative propositions. By examining the scalar readings induced by *propre*, I will extend the empirical basis for assuming the existence of E and clarify the conditions necessary for giving rise to E. Thereby, I will provide a new and independent argument in favor of the existence of such an operator E.

Consider again examples of possessum *propre* involving an unexpectedness effect:

- (103) a. Médée a tué ses propres ENFANTS !
Medea has killed her own children
'Medea killed her own CHILDREN!'
- b. Personne n' a essayé de défendre Luc. Sa propre MÈRE a gardé le silence!
nobody neg has tried to defend Luc his own mother has kept the silence
'Nobody tried to defend Luc. His own MOTHER kept silent!'
- c. Le propre FILS de la victime a été mis en examen !
the own son of the victim has been put in examination
'The victim's own SON has been indicted!'

I will call the unexpectedness effect of these sentences 'scalarity effect' because these propositions involving possessum *propre* are very low on a scale of expectations. Thus in

(a), the proposition that Medea killed her children is the least expected among a set of alternatives (e.g. "Medea killed strangers", "Medea killed her enemies"...etc). Note that such unexpectedness relies on the stereotypical assumption that it is scandalous to kill one's children (e.g. as compared to killing strangers or enemies), so the ordering relation creating the scale is not based on logical entailments, but depends on world knowledge, stereotypes or context. This scale is similar to that at stake with *même* 'even': the scalarity effect in (103) also obtains by replacing *propre* by *même* (but *même* is not identical in all respects as we will see):⁴⁹

- (104) a. Médée a même tué ses enfants !
 Medea has even killed her children
 'Medea even killed her children!'
 b. Personne n' a essayé de défendre Luc. Même sa mère a gardé le silence!
 nobody neg has tried to defend Luc. Even his mother has kept the silence
 'Nobody tried to defend Luc. Even his mother kept silent!'
 c. Même le fils de la victime a été mis en examen !
 even the son of the victim has been put in examination
 'Even the victim's son has been indicted!'

The gist of my argument for the presence of E will be to show that the only way to derive the right domain of the scalarity effect induced by *propre* is to assume the existence of an operator. By 'domain of the scalarity effect', I mean the proposition targeted for an evaluation with respect to the scale of expectations.

Three main hypotheses may be considered to account for the scalarity effect of *propre*:

- pragmatic hypothesis: the scalarity effect is derived by a general Gricean implicature;
- lexical hypothesis: the scalarity effect is an entailment of the lexical entry of *propre*;

⁴⁹ In particular, unlike *propre*, *même* presupposes that some alternatives higher on the scale of expectations are true. Moreover, *même* does not have to target DPs, but can also target other constituents like VPs. This has to be taken into account when comparing sentences involving *propre* and similar ones involving *même*.

- operator hypothesis: the scalarity effect is due to the presence of an implicit operator (henceforth called E).

First, I will argue against the pragmatic hypothesis by showing that the proposition targeted by the scalarity effect can be embedded. Second, I will refute the lexical hypothesis by demonstrating that the domain of the scalarity effect⁵⁰ does not have to correspond to the smallest proposition containing *propre*, whether at surface structure or at LF. These counterarguments will show that the pragmatic and the lexical hypotheses undergenerate and will constitute the main argument in favor of the operator hypothesis, since this hypothesis can on the contrary account for all the possible scopes of the scalarity effect. Further arguments such as intervention effects with other focus particles will reinforce the operator hypothesis. The following table gives a preview of the structure of the argument.

<i>Hypothesis</i>	<i>Prediction</i>	<i>Fact</i>	<i>Result</i>
Pragmatic Hypothesis: the scalarity effect is derived by a global Gricean reasoning	The proposition targeted by the scalarity effect cannot be embedded	The proposition targeted by the scalarity effect can be embedded	Wrong prediction
Lexical Hypothesis: the scalarity effect is included in the lexical entry of <i>propre</i>	The proposition targeted by the scalarity effect corresponds to the proposition in which <i>propre</i> occurs (at surface structure or at LF)	The proposition targeted by the scalarity effect does not have to correspond to a proposition that <i>propre</i> can move to.	Wrong prediction
Operator Hypothesis: the scalarity effect is due to the presence of the operator E	The proposition targeted by the scalarity effect is the proposition in the scope of E.	The proposition targeted by the scalarity effect does not depend on the position of <i>propre</i> and can be embedded. Overt focus operators in the same proposition trigger intervention effects.	Good predictions

⁵⁰ As an approximation, I will talk about the "scope" of the scalarity effect, even if strictly speaking, an effect has a domain rather than a scope. But this approximation will make the discussion easier.

4.3.2.1. *Against the pragmatic hypothesis*

A first possible hypothesis to account for the scalarity effect arising under the possessum reading of *propre* is to derive it by a pragmatic reasoning akin to a Gricean implicature. Since my goal is to refute the pragmatic hypothesis, I will not try to implement it in detail: the crucial point is that it predicts that the scalarity effect targets complete utterances (post-compositionally). I will suggest the basic idea though.

In the tradition stemming from Grice, semantics deals with the compositional construction of sentence meaning while pragmatics is postcompositional and deals with how sentence meaning is actually put to use and may be enriched through reasoning about speaker intentions or contextual informations. So-called scalar implicatures are thus derived by calling for the conversational principle of quantity: if the speaker does not utter a stronger (i.e. more informative) proposition, it is probably because (s)he takes it to be false. Chierchia, Fox and Spector (to appear) use this Gricean principle to derive primary implicatures. Primary implicatures in Sauerland (2004)'s terms correspond to the first step of the reasoning: if the speaker utters *p* instead of the stronger alternative *q*, it implies that (s)he does not have the belief that *q*. Secondary implicatures require an additional step to "(s)he believes that not *q*". In the case of these secondary implicatures, Chierchia, Fox and Spector argue for the exhaustivity operator *O* or *Exh* partly because those can be embedded: so they should be derived within grammar (compositionally), not via pragmatics (post-compositionally).

The case of the scalarity effect is different as informativity is not at stake: the alternatives are not related by logical entailment. Thus (103)_a does not imply that Medea killed more likely people, such as her enemies. Moreover, it is not excluded that other alternatives at

least as unexpected as the target are also true. So (103)a would be acceptable in a context where Medea also killed her parents and it is not more expected to kill one's parents than one's children.⁵¹

So under the pragmatic hypothesis, the scalarity effect is not derived by use of the principle of quantity, but a principle of the following kind may be appealed to: the speaker wants to be interesting to his hearer, therefore, (s)he tends to express very surprising propositions (principle of sensationalism). This is illustrated in (106).

(105) *Principle of sensationalism*: "Make your utterances as surprising as possible (in order to be as interesting as possible to the hearer)"

(106) a. Médée a tué ses propres enfants !

Medea has killed her own children

'Medea killed her own children.'

b. Médée a tué des inconnus.

Medea has killed strangers

'Medea killed strangers!'

c. Médée a tué ses ennemis.

Medea has killed her enemies

'Medea killed her enemies!'

i. The speaker uttered (106)a and not (106)b or (106)c, which, presumably, would have been also relevant [Relevance]

ii. It is likely that the speaker obeys the Principle of Sensationalism in order to be as interesting as possible to the hearer.

iii. Since the speaker chose to utter (106)a, it means that (106)a is more surprising than (106)b and (106)c.

Note that the reasoning does not take into consideration whether the alternatives are true or not, only the target needs to be true. Also, more would need to be said about the alternatives that should be considered to be relevant, but as I said, I will not detail the content of this analysis, the important point for my reasoning being that such a pragmatic

⁵¹ This is different from what is argued to happen with NPIs: in sentences examined by Krifka (1995) and Chierchia (2006), the least expected alternative is the strongest one, and that's why E is used. Thus if won't [even] lift a finger, it is implied that you won't be really helpful either.

hypothesis predicts that the scalarity effect targets complete utterances (i.e. it has the widest possible scope).

4.3.2.1.1. *Good prediction of the pragmatic hypothesis*

This hypothesis correctly predicts that a scalarity effect also arises when the possessum is focused by means other than *propre*, for instance by mere focal stress on the noun. Thus (107) exhibits the same scalarity effects as (103)a if the right prosody is used (i.e. stress and rising intonation on *enfants* 'children').

- (107) Médée a tué ses ENFANTS!
Medea has killed her children
'Medea killed her CHILDREN!'

4.3.2.1.2. *Wrong prediction of the pragmatic hypothesis*

However, the pragmatic hypothesis incorrectly predicts that the proposition targeted by the scalarity effect cannot be embedded since a Gricean reasoning has to be global: under this view, pragmatics takes place at the level of complete utterances.⁵² But in fact, the scalarity effect can locally arise as illustrated in (108).

- (108) a. Les amis d'Anne refusent qu' elle trahisse ses propres ENFANTS.
the friends of Anne refuse that she betrays her own children
'Anne's friends refuse to let her betray her own CHILDREN.'
b. #Les amis d'Anne refusent même qu' elle trahisse ses ENFANTS.
the friends of Anne refuse even that she betrays her children
'#Anne's friends even refuse to let her betray her CHILDREN.'
c. Les amis d'Anne refusent qu' elle trahisse même ses ENFANTS.
the amis of Anne refuse that she betrays even her children
'Anne's friends refuse to let her betray even her CHILDREN.'

⁵² If we were to adopt a cyclic view of pragmatics like Chierchia (2006) attempted to do, the availability of local implicatures (cf. argumentation for O by Chierchia, Fox and Spector: to appear) or local scalarity effects (cf. my argumentation for E) would not go against a pragmatic hypothesis any more. I will ignore this possibility in this paper, but it is worth noting that the empirical extension of focus sensitive operators that this study contributes to actually further raises the question of the justification for hidden operators. Even if I argue in favor of a silent operator here, I would not be opposed at all to the idea of converting these operators into pragmatic phenomena under an enriched view of pragmatics. I believe that proving the existence of silent operators under the standard view is a first step in this direction.

In this example used in a stereotypical context, what is unexpected⁵³ is that Anne would betray her children (based on a stereotypical scale of this kind: *betray one's children* < *betray one's neighbors* < *betray one's enemies*, with "<" meaning: less expected than), not that her friends refuse to let her betray them; on the contrary, based on stereotypical behaviors, it is rather expected that they do so. In other words, for the sentence to be felicitous in stereotypical contexts, the scalarity effect has to scope below the negative verb *refuser* 'refuse to let', not above it.

This is further suggested by the fact that in the paraphrase of (108)a involving *même* ('even'), *même* has to occur in the embedded clause of (108)c; if *même* appears in the matrix clause, the interpretation is not felicitous. I will make further use of paraphrases with *même* as it conveniently indicates the scope of the scalarity effect. As will be made clearer later on, this does not mean, however, that *même* and E are identical, nor necessarily that *même* always has surface scope. But it will be a convenient and good enough tool for my purposes if used cautiously: thus (108)c is certainly ambiguous between a reading where *même* scopes below *refuser* (surface scope) and another reading where it scopes above it (or at least, it seems so even if this does not necessarily have to be explained in terms of scope as we will briefly see later; cf. NPI *even* theory), but it is sufficient for my argument that the first reading exists and corresponds to the interpretation of (108)a; the important point is that the interpretation of (108)a does not correspond to that of (108)b, which is crucially not ambiguous: under the only possible interpretation, *même* scopes over *refuser*. Therefore, based on the stereotypical scale

⁵³ "Unexpected" is here (and later on) an abbreviation to actually mean "lowest on a scale of expectations".

mentioned above, (108)a cannot be interpreted if the scalarity effect occurs at the matrix level: it has to be embedded, which is not compatible with a global Gricean reasoning.

The same reasoning holds with relative clauses:

- (109) a. Les deux personnes qui ont trahi leurs propres PARENTS sont arrivées.
the two persons who have betrayed their own parents are arrived
'The two people who betrayed their own PARENTS arrived.'
- b. #Même les deux personnes qui ont trahi leurs PARENTS sont arrivées.
even the two persons who have betrayed their parents are arrived
'#Even the two people who betrayed their PARENTS arrived.'
- c. Les deux personnes qui ont même trahi leurs PARENTS sont arrivées.
the two persons who have even betrayed their parents are arrived
'The two people who even betrayed their PARENTS arrived.'

In (109), the scalarity effect is to be interpreted inside the relative clause: in a stereotypical context, it is not surprising that the two people in question arrived (*contra* the incorrect paraphrase in (109)b), but that they betrayed their children (cf. the correct paraphrase in (109)c).

So these two examples show that the proposition targeted by the scalarity effect can be embedded, which is predicted not to be possible under the pragmatic hypothesis since Gricean reasonings are global.

It should also be noted that I will mention an additional argument against the pragmatic hypothesis later on: the scalarity effect seems to be purely presuppositional, and a Gricean reasoning could presumably not derive a presupposition.

4.3.2.1.3. *The status of the pragmatic hypothesis in the case of E vs. O*

The previous point about embedding could appear to be trivial at first glance, as in these cases, the scalarity effect simply corresponds to the position of *propre* that we precisely said induces it. However, the possibility of having the same effect without the presence of *propre* (cf. (107)) makes the point less trivial. Furthermore, the availability of local readings is an important argument for proving the existence of the exhaustivity operator O (cf. Chierchia, Fox and Spector: to appear). In the case of O, the challenge is to show that scalar implicatures can occur systematically and freely in arbitrarily embedded positions, which goes against the pragmatic view on scalar implicatures since pragmatics takes place at the level of complete utterances. Thus as experimentally shown by Chemla and Spector (2011), the implicature involved in (110)(some *but not all*) can be local in (110)a.

- (110) Every letter is connected with SOME of its circles. (Chemla and Spector: 2011)
- a. Every letter is O[connected with SOME of its circles].
 - b. O [Every letter is connected with SOME of its circles].

(110) does not have to imply that some letters are not connected with all their circles (global implicature cf. (110)b), but can also mean that no letter is connected with all its circles (local implicature cf. (110)a: every letter is connected with some but not all of its circles).

The difference between E and O (non logical scalarity effect vs. logical scalar implicature) and the specificity of my argument in favor of E (scalar readings of *propre*) makes the structure of the argument in favor of the existence of each of them different. While in the case of O, an important challenge for the operator hypothesis is to show that local implicatures exist, this is pretty easy in the case of E as we have seen in this section.

However, the main challenge for me is to argue against the lexical hypothesis by demonstrating that the scalarity effect can actually have higher scope than *propre*. This is the goal of the next subsection.

4.3.2.2. *Against the lexical hypothesis*

According to the lexical hypothesis, the scalarity effect is contained in the lexical entry of *propre*. This predicts that the scalarity effect occurs at the same propositional level as *propre*. However, I will show that this prediction is not borne out: the scalarity effect can arise at a position where *propre* does not occur whether at surface structure or at LF.⁵⁴

4.3.2.2.1. *Propre and the scalarity effect can be disconnected*

Islands

This can be first tested with sentences involving islands such as (111).

- (111) a. Luc n'est jamais content; il n'est pas content quand ses propres ENFANTS
 Luc neg is never happy he neg is not happy when his own children
 sont là!
 are there
 'Luc is never happy; he's not happy when his own CHILDREN are here!'
- b. Luc n'est jamais content ; il n'est même pas content quand ses ENFANTS
 Luc neg is never happy he neg is even not happy when his children
 sont là !
 are there
 'Luc is never happy; he's not even happy when his CHILDREN are here!'

⁵⁴ Examples such as the following –involving a scalarity effect arising at a position (matrix level) where *propre* could move to at LF– do not prove anything against the lexical hypothesis since the DP with *propre* could be argued to covertly move in a QR-like way.

- 22) a. Les parents d' Anne refusent qu' elle aide ses propres ENFANTS !
 the parents of Anne refuse that she helps her own children
 'Anne's parents refuse to let her help her own CHILDREN!'
- b. Les parents d' Anne refusent même qu' elle aide ses ENFANTS !
 the parents of Anne refuse even that she helps her children
 'Anne's parents even refuse to let her help her CHILDREN!'

Note that *même* seems precisely able to behave this way, since the same interpretation as (b) can obtain if *même* appears in the embedded clause:

- c. Les parents d' Anne refusent qu' elle aide même ses ENFANTS ! (neg > *même*; *même* > neg)
 the parents of Anne refuse that she helps even her children
 'Anne's parents refuse to let her even help her CHILDREN!' (neg > *even*; *even* > neg)

- c. #Luc n'est jamais content ; il n' est pas content quand même ses ENFANTS
 Luc neg is never happy he neg is not happy when even his children
 sont là!
 are there
 'Luc is never happy; he's not happy when even his CHILDREN are here!'
- d. Luc n' est jamais content ; il n' est pas content quand ses ENFANTS sont là!
 Luc neg is never happy he neg is not happy when his children are there
 'Luc is never happy; he's not happy when his CHILDREN are here!'

In this case, the DP containing *propre* occurs in an adjunct island so that it arguably cannot move out of it at LF. Moreover, the scalarity effect is interpreted at the matrix level in stereotypical contexts: what is unexpected is not that Luc's children are present, but that Luc is not happy when they are. That's why in the correct paraphrase, *même* appears in the matrix clause, not in the adjunct clause ((111)b vs. (111)c).⁵⁵ Therefore, the scalarity effect is interpreted at a position (matrix level) where the DP with *propre* cannot appear even at LF, since movement to that position would violate the island constraint. This is an argument against the lexical hypothesis as the scalarity effect and the DP containing *propre* are irreparably disconnected. Furthermore, note that this argument is theory-neutral since there is in any case a contrast between (111)c and (111)a: a scalarity effect can occur in the highest proposition when *son propre* appears in an adjunct clause (111)a, but not when *même* does (111)c; this shows that the scalarity effect induced by *propre* cannot be derived in the same way as that induced by *même*, which most theories assume is one of the presuppositions constituting the lexical entry of *même*.

The same holds in sentences involving other islands such as relative clauses:

⁵⁵ It seems however that the English translation of (111)c can be interpreted like (111)a (matrix scope of the scalarity effect) even if *even* occurs in the adjunct clause. This kind of sentence constitutes an argument for theories assuming the existence of two *even* (regular *even* and NPI *even*, as we will see later) against scope theories of *even*: the latter theories would have to assume that *even* moves out of an island at LF. However, French *même* does not seem to behave the same (the scalarity effect cannot have matrix scope when *même* occurs in the adjunct clause, cf. (111)c; to my knowledge, this difference between French and English has not been explained nor even noticed.

- (112) a. Les patients qui ont vu leurs propres ENFANTS aujourd'hui ne sont pas contents.
 the patients who have seen their own children today neg are not
 happy
 'The patients who saw their own CHILDREN today are not happy.'
- b. Les patients qui ont vu leurs ENFANTS aujourd'hui ne sont même pas contents.
 the patients who have seen their children today neg are even not
 happy
 'The patients who saw their CHILDREN today aren't even happy.'
- c. #Les patients qui ont même vu leurs ENFANTS aujourd'hui ne sont pas contents.
 the patients who have even seen their children today neg are not
 happy
 'The patients who even saw their CHILDREN today aren't happy.'
- d. Les patients qui ont vu leurs ENFANTS aujourd'hui ne sont pas contents.
 the patients who have seen their children today neg are not happy
 'The patients who saw their CHILDREN today aren't happy.'

(112)a exhibits a scalarity effect at the matrix level while *propre* occurs in a relative clause: what is unexpected is not that some patients saw their children, but that those patients that saw their children are not happy. This is clarified by the paraphrases with *même*: the right paraphrase of (112)a does not show *même* in the relative clause (cf. infelicitous (112)c), but in the matrix clause (cf. (112)b). Furthermore, the same matrix scalarity effect occurs in the absence of *propre* if the right prosody is used for *enfants* 'children' in the relative clause (cf. (112)d).

Interaction with intermediate quantifiers

A second possible test is to examine sentences where the DP containing *propre* occurs in an embedded clause and contains a variable bound by a quantifier that appears at an intermediate position and cannot move higher. If the scalarity effect can be interpreted at the matrix level, this is an argument against the lexical hypothesis: moving the DP with *propre* to the matrix level, i.e. above the quantifier, would unbind the variable; so as in the

previous case, the scalarity effect and the DP containing *propre* are irreparably disconnected. In fact, this case turns out to be attested as shown in (113).

- (113) a. Les policiers refusent que quiconque_i accuse son_i propre AGRESSEUR !
 the policemen refuse that anybody accuses his own aggressor
 'The policemen refuse to let anybody_i accuse his_i own ATTACKER!'
- b. Les policiers refusent même que quiconque_i accuse son_i AGRESSEUR !
 the policemen refuse even that anybody accuses his aggressor
 'The policemen even refuse to let anybody_i accuse his_i ATTACKER!'
- c. Les policiers refusent que quiconque_i accuse son_i AGRESSEUR !
 the policemen refuse that anybody accuses his aggressor
 'The policemen refuse to let anybody_i accuse his_i ATTACKER!'

In this example, *quiconque* ('anybody') is a Negative Polarity Item and must therefore be outscoped by the negative verb *refuser* ('refuse'). Moreover, *son propre agresseur* ('his own attacker') is bound by *quiconque* ('anybody') so that it cannot have wide scope with respect to the negative verb either. Nevertheless, the scalarity effect can be interpreted above the negative verb; this is in fact the much preferred interpretation in stereotypical contexts: what is unexpected is not that one accuses one's attacker (this is on the contrary quite expected), but that the policemen refuse to let people do so. Thus the paraphrase with *même* in the matrix clause is correct (the paraphrase would also be acceptable if *même* occurred in the embedded clause since two interpretations are possible in this case as mentioned concerning (c) in footnote 54).

The same pattern obtains if one replaces the NPI by other elements that need to remain in an intermediate position for interpretive reasons. Thus, we reach the same result if the binder of *son propre* is an indefinite that is not specific as exemplified in (114).

- (114) a. La nouvelle loi interdit qu'[une victime]_i dénonce son_i propre AGRESSEUR !
 the new law prohibits that a victim denounces his own aggressor
 'The new law prohibits [a victim]_i from accusing his_i own ATTACKER!'
- b. La nouvelle loi interdit même qu'[une victime]_i dénonce son_i AGRESSEUR !
 the new law prohibits even that a victim denounces his aggressor
 'The new law even prohibits [a victim]_i from accusing his_i ATTACKER!'

- c. La nouvelle loi interdit qu'[une victime]_i dénonce son_i AGRESSEUR!
 the new law prohibits that a victim denounces his aggressor
 'The new law prohibits [a victim]_i from accusing his_i ATTACKER!'

Once again, under the much preferred interpretation, the scalarity effect outscopes the negative verb *interdire* ('prohibit'), while the DP containing *propre* has narrow scope with respect to the negation as it is bound by the indefinite *une victime* ('a victim') that has a non specific interpretation (under a specific interpretation, the indefinite could however have high scope, but this is very implausible in such an abstract context).

The effect is similar when the binder is a quantifier that is not able to move by nature. For instance, modified numerals are claimed not to be able to move (cf. a.o. Szabolcsi: 1997) as shown in (115)a, and when this kind of quantifier binds *son propre*, the scalarity effect can nevertheless scope high (cf. (115)b paraphrased by (115)c).

- (115) a. Un professeur dirige plus de 5 étudiants. (*plus de 5 > un)
 a professor supervises more than 5 students
 'Some professor supervises more than 5 students.' (*more than > some)
- b. Un professeur refuse que [plus de 5 étudiants]_i présentent leur_i propre TRAVAIL !
 a professor refuses that more than 5 students present their own work
 'Some professor refuses to let [more than 5 students]_i present their_i own WORK!'
- c. Un professeur refuse même que [plus de 5 étudiants]_i présentent leur_i TRAVAIL !
 a professor refuses even that more than 5 students present their work
 'Some professor refuses to let [more than 5 students]_i present their_i WORK!'
- d. Un professeur refuse que [plus de 5 étudiants]_i présentent leur_i TRAVAIL !
 a professor refuses that more than 5 students present their work
 'Some professor refuses to let [more than 5 students]_i present their_i WORK!'

Finally, we observe the same pattern if the intermediate quantifier binding *son propre* gets a different interpretation depending on its scope with respect to the matrix verb. Thus in (116), *deux tiers des étudiants* ('two thirds of the students') is interpreted differently

whether it scopes above or below *refuser*; and in the latter option (when it is question of a proportion, not of a specific group of students), the scalarity effect can still get interpreted at the matrix level.

- (116) a. Chaque président de département refuse que [deux tiers des étudiants]_i
 each president of department refuses that two thirds of_the students
 présentent leur_i propre TRAVAIL !
 present their own work
 'Each chair refuses to let [two thirds of the students]_i present their_i own WORK!'
- b. Chaque président de département refuse même que [deux tiers des
 each president of department refuses even that two thirds of_the
 étudiants]_i présentent leur_i TRAVAIL !
 students present their work
 'Each chair even refuses to let [two thirds of the students]_i present their_i WORK!'
- c. Chaque président de département refuse que [deux tiers des étudiants]_i
 each president of department refuses that two thirds of_the students
 présentent leur_i TRAVAIL !
 present their work
 'Each chair refuses to let [two thirds of the students]_i present their_i WORK!'

All these examples follow the same template: the scalarity effect can be interpreted at the matrix level, while the low scope (crucially below the matrix level, i.e. at the embedded level) of the DP containing *propre* is guaranteed by different means. This demonstrates that the position of the scalarity effect and that of the DP with *propre* can be irreparably dissociated, which is a strong argument against the lexical hypothesis that predicts this situation to be impossible.

Note that even if we were to adopt an extreme position to defend the lexical hypothesis, i.e. that it is not the whole DP containing *propre* that covertly moves (like in most cases of QR), but only *propre* (which would *a priori* be more controversial, since it is not syntactically obvious that an adjective alone can move at LF), we would encounter problems. Certainly, the second set of examples above would not argue against the lexical hypothesis any more, since the low position of the DP with *propre* is guaranteed by the binding of the possessive pronoun in these cases; but the possessive pronoun could still presumably be bound if

propre alone moved at LF. However, the examples involving islands would raise the same issue: movements out of an island remain violations whether by a whole DP or by a mere adjective, and we would need to explain why *même* is different from *propre* with respect to its island-escaping behavior. Moreover, the next arguments also hold in both cases.

4.3.2.2.2. Two weaker arguments against the lexical hypothesis

To the strong argument that I have just presented through a range of different cases I want to add some weaker arguments against the lexical hypothesis.

First, given that *propre* typically triggers a scalarity effect only under one of the two main possible readings, i.e. when the focus alternatives target the possessum, the lexical hypothesis predicts the existence of two homonymous lexical entries for *propre*, one including the scalarity effect, the other one excluding it. But this is not desirable for theory-internal reasons of economy. As we will see, the operator hypothesis, however, does not have this consequence (I will assume that E is independent from *propre*).

Furthermore, the lexical hypothesis does not provide any explanation for why the same scalarity effect can occur without the presence of *propre*. Thus the following examples in (117) are identical to some of the previous examples except that they do not contain *propre*; however, a similar scalarity effect arises.

- (117) a. Médée a tué ses ENFANTS! (cf. (103)a)
 Medea has killed her children
 'Medea killed her CHILDREN!'
- b. Luc n'est jamais content ; il n'est pas content quand ses ENFANTS sont là !
 Luc neg is never happy he neg is not happy when his children are there
 'Luc is never happy; he's not happy when his CHILDREN are here!'
 (cf. (111)d)
- c. Les policiers refusent que quiconque_i accuse son_i AGRESSEUR !
 the policemen refuse that anybody accuses his aggressor
 'The policemen refuse to let anybody_i accuse his_i ATTACKER!' (cf. (113)c)

This means that under the lexical hypothesis, another mechanism is needed to explain these cases. Once again, it is a weak argument against the hypothesis in that even if no contradiction obtains, these are undesirable consequences for theoretical reasons of economy.

Nevertheless, based on examples like (117), a different lexical hypothesis could be proposed, namely it is not *propre* but the intonational morpheme, i.e. the rising intonation on the noun mentioned above, that lexically encodes the unexpectedness effect. Such a hypothesis would be supported by the fact that mirativity has recently been recognized as a distinct grammatical and semantic category: DeLancey (1997, 2001) suggests that the equivalent of mirative morphemes in languages such as Lhasa Tibetan or Turkish could be an intonational marker in English (2001: 377). However, this second lexical hypothesis encounters the same problems as the first one since the specific rising contour targets the noun combining with *propre*: as shown by examples involving islands and binding by intermediate quantifiers, the intonational marker and the scalarity effect are irreparably disconnected; covert movement cannot solve the problem.

Thus there are many reasons militating against the lexical hypothesis. Now that I have argued against both the pragmatic and the lexical hypotheses, I will show how the operator hypothesis is more satisfactory in the next subsection.

4.3.2.3. *In favor of the operator hypothesis*

According to the operator hypothesis, the scalarity effect induced by *proprie* is due to the presence of the scalarity operator E (akin to *even*) proposed by Chierchia (2006). As a first approximation (I will provide the full lexical entry for E later on), this focus sensitive operator implies⁵⁶ that the proposition p that it scopes over is low on a scale of expectations (i.e. the alternatives q are more likely):

$\forall q ((q \in C \wedge q \neq p) \rightarrow p < q)$
< means 'less expected than'
C is a set of contextually given alternative propositions.

1.1.1.1. *First good prediction: the scope of the scalarity effect*

The operator hypothesis is superior to the previous ones in that it makes correct predictions when the pragmatic and the lexical hypotheses fail to do so but undergenerate. In particular, this hypothesis correctly predicts that the scalarity effect can either have matrix scope or embedded scope disregarding the position of *proprie*. Thus the dilemma faced by the previous hypotheses is reconciled if we assume the presence of E: the pragmatic hypothesis can account for cases where the scalarity effect has high scope and *proprie* does not, but it cannot explain cases where the scalarity effect is embedded; conversely, the lexical hypothesis can account for cases where the scalarity effect is embedded, but it cannot explain cases where the position of the scalarity effect and that of *proprie* are irreparably dissociated; but the presence of E derives the scalarity effect at the right level both in problematic examples for the pragmatic hypothesis (e.g. (118)) and in problematic ones for the lexical hypothesis (e.g. (119)).

⁵⁶ I will later on show that it seems to be a presupposition.

(118) Les amis d'Anne refusent que E[elle trahisse ses propres ENFANTS].
 the friends of Anne refuse that she betrays her own children
 'Anne's friends refuse to let E[her betray her own CHILDREN].' (cf. (108))

(119) Luc n'est jamais content ; E[il n'est pas content quand ses propres ENFANTS
 Luc neg is never happy he neg is not happy when his own children
 sont là]!
 are there
 'Luc is never happy; E[he's not happy when his own CHILDREN are here!]' (cf. (111))

Moreover, these two cases can be combined in the same sentence:

(120) Je ne pense pas que E[Luc ne soit pas content quand ses propres ENFANTS
 I neg think not that Luc neg is not happy when his own children
 sont là].
 are there
 'I do not think that E[Luc is not happy when his own CHILDREN are here].'

In (120), E has intermediate scope in the sense that it has narrow scope with respect to the matrix negation (*je ne pense pas* 'I do not think'), but wide scope with respect to the embedded negation (*Luc n'est pas content* 'Luc is not happy'); moreover *propre* is further embedded in an island. This means that neither the pragmatic hypothesis nor the lexical hypothesis could account for this case. The operator hypothesis however can.

Thus the arguments against the pragmatic and the lexical hypotheses turn out to be arguments in favor of the operator hypothesis. This is also the case of the weaker arguments previously mentioned. While the lexical hypothesis makes the undesirable prediction that *propre* has at least two lexical entries and that another mechanism is needed in cases of scalarity effects occurring without *propre*, the operator hypothesis does not. On the contrary, it directly follows from this hypothesis that *propre* does not have to induce a scalarity effect, since the operator E is independent from *propre*. Conversely, it

also follows that scalarity effects can arise without *propre* (cf. (117)): the operator E does not depend on *propre*.

4.3.2.4. A second good prediction: intervention effects with overt focus particles

In addition, the operator hypothesis is further supported by another array of facts concerning multiple foci. The structure of the argument is as follows: the operator hypothesis predicts an intervention effect with other focus sensitive particles in the same way as overt *même* ('even') can intervene with other focus particles such as *seulement* 'only' or *aussi* 'also'; in fact, sentences involving the reading of *propre* that is of interest here (the alternatives target the possessum) are degraded when an overt focus particle occurs in the sentence and targets the DP containing *propre*. The following example (121) illustrates this point with the focus sensitive particle *aussi* 'also'.⁵⁷

- (121) a. ?? Pour ses 30 ans, Jean a invité sa famille et ses amis. Il a aussi invité
 for his 30 years John has invited his family and his friends he has also invited
 ses propres ENNEMIS.
 his own enemies
 'John invited his family and his friends for his 30th birthday. He also invited
 his own ENEMIES.'
- b. ?? Pour ses 30 ans, Jean a invité sa famille et ses amis. Il a aussi invité
 for his 30 years John has invited his family and his friends he has also invited
même ses ENNEMIS. /Il a même aussi invité ses ENNEMIS.⁵⁸
 even his enemies he has even also invited his enemies

⁵⁷ I illustrate the point with *aussi* 'also' rather than *seulement* 'only', because the paraphrase with *même* 'even' (which is meant to control for the existence of the intervention effect in the example at hand, as data with multiple foci do not seem to always show intervention effects for unknown reasons, cf. Beck and Vasishth: 2009) would be bad for independent reasons in the case of *seulement*: as we will see, *même* unlike E presupposes that some more expected alternatives are true, which is in most cases incompatible with the assertion of *seulement* that excludes all other alternatives (but since E can occur if more expected alternatives are true, it should be compatible with *aussi*).

⁵⁸ The second option may appear to sound better because the most salient reading is not the intended one. Under the intended reading (which is not acceptable), both *aussi* 'also' and *même* 'even' associate with the DP *ses ennemis* 'his enemies'. There is however a second reading where *même* targets the whole VP while *aussi* only associates with the DP; there is no intervention effect in this case, but this case does not concern us here, since the scalarity effect induced by *propre* necessarily targets the DP including *propre*.

- 'John invited his family and his friends for his 30th birthday. He also invited even his ENEMIES./He even also invited his ENEMIES.'
- c. Pour ses 30 ans, Jean a invité sa famille et ses amis. Il a aussi invité
for his 30 years John has invited his family and his friends he has also invited
ses ENNEMIS.'
his enemies
'John invited his family and his friends for his 30th birthday. He also invited
his ENEMIES.'
- d. Pour ses 30 ans, Jean a invité sa famille et ses amis. Il a même invité
for his 30 years John has invited his family and his friends he has even invited
ses ENNEMIS.'
his enemies
'John invited his family and his friends for his 30th birthday. He even invited
his ENEMIES.'
- e. Pour ses 30 ans, Jean a invité sa famille et ses amis. Et il a invité
for his 30 years John has invited his family and his friends and he has invited
ses propres ENNEMIS !
his own enemies
'John invited his family and his friends for his 30th birthday. And he invited
his own ENEMIES!'

In (121)a, *aussi* is supposed to associate with *ses propres ennemis* ('his own enemies'). But the sentence is degraded, while the same sentence without *propre* (c) or without *aussi* (e) is perfectly acceptable. This suggests that there is an intervention effect induced by the presence of *propre* in the DP targeted by the focus particle *aussi*. As a matter of fact, an intervention effect arises when *propre* is absent but *même* associating with the possessive DP is present instead (b), while the sentence with *même* but without *aussi* is grammatical (d). So it seems that *même* and *propre* have the same degrading effect on the sentence in the presence of another focus particle *aussi* targeting the same DP. This directly follows under the operator hypothesis, assuming that E like *même* triggers an intervention effect with *aussi*.

The same holds if the focus particle targets a DP different from that containing *propre*:

- (122) a. ??[Cette année, Jean a seulement₁ vu ses propres₂ PARENTS₂ [à NOËL]₁]₂.
this year John has only seen his own parents at Christmas

- '?? [This year, John only₁ saw his own₂ PARENTS₂ [at CHRISTMAS]₁] 2.'
- Intended*: it is unexpected that this year, John saw his parents only at Christmas.
- b. Cette année, Jean a seulement₁ vu ses PARENTS [à NOËL]₁.
 this year John has only seen his parents at Christmas
 'This year, John only₁ saw his PARENTS [at CHRISTMAS]₁.'
- c. # Cette année, Jean a vu ses propres PARENTS à NOËL.
 this year John has seen his own parents at Christmas
 '# This year, John saw his own PARENTS at CHRISTMAS.'
- d. ?? Cette année, Jean a seulement₁ vu même₂ ses PARENTS₂ à NOËL₁./
 this year John has only seen even his parents at Christmas
 Cette année, Jean a même₂ vu ses PARENTS₂ seulement₁ à NOËL₁.⁵⁹
 this year John has even seen his parents only at Christmas
 '[This year, John only₁ saw even₂ his PARENTS₂ [at CHRISTMAS]₁] 2./[This year, John even₂ saw only₁ his PARENTS₂ [at CHRISTMAS]₁] 2.'

In (122), *seulement* ('only') associates with *à Noël* ('at Christmas'): the intended interpretation is that it is unexpected that John saw his parents only at Christmas this year (the bracketing is meant to indicate that the domain of the scalarity effect (2) includes the focus effect of *seulement*; the indices clarify the target of the focus).⁶⁰ But while the sentence is perfectly acceptable without *propre* in (b) (the contrastive focus on *parents* only needs to be justified, for instance by a continuation of that sort: "and he only saw his SISTER for NEW YEAR"), the presence of *propre* seems again to yield an intervention effect similar to the intervention effect triggered by *même* in (d).⁶¹

⁵⁹ The same remark holds as in (121)b), cf. footnote 58.

⁶⁰ This representation implicitly assumes that focus evaluation is selective, which is one possible theory (cf. Kratzer: 1991, Wold: 1996), while Rooth (1992)'s theory rather implies that focus evaluation affects all foci in the scope of the evaluating operator. Even if I do not mean here to take a stand on this issue, the facts that my argument is based on seem to support the former theory (focus evaluation is selective). But as shown by Beck and Vasisht (2009), the data are tricky and the story may need to be more complex. In any case, the important point for my purposes here is that intervention effects indeed occur in my specific examples with overt focus particles (as controlled by paraphrases with *même*) and also with hypothesized E as well. I do not aim at making a point with respect to multiple foci in general.

⁶¹ If the DP with *propre* is topicalized, the intervention effect vanishes (cf. a). This is consistent with the operator hypothesis since the same happens with *même* (cf. b).

- 23) a. Ses propres PARENTS, Jean les a seulement₁ vus à NOËL₁.
 his own parents John them has only seen at Christmas
 'His own PARENTS, John has only seen at CHRISTMAS.'

Note that the sentence without *seulement* is infelicitous in (c). This is only the case because the scalarity effect was precisely made felicitous by the presence of *seulement*: in stereotypical contexts, it is not unexpected to see one's parents, but it is unexpected to see them only at Christmas. In fact, if the scalarity effect does not depend on the presence of *seulement* as in (123), the sentence without *seulement* is fine, as in stereotypical contexts it is unexpected to invite one's enemies to one's wedding.

- (123) a. ?? [A son mariage, Jean a seulement₁ invité ses propres₂ ENNEMIS₂]₂
 at his wedding John has only invited his own enemies
 [au vin d'HONNEUR]₁.
 at the wine of honor
 '?? [For his wedding, John only₁ invited his own₂ ENEMIES₂]₂ [to the RECEPTION]₁.'
Intended: it is unexpected that for his wedding, John invited his enemies, though only to the reception.
- b. #A son mariage, Jean a seulement₁ invité ses ENNEMIS [au vin d'HONNEUR]₁
 at his wedding John has only invited his enemies at the wine of honor
 '#For his wedding, John only₁ invited his ENEMIES [to the RECEPTION]₁.'
- c. A son mariage, Jean a invité ses propres ENNEMIS au vin d'honneur.
 at his wedding John has invited his own enemies at the wine of honor
 'For his wedding, John invited his own₂ ENEMIES to the reception.'
- d. ?? A son mariage, Jean a seulement₁ invité même₂ ses ENNEMIS₂
 at his wedding John has only invited even his enemies
 [au vin d'HONNEUR]₁. / A son mariage, Jean a même₂ invité ses ENNEMIS₂
 at the wine of honor at his wedding John has even invited his enemies
 seulement₁ [au vin d'honneur]₁.
 only at the wine of honor
 '?? For his wedding, John only₁ invited even₂ his ENEMIES₂ [to the RECEPTION]₁. /
 ?? For his wedding, John even₂ invited his ENEMIES₂ only₁ [to the RECEPTION]₁.'

Still, the same intervention effect arises when *seulement* is present even if the intended interpretation is perfectly plausible: it is unexpected that John invited his enemies to his wedding, and he invited them only to the reception. But conversely, the sentence without

b. Même ses PARENTS, Jean les a seulement₁ vus à NOËL₁.
 even his parents John them has only seen at Christmas
 'Even his PARENTS, John has only seen at CHRISTMAS.'

propre (123)b is infelicitous in stereotypical contexts: since it is already unexpected to invite one's enemies at all, the downward oriented nature of *seulement* does not fit.

But taken together, these two examples (122) and (123) show that even if the sentences are grammatical when only *propre* or only *seulement* is present, they are not when both occur, even though the intended interpretation is perfectly plausible. This supports the operator hypothesis for two reasons. First, this hypothesis indeed predicts an intervention effect similar to that occurring with *même*, which can explain the degraded status of the sentences. Second, this intervention effect is not predicted by the pragmatic and the lexical hypothesis that do not involve any focus operator.

Thus several arguments support the operator hypothesis: the best way to account for the scalarity effects induced by *propre* is to assume the existence of the focus operator E.

I have shown that the scalarity effect does not come from the lexical entry of *propre*, but from the association of the possessive DP containing *propre* with E. The lexical entry of *propre* does play a role though, and that's why *possessum propre* is typically associated with E. This is what I will show in the next subsection.

4.3.2.5. Association of *propre* with E

I have argued in favor of the operator hypothesis for two main reasons: the right scope of the scalarity effect cannot be derived by a global Gricean reasoning as it can be embedded, and it cannot be predicted by a lexical hypothesis either, since the scalarity effect can be interpreted irreparably higher than the position of *propre*. This means that sentences involving a scalarity effect can be accounted for if we assume that the DP containing *propre* is associated with the scalarity operator E that can appear at different levels of the

sentence. The question is now to know why *possessum propre* and E are typically associated since this association is not directly lexical.

4.3.2.5.1. *Placing the possessive DP at the end of a scale of expectedness*

Recall that in general, I suppose that focus serves the principle of minimization (when *propre* does not impact the truth conditions, it should have a pragmatic effect, and this is satisfied if it is in focus as it will induce alternatives); but under the possessum reading, I appeal to the theory of relevance since *propre* is neither truth-conditional nor FOC-marked itself, but only part of a FOC-marked constituent. In cases of possessum *propre* that do not involve a scalarity effect, I hypothesized that *propre* is relevant in justifying the condition of contrast for alternatives (cf. (97)). When the possessum reading induces an unexpectedness effect, I will now assume that *propre* can get another pragmatic effect: its lexical entry characterizing the possessive relation as most specific justifies unexpectedness.

The effect of *propre* is similar to that of the adjectives *noir* 'black' and *brillant* 'brilliant' in the following examples:

- (124) a. [Le Président noir]_F a prononcé un discours raciste !
 the president black has pronounced a discourse racist
 'The black President gave a racist talk!' [talking about Obama]
- b. Tu te rends compte, [le brillant fils de Paul]_F a raté l' examen !
 you realize the brilliant son of Paul has failed the exam
 'Can you imagine, Paul's brilliant son failed the exam!' [Paul has one son]

Here, the adjectives 'black' and 'brilliant' do not have any truth-conditional contribution since we already know that President Obama is black and it is assumed in the context that

Paul only has one son.⁶² But these adjectives do not violate the maxim of minimization as they have the following pragmatic effect: they point out the relevant property to be considered to create a scale of expectedness and rank the President/Paul's son on it; both sentences indeed induce a surprise effect and the source of the surprise is explained by the meaning of the adjective. Thus in (a), it is because the President is black that he is particularly unexpected to give a racist discourse; in (b), it is because Paul's son is brilliant that he is particularly unexpected to have failed the exam. In other words, the adjectives *black* and *brilliant* do not impact the truth conditions of the sentence, but play a pragmatic role by justifying the unexpectedness of the proposition. In fact, non-relevant modifiers are infelicitous in the same environment :

- (125) a. #[Le Président de 51 ans]_F a prononcé un discours raciste !
 the president 51-year old has pronounced a discourse racist
 '#The 51-year old President gave a racist talk!' [talking about Obama]
 b. #Tu te rends compte, [le fils blond de Paul]_F a raté l' examen !
 you realize the son blond of Paul has failed the exam
 '#Can you imagine, Paul's blond son failed the exam!' [Paul has one son]

Similarly, *propre* plays a relevance role with respect to the pragmatic construction of a scale ranking the alternatives, which gives rise to E: due to its superlative meaning (it qualifies the possessive relation as most specific), *propre* gives the criterion for the scale and ranks the focused DP it is part of on the end of this scale. More specifically, *propre* indicates that the relevant property of the possessum to rank it on the expectedness scale is closeness of relation:

- (126) Personne n' a défendu Paul. [Sa propre MERE]_F a gardé le silence.
 nobody neg has defended Paul her own mother has kept the silence
 'Nobody tried to defend Paul. His own MOTHER kept silent.'

⁶² The context does not necessarily include the fact that Paul's son is bright: this can be an informative presupposition.

In the context of (126), the closer one is to Paul, the more likely one is to speak up to defend him. Moreover, *propre* indicates that the focused DP is at the end of the scale since the idea of extreme closeness of relation is included in its lexical entry (recall that I hypothesized that *propre* has a superlative meaning): in (126), Paul's mother is related to him in the most specific way so she is really unlikely to keep silent.

In other words, assuming the theory of relevance mentioned above for non-truth-conditional adjectives, I propose that *propre* is relevant in giving the explanatory factor for unexpectedness presupposed by E: in (126), it is because the relation is the closest between Paul and his mother that it is unexpected that she kept silent. Moreover, what (124)a and (124)b show is that this kind of relevance is also satisfied by other adjectives and is not a specificity of *propre*.

Note that the notion of closeness can be relativized to the relation expressed by the noun. By closeness of relation, I do not mean that *propre* necessarily expresses affective closeness, but rather, the notion of closeness or tightness depends on the relation expressed by the noun. For instance in (121)e repeated below, *propre* indicates that the enemy relation is very tight or characteristic: personal enemies are closer in that sense than common enemies.

- (127) Pour ses 30 ans, Jean a invité sa famille et ses amis. Et il a invité
for his 30 years John has invited his family and his friends and he has invited
ses propres ENNEMIS !
his own enemies
'John invited his family and his friends for his 30th birthday. And he invited his
own ENEMIES!'

The enemies in question here are John's personal enemies and that's why it is unexpected that he invited them: *propre* is relevant in expressing the explanatory criterion for unexpectedness, namely that the referred individuals are high on the enemy scale and according to common knowledge, this inversely correlates with the scale of invited people.⁶³

When the head noun is not relational, the unexpectedness effect must come from closest possession:

(128) Lise a détérioré ses propres affaires !
'Lise damaged her own stuff!'

Here, *propre* justifies unexpectedness in indicating that Lise's stuff are possessed by her, and that's why it is unexpected that she damaged them in a stereotypical context. Like in (97), this is possible only because the head noun is general enough ('stuff'): if too specific, the lexical entry of the head noun interferes in the relevance effect as illustrated below:

(129) ?Lise a abîmé son propre stylo !
'?Lise damaged her own pen!'

Here, since the head noun is quite specific (*pen* vs. *stuff*), it is expected to be relevant for unexpectedness; but actually, it is not because what Lise damaged is a pen that her

⁶³ When the head noun itself already indicates that the possessive DP is at the end of a scale of unexpectedness, *propre* is less felicitous:

24) Personne n'a défendu Paul. [Son (??propre) AVOCAT]_F a gardé le silence.

'Nobody tried to defend Paul. His (??own) LAWYER kept silent.'

Here, the lexical meaning of *avocat* ('lawyer') and world knowledge imply that it is highly unexpected that Paul's lawyer kept silent, since his lawyer is precisely the individual in charge of defending him. Therefore, *propre* does not have any role in justifying unexpectedness, all the more since personal lawyers do not contrast with non-personal lawyers in this context.

This is probably why some speakers do not like examples involving *ses propres ennemis* ('his own enemies'): the noun *ennemis* ('enemies') itself already justifies unexpectedness, and it may appear superfluous to specify that the event in question is unexpected because they are personal enemies.

behavior is unexpected. Thus the sentence is odd (unless the context is accommodated⁶⁴). This explains why in general, the scalar reading of *propre* mostly arises with relational nouns: in the case of non-relational nouns, the reading is only available if the head noun is general enough (or the context is accommodated).

In sum, if *possessum propre* typically associates with E, it is because it creates the good conditions for giving rise to E, namely its proximity meaning justifies unexpectedness: its superlative meaning places the possessive DP at the end of the scale of expectedness. This pragmatic function of *propre* compensates its lack of truth-conditional effect, thus satisfying the Gricean maxim of minimization.

4.3.2.5.2. Association with other focus particles

The theory of relevance predicts that *possessum propre* should also be able to be relevant in justifying the association with other focus particles, not only mere contrastive focus as in (97) or E.

Indeed, *possessum propre* can as expected play the same role in associating with *même* 'even':

- (130) Personne n' a défendu Paul. Même [sa propre mère]_F a gardé le silence.
 nobody neg has defended Paul Even her own mother has kept the silence
 'Nobody tried to defend Paul. Even his own MOTHER kept silent.'

Moreover, *possessum propre* can play another pragmatic role in associating with *seulement* 'only':

- (131) a. La présidente Archer fusilla le secrétaire du regard et se ravisa
 the president(fem) Archer shot the secretary of_the look and changed_her_mind

⁶⁴ For instance, if Lise is a scribe, her pen can be her most precious possession. In that case, *son propre stylo* ('her own pen') can give rise to an unexpectedness effect.

aussitôt. Seuls [ses *propres* ENFANTS]_F osaient ainsi la couper. Si ce blanc-bec osait le
 immediately only her own children dared so her cut if that greenhord dared it
 faire, c'est que c'était vraiment important. Dans le cas contraire, il le regretterait.
 do it is that it was really important in the case opposite he it would_regret

'President Archer gave dirty looks to the secretary and immediately changed her
 mind. Only her *own* CHILDREN would dare interrupt her like this. If that greenhorn dared do
 it, it had to be because it was really important. Otherwise, he would regret it.' [google]

b. ... ?? Seuls même ses ENFANTS osaient ainsi la couper.
 only even her children dared so her cut

/ Même seuls ses ENFANTS osaient ainsi la couper....
 even only her children dared so her cut

'...?? Only even her CHILDREN dared interrupt her like this./ Even only her CHILDREN
 dared interrupt her like this...'

(132) a. Paul sait seulement écrire [son *propre* NOM]_F.
 Paul knows only write his own name

'Paul only knows how to write his *own* NAME.'

b. ??Paul sait même seulement écrire son NOM./ Paul sait seulement même
 Paul knows even only write his name Paul knows only even

écrire son NOM.
 write his name

'Paul even only knows how to write his NAME./ Paul only even knows how to
 write his NAME.'

In (131) and (132), the DP containing *propre* occurs with *seulement* without intervention
 effect arising as shown in (b); this means that E is not present but *seulement* associates
 with this DP. Given that *seulement* ('only') is here scalar, *propre* plays a role similar to its
 role with E. The only difference is the orientation of the scale: *only* triggers the
 presupposition that the prejacent is low on a certain scale (cf. Klinedinst: 2004).⁶⁵ For
 instance in (132), to write one's own name is low on the scale of writing skills; therefore, it
 is highly expected to be true. Thus *propre* points out the relevant property – tightness of
 the relation - to be taken into consideration for constructing a scale of likelihood: closeness

⁶⁵ Klinedinst (2004) gives the following examples of scalar uses of *only*:

25) (After 10 years at the university) Bill only has a MASTER'S DEGREE.

26) John only got his degree from CAL STATE. [John got his degree from LA Community College < Cal
 State < UCLA < USC < Stanford]

27) I was only WATCHING TV (when you called).

28) I only have a SIX. [in a game where high card wins]

explains expectedness, or more precisely, it is because his name is closely related to him that Paul is more expected to know how to write it. As opposed to E or *even* that presupposes that the proposition is particularly unexpected, *seulement* here presupposes that the proposition is particularly expected, i.e. high on the scale of expectation.

This case is important in two respects: first, it supports the idea that *propre* participates in the construction of the likelihood scale and the ranking of the focused constituent at an extremity of it; second, it empirically confirms that *possessum propre* does not obligatorily associate with E but does typically so to satisfy the principle of minimization. So *possessum propre* can obey the principle of minimization by being relevant in justifying the association with focus, whether with the squiggle operator (cf. (97)) or with E (cf. a.o. (103), (126)), *même* (cf. (130)) or *seulement* (cf. (132)).

4.3.2.5.3. E without propre

Conversely, my theory predicts that the presence of *propre* is not necessary for E and this is also borne out.

First, other elements like NPIs can give rise to it as shown in the literature (cf. next subsection). Moreover, in examples such as (133), E can also arise without *propre* just as E can occur without *noir* or *brillant* in (134).

(133) Personne n' a défendu Paul. [Sa mère]_F a gardé le silence.
 nobody neg has defended Paul her mother has kept the silence
 'Nobody tried to defend Paul. His MOTHER kept silent.'

(134) a. [Le Président]_F a prononcé un discours raciste !
 the President has pronounced a discourse racist
 'The PRESIDENT gave a racist talk !' [talking about Obama]
 b. Tu te rends compte, [le fils de Paul]_F a raté l' examen !
 you realize the son of Paul has failed the exam
 'Can you imagine, Paul's son failed the exam!' [Paul has one son]

It does not mean that *propre*, *noir* or *brillant* do not have any contribution in such cases: their role is to justify unexpectedness and thus facilitate the construction of a likelihood scale by specifying the reason for unlikelihood, namely high degree of closeness in the case of *propre*. In (134) however, the justification for unexpectedness is not explicitly given: the hearer needs to accommodate that the reason for why the sentence is surprising is that the President is black in (a) and that Paul's son is brilliant in (b); similarly in (133), the hearer needs to deduce from his knowledge that the reason for the unexpectedness effect is that the person that kept silent is closely related to Paul and one normally does defend closely related people. Adjectives like *propre*, *noir* or *brillant* in (133) and (134) make the interpretation less costly for the hearer.

Furthermore, in sentences without relevant adjectives like *propre*, the range of interpretations is actually broader since the reason for unexpectedness is not explicitly given. For instance in (133), unexpectedness could arise from the fact that in the context, Paul's mother is really talkative and never keeps quiet in any situation, and not that she is her mother. However, (126) containing *propre* would be infelicitous in such a context, since in this case, the reason for unexpectedness has to be close motherhood; otherwise, *propre* would be irrelevant.

Also, sentences without relevant adjectives like *propre* do not give rise to unexpectedness inferences in some cases at least:

- (135) a. Jean se dispute avec [ses voisins]_F.
Jean fights with his neighbors
'Jean fights with his NEIGHBORS.'
b. Jean se dispute avec [ses propres voisins]_F.
Jean fights with his own neighbors
'Jean fights with his own NEIGHBORS.'

Thus (a) does not trigger any special inference: *ses voisins* ('his neighbors') is simply contrasted with other individuals Jean fights (could fight) with. But the presence of *propre* in (b) gives rise to the inference that it is unexpected that Jean would fight with his neighbors because they are very close to him (you get along with close neighbors); it would be more expected that he fights with people less close to him.

Note that the same holds with the following sentences :

- (136) a. Jean s'entend avec [ses voisins]_F.
 Jean gets_along with his neighbors
 'Jean gets along with his NEIGHBORS.'
 b. Jean s'entend avec [ses propres voisins]_F.
 Jean gets_along with his own neighbors
 'Jean gets along with his own NEIGHBORS.'

In this case too, (a) does not give rise to special inference. But (b) implies that it is unexpected that Jean would get along with his neighbors because they are very close to him (you argue with too close neighbors). The contrast between (135) and (136) shows that world knowledge is not responsible for the inference, but *propre* triggering the presence of E is (cf. (147)).

To sum up, possessum *propre* is part of a focused constituent (the possessive DP); it does not have any truth-conditional effect but a pragmatic effect of relevance. Due to its meaning expressing closest association, it ranks the focused DP at the end of a closeness scale whose exact content depends on the relation expressed by the noun. This can have various relevance effects. In the case of association of E that is the typical case, the scale of closeness inversely correlates with the scale of unexpectedness and thus, the role of *propre* is to justify unexpectedness due to its proximity meaning. On the contrary, in the case of association with scalar *seulement*, the scale of closeness correlates with expectedness, and

thus, the meaning of *propre* justifies exclusivity. More generally, *propre* can be relevant by justifying any association with focus.

4.3.2.6. *Consequences for E*

Recall that the goal of the section was to derive the scalarity effect arising with possessum *propre*, and I have shown that it arises from the fact that the possessive DP involving *propre* associates with E. In the preceding subsection, I have explained the role of *propre* in this association. In this subsection, I concentrate on E since my analysis turns out to be an argument for the existence of an operator E akin to *even*. I will review the literature on E and clarify the contribution of this study with respect to E.

4.3.2.6.1. *Literature on E: interpretation of NPIs*

In parallel to the exhaustivity operator O akin to *only* (cf. Chierchia, Fox and Spector: to appear), an operator akin to overt *even* has been argued for, in particular by Krifka 1995 (cf. *Emph.Assert*) and Chierchia 2006 (cf. E). Both authors propose that this operator is associated with NPIs; the basic idea is that negative polarity *any* in English has the same meaning as an indefinite like *some*, plus domain widening.

(137) a. I didn't see any boy. (Chierchia 2006: 558)

≈ I didn't see even one boy.

b. Yesterday, Mary saw any student that wanted to see her. (Chierchia 2006: 539)

In a nutshell, Chierchia (2006) hypothesizes the existence of a silent focus sensitive operator E in order to give a unified account of polarity sensitivity through domain widening; polarity sensitive elements include negative polarity items such as *any* in negative contexts (cf. a) and free choice items like *any* meaning 'whatever' in positive contexts (cf. b). The intuition behind the domain-widening hypothesis is that as we

communicate, we select domains of discourse as our subject matter. In (137), *any boy* or *any student* is used with such domain in mind: the set of boys or students relevant and salient in the context could for example correspond to the boys or the students in this class. Domain widening consists of considering domains of individuals broader than what one would otherwise have considered. Thus use of *any* in (137) invites the hearer to consider a set of boys possibly larger than expected: in (a), not only didn't I see any boy in this class but not even any boy in this school; similarly in (b), Mary did not even see marginal students like students on leave for instance. In technical terms, domain widening amounts to the activation of a series of domain alternatives, out of which the largest quantification domain (in quantitative and qualitative terms) gets selected. Importantly, it is only in negative contexts that such broadening of the quantificational domain yields stronger propositions, which explains the distribution of NPIs. Chierchia proposes to formalize the idea by giving to *any* a lexical entry with activation of alternatives and by assuming the existence of a mode of enrichment E giving rise to *even*-like implicatures.

The basic idea is similar in Krifka (1995)'s paper: a NPI activates alternatives with smaller domains and this triggers an implicature that the alternative selected is the strongest the speaker has evidence for. Moreover, Krifka assumes a difference between the weak use of NPIs (e.g. *any*) which associate with a scalar operator akin to O (*Scal.Assert*) and their strong use (e.g. stressed *any*, *any at all*): only in the second case are borderline cases taken into consideration and the assertion is not scalar, but emphatic in that it carries the implicature expressed by the word *even* in the paraphrase; this is formalized using the operator *Emph.Assert*. The same type of assertion occurs with minimizers (b) and emphatic focus (c).

- (138) a. Mary didn't get ANYthing (at ALL) for her birthday. (Krifka 1995: 226)
b. NO friend of mine lifted a FINGER. (Krifka 1995: 231)
c. John would distrust Albert SCHWEITzer ! (Krifka 1995: 227)

Unlike the present study, Krifka and Chierchia do not concentrate on the different possible insertion sites of the operator E.⁶⁶ But Heim (1984: 104) implicitly suggests the possibility of wide scope of E (hidden *even* in her terms) with respect to an embedded minimizer (e.g. *so much as a dime*)⁶⁷ in the following example:

- (139) a. Every restaurant that charges so much as a dime for iceberg lettuce ought to be closed down.
b. ??Every restaurant that charges so much as a dime for iceberg lettuce actually has four stars in the handbook.

The contrast between (a) and (b) shows that the combination of hidden *even* and the lowest end of a scale is acceptable in the restrictor of a universal only if the relation between the restrictor and the nuclear scope is non-accidental: the predicate in (a) is something that applies to restaurants because they charge a dime or more for iceberg lettuce whereas the predicate in (b) just happens to apply to those restaurants. In other terms, hidden *even* has wide scope (over the whole sentence) in (139): it does not occur in the restriction of *every*; that's why there is a contrast between (a) and (b).

Guerzoni (2003: 95) explicitly treats these examples in terms of scope using overt *even*, showing that in (140), *even* should be interpreted with wide scope (over the whole sentence).

- (140) a. Every student that even handed in one assignment, got an A.
b. # Every student that even handed in one assignment was wearing blue jeans.

⁶⁶ Krifka mentions that assertion operators can occur in embedded sentences (Krifka 1995: 244), but he does not specifically treat the case of *Emph.Assert* in this respect.

⁶⁷ Unlike Chierchia or Krifka, Heim (like Guerzoni) however argues that weak NPIs do not have a hidden *even*. Therefore, the analysis involving E that I present here only applies to minimizers for her, not to weak NPIs.

In sum, the operator E or its equivalent has been proposed in the literature mostly to account for domain widening and the distribution of sensitive polarity items, which is a topic different from that of the present study. But the scopal fact hinted at by Heim will allow us to understand the link between the association of E with NPIs and that with *propre*.

4.3.2.6.2. *The conditions for giving rise to E*

Indeed, this study provides a new empirical evidence for E, i.e. it associates with possessive DPs involving *propre*. The parallel between the behavior of *possessum propre* and NPIs/minimizers turns out to be a key to better understand the conditions for E.

I propose that three main ingredients are necessary for giving rise to E:

- 1- a focused constituent that will associate with E;
- 2- a scale at an extremity of which the entity (corresponding to the focused constituent) is, as compared to the alternatives;
- 3- a context that makes this scale inversely correlate with an expectedness scale and thus ranks the proposition at the lowest end of it (otherwise, the presupposition of E is not satisfied).

Elements such as minimizers or *propre* provide these ingredients as they introduce focus alternatives (more or less directly), they point out the relevant property involved in the scale (e.g. proximity for *propre*) and they denote an extreme degree of it (e.g. closest association for *propre*, due to its superlative meaning).

Let's examine in parallel two examples involving a minimizer and *possessum propre* respectively where E has wide scope but the minimizer and *possessum propre* are embedded.

(141) E [Every restaurant that charges [so much as a dime]_F for iceberg lettuce ought to be closed down]. (Heim 1984: 104)

(142) E[Les patients qui ont vu [leurs propres enfants]_F aujourd'hui ne sont pas contents].
 the patients who have seen their own children today neg are not happy
 'The patients who saw their own children today are not happy.'

	Focused constituent	Scalar element	Context (correlation with unexpectedness)	Scale involved, oriented towards unexpectedness
Minimizers	<i>so much as a dime</i>	dime → numerical scale: <i>so much as a dime</i> is low on the scale	closing down of a restaurant despite low prices	closing down when price is 1 dime ↑ closing down when price is 100 \$
Possessum propre	<i>leurs propres enfants</i>	propre → scale based on closeness: <i>leurs propres enfants</i> is high on the scale	unhappiness despite visit of relatives	unhappiness when children visit ↑ unhappiness when enemies visit

The three ingredients I have mentioned are here present: first, *propre* and minimizers are part of a focused DP; second, they give rise to a scale (closeness scale, numerical scale) and rank the DP containing them at the extremity; thirdly, this scale inversely correlates with expectedness in the context.

If the scale is reversed (e.g. the previous context is negated), association with *seulement* obtains:

(143) [Only restaurants that charge [so little as a dime]_F for iceberg lettuce oughtn't to be closed down].

(144) [**Seuls** les patients qui ont vu [leurs propres ENFANTS]_F aujourd'hui sont
 Only the patients who have seen their own children today are
 contents].
 happy
 'Only the patients who saw their own CHILDREN today are happy.'

Furthermore, this analysis predicts that E can arise with adjectives other than *propre* as long as focus is involved and the adjective denotes a property at an extreme degree suitable to justify unexpectedness in a certain type of context. This is easily the case of superlatives, which explicitly correspond to ends of scale. For instance in the following example, the degree of competence of the student is expected to correlate with the performance at the exam; E arises because it is particularly unexpected for the best student to fail the exam.

(145) Il paraît que **E**[le meilleur élève a raté l' examen]!
 it appears that the best student has failed the exam
 'Apparently, the best student failed the exam!'

Note however a difference between this case and *propre*: as previously mentioned, *propre* does not necessarily have any truth-conditional effect, while the adjective of this example does (it is restrictive in the context).

It also happens with adjectives different from superlatives:

(146) J'ai appris que **E**[le patron a insulté son adorable secrétaire]!
 I have learned that the boss has insulted his adorable secretary
 'I heard that the boss insulted his adorable secretary!'

Here, the adjective *adorable* 'adorable' contributes to creating a kindness scale and its extreme degree is expected to inversely correlate with the probability of getting insulted. *Adorable* corresponds to a high degree of kindness so it is particularly unexpected for the secretary to get insulted; that's why E can arise here.

In all these examples, the proximity scale introduced by *propre* (or other kinds of scale contributed by the other adjectives that are mentioned) inversely correlates with the scale of expectedness: proximity explains unexpectedness, or more precisely, the highest degree on the proximity scale for the DP corresponds to the lowest degree on the expectation scale for the proposition. This inverse correlation arises from world knowledge and is not formally forced: the theory only predicts that non-truth-conditional adjectives must be relevant in some way, and it turns out that when it cooccurs with E, *propre* due to its proximity meaning is relevant in justifying unexpectedness. In general, *propre* occurs in a context where the relationship between people matter. More specifically, the context is some event X involving two entities x and y and X is particularly unexpected if x and y are closely related (association with E or *même*) or it is particularly expected (association with *seulement*). The simplest case is when the event is expressed by an axiomatic verb, negative like *détester* 'hate' (it is unexpected to hate closely related people), or positive like *aimer* 'love' (it is expected to love closely related people).

But I leave open the question how to precisely correlate the kind of relevance with the kind of focus particles. More generally, it is not completely clear how to formalize and predict rhetorical relations involved for relevance.

Moreover, the causal relation between the scales is not fixed by world knowledge but can be accommodated:

- (147) a. Personne n' a défendu Paul. [Sa propre mère]_F a gardé le silence.
 nobody neg has defended Paul her own mother has kept the silence
 'Nobody tried to defend Paul. His own MOTHER kept silent.'
- b. Personne n' a attaqué Paul. [Sa propre mère]_F a gardé le silence.
 nobody neg has attacked Paul her own mother has kept the silence
 'Nobody tried to attack Paul. His own MOTHER kept silent.'

The (b) sentence sounds odd at first glance, just because in stereotypical contexts, it is expected that mothers do not attack their sons, so proximity should not explain why it is unexpected that Paul's mother kept silent, since it is actually expected that she did so: the sentence is infelicitous because of presupposition failure. But the sentence can be accommodated if we imagine a context where on the contrary, mothers are the most likely to attack their sons as they know them more and do not want to protect them. In this case, the unexpectedness effect implied by E can be satisfied: in this context, it is expected that mothers attack their son, and therefore closeness explains why it is unexpected that Paul's mother kept silent.

To summarize, the fact that my argument for E involves a different empirical domain (*propre*) from that mentioned in the literature (NPIs) allows us to pinpoint the crucial conditions – focus, high extremity of a scale, inverse correlation with an expectedness scale – for giving rise to E by comparing the two cases; note that this also gives us a way to avoid overgeneration of E.

These conditions are precisely combined in Krifka's example involving emphatic focus:

(148) (= (138)c) John would distrust Albert SCHWEITZER ! (Krifka 1995: 227)

Indeed, the DP *Albert Schweitzer* is focused and Krifka assumes that it is known in the context that Albert Schweitzer is a particularly trustworthy person (extreme degree of trustworthiness); moreover, it is unexpected to distrust trustworthy people. The only difference from examples with *propre* or minimizers (but this is similar to (133) or (134)) is that the hearer must deduce from his knowledge that the relevant property in *Albert Schweitzer* for the ordering relation is trust, while elements like *propre* explicitly point out

the relevant criterion to be considered to construct the scale, and thus make the interpretation less costly for the hearer. Note that this difference seems to correlate with a difference in intonation, which would need to be further investigated (the intonation seems to be more rising in the absence of elements like *propre*).

Now that I have specified the conditions for giving rise to E, I want to be more specific on the nature of E by comparing it with overt *even* and the other focus operator O.

4.3.2.6.3. *Comparison between E and even*

As indicated by its designation, E roughly corresponds to overt *even*: like *even*, E targets a focused element and presupposes that the proposition p that it outscopes is the least expected among the alternative propositions. However, this view needs to be complemented and clarified.

Issues raised by NPI theories of even

The first complication comes from the fact that there exist two main theories about *even* and one of them postulates the existence of two different *even*; in the latter case, which *even* E is the counterpart of needs to be clarified. I will explain that even if I remain neutral in this debate here, I have some reasons to match E with regular *even*.

In a nutshell, the two main theories about *even* diverge in cases where *even* occurs in the scope of the negation but gets interpreted higher than the negation. This case is illustrated in footnote 54 in (c) repeated below.

(149) Les parents d' Anne refusent qu' elle aide même ses ENFANTS !
the parents of Anne refuse that she helps even her children
'Anne's parents refuse to let her even help her CHILDREN!'

The scope theory proposes that *even* covertly moves to the position where it gets interpreted (cf. Horn 1971, Karttunen and Peters 1979, Wilkinson 1996, Lahiri 1998, Guerzoni 2003, Nakanishi 2006...); the NPI theory assumes the existence of two *even*: regular *even* (corresponding to the *even* of the scope theory) that presupposes that p is the least likely among the alternative propositions, and NPI *even* (thus occurring in downward entailing environments, i.e. in the scope of *refuser* in previous examples) that conversely presupposes that p is the most likely (cf. Rooth 1985, Rullmann 1997, Herburger 2000, Schwarz 2005, Giannakidou 2007...). I am not going to mention all the arguments for and against each theory here (see Rullmann: 2007 for a review), but only what is of interest for my purposes.

First, note that the possibility of the existence of NPI *even* could appear to question my main argument in favor of the existence of E itself: my argument consisted in irreparably separating the scope of the scalarity effect and that of *propre* to show that the scalarity effect could not be included in the lexical entry of *propre*. However, since I mainly illustrated these cases by using negation for reasons of clarity (narrow and wide scopes with respect to the negation are clearly distinguishable), it could be argued that the apparent cases of high scope of the scalarity effect actually correspond to cases of NPI *even*. If so, the scope is no longer disconnected from that of *propre*, and the argument does not hold any more. However, this hypothesis (revised lexical hypothesis) would be very costly, as we would need both regular *propre* implying highest unexpectedness (cf. regular *even*) and NPI *propre* implying highest expectedness (cf. NPI *even*). Moreover, the parallel between *même* and *propre* would be somehow broken as shown in cases such as (150):

(150) a. Luc n' est jamais content ; il ne sera pas content si ses propres ENFANTS
 Luc neg is never happy he neg will_be not happy if his own children
 viennent !

come

'Luc is never happy; he won't be happy if his own CHILDREN come!'

b. #Luc n'est jamais content ; il ne sera pas content si même ses ENFANTS
 Luc neg is never happy he neg will_be not happy if even his children
 viennent !

come

'Luc is never happy; he won't be happy if even his CHILDREN come!'

Under the intended reading, it is unexpected that Luc will not be happy if his children come; in other words, the scalarity effect is interpreted at the matrix level; this reading obtains when *propre* occurs in the adjunct clause (a), but not when *même* does (b), which is unexpected under an NPI hypothesis. Nevertheless, both options are possible in English (cf. footnote 55), which may undermine this counterargument.

But there are even clearer cases of that type, namely sentences where NPIs are not licensed but the relevant scope is high though.

(151) a. La directrice n' a aucun sens de la probité : elle a accepté que les
 the director neg has no sense of the integrity she has accepted that the
 chefs d'équipe proposent une promotion à ses propres ENFANTS sans test préalable !
 heads of team propose a promotion to her own children without test preliminary

'The boss has no sense of integrity: she let the team leaders promote her own CHILDREN without a preliminary review!'

b. #La directrice n' a aucun sens de la probité : elle a accepté que les
 the director neg has no sense of the integrity she has accepted that the
 chefs d'équipe proposent une promotion même à ses ENFANTS sans test préalable !
 heads of team propose a promotion even to her children without test preliminary

'#The boss has no sense of integrity: she let the team leaders promote even her CHILDREN without a preliminary review!'

c. La directrice n' a aucun sens de la probité : elle a même accepté que les
 the director(fem)neg has no sense of the integrity she has even accepted that the
 chefs d'équipe proposent une promotion à ses ENFANTS sans test préalable !
 heads of team propose a promotion to her children without test preliminary

'The boss has no sense of integrity: she even let the team leaders promote her CHILDREN without a preliminary review!'

d. *La directrice n' a aucun sens de la probité : elle a accepté que les
 the director(fem) neg has no sense of the integrity she has accepted that the
 chefs d'équipe proposent une promotion à qui que ce soit sans test préalable !
 heads of team propose a promotion to anybody without test preliminary

'*The boss has no sense of integrity: she let the team leaders promote a single person without a preliminary review!'

In (151), there is no downward entailing environment that could license a NPI as shown in (d) which exhibits the NPI *qui que ce soit* ('anybody', 'a single person'). However in (a), the scalarity effect is interpreted at the matrix level while *propre* occurs in the embedded clause (what is unexpected is not that the team leaders promote the boss's children without a preliminary review, but that she accepted it): this is unexpected under the revised lexical hypothesis (NPI theory) since regular *propre* does not trigger the intended presupposition in its position and NPI *propre* cannot be licensed.

Furthermore, the theory of NPI *propre* would predict too small a domain for the scalarity effect:⁶⁸ since NPI *propre* remains in the embedded clause, the proposition that is predicted to be lowest on the scale of expectation is that the team leaders promoted the director's children without a preliminary review; however, the more expected alternatives are not that the team leaders promoted someone else without a preliminary review, but that the boss let them do so. Thus the domain of the scalarity effect should crucially include the matrix verb *accepter* ('accept'), which is incompatible with the theory of NPI *propre* which predicts that *propre* remains in its surface position for interpretation as opposed to the scope theory.

⁶⁸ This was also true in the previous example and more generally in all examples involving *even*. The examination of the domain to be considered thus appears to be a good way to discriminate between the two theories about *even*. I am not going to tackle the problem here as (150) and (151) already show that there are probably further complications: first, the difference between French and English is unexpected; moreover even only concentrating on French, (150) seems to support the scope theory (the impossibility of high scope of the scalarity effect is correctly predicted by the island violation it would lead to), but (151) does not (there is no apparent reason why *même* could not scope at the desired level, but it does not).

Thus even enriched with NPI *propre*, the lexical hypothesis is not satisfying. Coming back to the operator hypothesis, the existence of the theory of *even*-NPI however still raises the possibility of having two operators, i.e. regular E and NPI E corresponding to the two *even* of that theory. I will not adopt this option for two main reasons. First, this would once again go against Occam's razor by unnecessarily multiplying elements. Moreover, as just mentioned, this would not make the right predictions with respect to the domain of the proposition targeted: for instance in (150), there is a difference between presupposing that it is highly expected that Luc's children will come (under the reading with hypothetical NPI E that would target the adjunct clause) and that it is highly unexpected that Luc will not be happy if they do (under the reading with regular E that targets the matrix clause). To sum up, there is no reason to assume the existence of NPI E; even more, it would make undesirable predictions to do so.

*Differences between E and even with respect to existence
presupposition*

The second clarification is that even if E corresponds to regular *even*, it is not its exact counterpart. The main difference⁶⁹ is that contrary to what is standardly assumed for

⁶⁹ Another difference concerns constraints on the position of *even* vs E. While E seems to be able to occur anywhere, *even* does not, as already suggested in (151)a vs. (151)b. Another striking case is that involving negation and *even* in the same proposition: while *even* seems to behave like a PPI in these cases, E does not, as illustrated in the following example (note that the scalar effect induced by E is a presupposition as explained in the next page)

- 29) a. Anne ne trahira pas ses propres ENFANTS! (neg > E)
 Anne neg will_betray not her own children
 'Anne will not betray her own CHILDREN!'
 b. #Anne ne trahira pas même ses ENFANTS! (*neg > même)
 Anne neg will_betray not even her children
 '#Anne will not betray even her CHILDREN!'

even,⁷⁰ E does not imply that the more expected alternatives are true, as shown by the contradiction in (152)b vs. (152)a.

- (152) a. Jean a trahi ses propres PARENTS, mais il n' a trahi personne d' autre.
John has betrayed his own parents but he neg has betrayed nobody of other
'John betrayed his own PARENTS, but he did not betray anybody else.'
- b. #Jean a trahi même ses PARENTS, mais il n' a trahi personne d' autre.
John has betrayed even his parents but he neg has betrayed nobody of other
'#John betrayed even his PARENTS, but he did not betray anybody else.'

4.3.2.6.4. Comparison between E and O

Absence of a presupposition present in the overt counterpart

This observation leads me to my final point concerning the comparison between E and O, because it uncovers a further parallel between these two operators: both operators do not make a presupposition that is made by their overt counterpart. While *even* presupposes that more expected alternatives are true, E does not. While *only* presupposes that the proposition it outscopes is true, O does not: it asserts it.

Thus E supports the theory of focus operators since it seems to fill a hole: just as O corresponds to *only*, E is the covert counterpart of *even*; and *only* and *even* are the two main focus sensitive particles.

E is presuppositional

Despite their resemblance, E and O differ in some respects. First, E seems to require focus, while O does not necessarily. Furthermore, while O is purely assertive (the presuppositional component of *only* is in the assertive component of O), E seems to be

⁷⁰ Some examples such as the following where the alternatives are mutually exclusive seem to be problematic for that claim but I do not have room to treat this problem (cf. a.o. Schwarz 2005 for discussion).

30) A: Est-ce que Sylvie a remporté la médaille d'argent ? B: Elle a même remporté l' or !
Q Sylvie has won the medal of silver she has even won the gold
'A: Did Sylvie win the silver medal? B: She even won the gold!'

presuppositional (this reflects a similar difference between *even* that is standardly assumed to be only presuppositional and *only* that also has an assertive component): the following tests suggest that the scalarity effect is a presupposition.

- (153) a. Si Jean a trahi son propre PATRON, il va être viré.
 if John has betrayed his own boss he is_going_to be fired
 'If John betrayed his own BOSS, he is going to be fired.'
- b. Est-ce que Jean trahirait ses propres ENFANTS ?
 Q John would_betray his own children
 'Would John betray his own CHILDREN?'⁷¹
- c. Aucun prisonnier n' a avoué qu' il avait tué son propre FRERE.
 no prisoner neg has confessed that he had killed his own brother
 'No prisoner confessed that he killed his own BROTHER.'

First, the scalarity effect projects in conditional clauses and questions: (153)a conveys the presupposition that it is unexpected that John betrayed his boss, (153)b that it would be unexpected that he betrays his children. Moreover, it yields a universal inference in the scope of the quantifier *aucun* 'no' (and Chemla (2009) experimentally shows that the quantifier *no* provides a robust test to tease apart presuppositions and implicatures as presuppositions project universally out of the scope of the quantifier *no* while implicatures do not project universally (existential inference only)): (153)c implies that for every prisoner, it is unexpected to kill his brother: in a context where it would be expected for every prisoner to kill his brother, the sentence would be infelicitous.

The presuppositional nature of E has some interesting consequences. First, note that it is a further argument against the pragmatic hypothesis as a Gricean reasoning cannot derive a presupposition. Moreover, if the contribution of E is presuppositional, it means that there is

⁷¹ This question is negatively biased under its preferred interpretation, while it is predicted to be neutral under Guerzoni (2002)'s theory since to betray one's children corresponds to her "hardP". Note that this interestingly correlates with a non-PPI behavior of *propre* as opposed to *even* (cf. examples of footnote 69). This is worth further investigating.

no monotonicity constraint on its insertion as opposed to O. In fact, while O cannot for instance occur under a negation, E can, as shown in footnote 69 in example (a).

In sum, I propose the following lexical entry for E which is evaluated with respect to a proposition:

- (154) $\llbracket E \rrbracket(p) \neq \#$ iff $\forall q ((q \in C \wedge q \neq p) \rightarrow p < q)$. If $\neq \#$, $\llbracket E \rrbracket(p) = p$
 # indicates presupposition failure
 < means "less expected than"
 C is a set of contextually given alternative propositions, such that $C \subseteq \llbracket p \rrbracket^f$ and $\llbracket p \rrbracket^o \in C$
 ($\llbracket p \rrbracket^o$ is the ordinary meaning of p ; $\llbracket p \rrbracket^f$ is the focus meaning of p)

To wrap up this long section, I have argued that in the case of possessum *propre*, the whole DP containing *propre* is F- and FOC-marked, which explains why the target of the alternative is the possessum. Moreover, I have demonstrated that the scalarity effect typically arising with possessum *propre* can be accounted for by assuming association of the focused DP with the covert focus operator E similar to *even*. Thereby, I have also provided a further argument for the existence of such an operator.

In other terms, I have derived the possessum reading of *propre* by varying the target of focus and by postulating association with a focus operator. These are the two main factors explaining the difference between the restrictive, possessor and possessum readings of *propre*:

- (155) a. Restrictive reading:
 [Claire took her [OWN_F]_{FOC} car]~ C
- b. Possessor reading:
 [The stepmother pleases [her_F OWN_F children]_{FOC}]~ C
- c. Possessum reading:
 E [Medea killed [her_F own_F CHILDREN_F]_{FOC}]~ C

This suggests the existence of other readings if we further vary these two factors. First, the question arises if the FOC-marked constituent containing *propre* can be bigger. Second, is association with focus operators also possible in readings different from possessum?

Before turning to further readings, here is a summary of the readings examined in this section:

Type of reading	Principle of minimization for <i>propre</i>	Representation of the possessive DP	Example
Possessum <i>propre</i>	Pragmatic effect: relevance in focus association	[her _F own _F CHILDREN _F] _{FOC}	(88) Médée a tué ses propres ENFANTS ! 'Medea killed her own CHILDREN!' (97) Ce matin, Sonia n'a pas pris les transports en commun pour aller en ville, elle a pris sa propre VOITURE. 'This morning, Sonia did not take public transportation to go to town, she took her own CAR.'
	Truth-conditional effect	[her _F own _F CHILDREN _F] _{FOC}	Footnote 48: Marie n'a invité ni ses beaux-enfants, ni ses amis, ni les voisins, ni les amis de sa fille pour son anniversaire, elle a invité ses propres ENFANTS. 'Marie did not invite her stepchildren, her friends, the neighbors or her daughter's friends for her birthday, she invited her own CHILDREN.'
Subcases of possessum <i>propre</i>	Relevant in focus association or truth-conditional	her [own _F CAR _F] _{FOC}	(100) Pour aller en ville ce matin, Sonia n'a pas pris son bus, elle a pris sa propre VOITURE. 'To go to town this morning, Sonia did not take her bus, she took her own CAR.'
	Truth-conditional or/and relevant	her own [CAR _F] _{FOC}	(101) Pour aller en ville ce matin, Sonia n'a pas pris son propre vélo, elle a pris sa propre VOITURE. 'To go to town this morning, Sonia did not take her own bike, she took her own CAR.'
	Truth-conditional or/and relevant (in focus association)	[her _F own CAR _F] _{FOC}	(102) Pour aller en ville ce matin, Sonia n'a pas pris le propre vélo de Paul, elle a pris sa propre VOITURE. 'To go to town this morning, Sonia did not take Paul's own bike, she took her own CAR.'

4.4. Further readings

4.4.1. Association with focus operators

I will start by the second question concerning association with focus operators. We have seen that in the case of possessum *propre*, the focused DP usually associates with focus operators, in particular scalar ones like E, *même* ('even') or *seulement* ('only')⁷² because the superlative meaning of *propre* ('most specific') justifies this association and *propre* is thereby relevant.

Similarly, possessor or restrictive *propre* should be able to associate with focus particles. This association is expected to be even easier as the condition of relevance is not at stake in these cases, since restrictive and possessor *propre* are the direct targets of focus.

Here is an example of association of possessor *propre* with E:

- (156) E[Julie a cambriolé [son_F PROPRES_F appartement]_{FOC}]~ C
Julie has burglarized her own apartment
'E[Julie burglarized [her_F OWN_F apartment]_{FOC}]~ C'

In this example, Julie's apartment is contrasted with others' apartments so that we indeed deal with possessor *propre*. Moreover, it is less expected that Julie burglarized her own apartment than others' apartments; so *possessor propre* associates with E here.

⁷² Possessum *propre* does not seem to be able to associate with O. Thus the following dialogue is infelicitous while it would be fine if O was associated with possessum *propre* in the second sentence; indeed, it is acceptable if we add *seulement* ('only') as in B'.

- 31) A: Pourquoi tu penses que Simon est analphabète?
B: #Il sait écrire son propre nom.
(B': Il sait seulement écrire son propre nom.)
'A: Why do you think Simon is illiterate?
B: #He knows how to write his own name.
(B': He only knows how to write his own name.)'

This may be due to the constraint *Maximize Presupposition!* given that O unlike *seulement/only* is not presuppositional. The absence of association with O may follow if we assume that the scale at stake with *propre* is always presupposed since it corresponds to world knowledge, and we suppose like Klinedinst (2004) that *seulement/only* has a scalar presupposition. This question would require further investigation.

Also, possessor *propre* can associate with overt focus particles like *même* ('even') or *seulement* ('only'):⁷³

(157) E [Julie a même cambriolé [son_F PROPRES_F appartement]_{FOC}]~ C
 Julie has even burglarized her own apartment
 'E[Julie even burglarized [her_F OWN_F apartment]_{FOC}]~ C'

(158) [Le professeur de piano a seulement invité chez lui [ses_F PROPRES_F élèves]_{FOC}]~ C,
 pas ceux de ses collègues.
 '[The piano teacher only invited [his OWN students]_{FOC}]~ C, not his colleagues'
 students.'

Similarly, restrictive *propre* is compatible with focus operators:

(159) E[Anne a déshérité ses [PROPRES_F enfants]_{FOC}]~ C.
 'E[Anne disinherited her [OWN_F children]_{FOC}]~ C.'

(160) [Anne a même déshérité ses [PROPRES_F enfants]_{FOC}]~ C (pas seulement ses
 enfants adoptifs).
 '[Anne even disinherited her [OWN_F children]_{FOC}]~ C(not only her adoptive
 children).'

(161) [Anne n'a légué sa fortune qu'à ses [PROPRES_F enfants]_{FOC}]~ C.
 '[Anne only left her fortune to her [OWN_F children]_{FOC}]~ C.'

This demonstrates that other readings involving *propre* arise if we take into consideration association with focus operators: restrictive, possessor and possessum *propre* do not only occur with contrastive focus.

⁷³ Concerning O, it seems more acceptable with possessor *propre* than possessum *propre*:

32) A: Pourquoi la Grande-Bretagne ne t'a pas aidé?
 B: Elle aide ses propres ressortissants.
 (B': Elle n'aide que ses propres ressortissants.)
 'A: Why didn't Great Britain help you?
 B: It helps its own nationals.
 (B': it only helps its own nationals.)'

But again, the conditions of O association with *propre* would need further investigation.

4.4.2. Varying the size of the FOC constituent

The second way to obtain further readings with *propre* is to examine if the FOC-marked constituent containing *propre* can be bigger. In the case of restrictive, possessor or possessum *propre*, it corresponds to the smallest AdjP or DP containing *propre*:

(162) a. Restrictive reading:

[Claire took her [OWN_F]_{FOC} car]~ C

b. Possessor reading:

[The stepmother pleases [her_F OWN_F children]_{FOC}]~ C

c. Possessum reading:

E [Medea killed [her_F own_F CHILDREN_F]_{FOC}]~ C

In fact, it can correspond to a bigger constituent: in the following example, the FOC-marked constituent is not the smallest DP containing *propre* but the higher DP, under the salient reading involving E.

(163) E [Louis n'entend pas [les battements de son propre coeur]_{FOC}]~ C

'E [Louis does not hear [the beats of his own heart]_{FOC}]~ C'

Indeed, the FOC-marked constituent has to be bigger than the smallest AdjP or DP containing *propre* for the sentence to get its salient reading, i.e. Louis does not hear anything. Here are the different possible questions under discussion depending on the size of the FOC constituent:

(164) a. Whose heartbeats doesn't Louis hear?

b. Which beats doesn't Louis hear?

c. What doesn't Louis hear?

The sentence (163) means that Louis does not hear anything, not even his heartbeats. Thus, the question in (164)a is too specific in this context (but it is possible under a possessor reading); moreover, the word *battement* ('beat') is so associated with *coeur* ('heart') that it

would be infelicitous to use this sentence to compare different kinds of beats as implied by (164)b.

In other words, the salient reading of (163) implies that Louis does not hear anything. Under this interpretation, the focus alternatives must target the biggest DP containing *propre*, namely *les battements de son propre coeur* (lit. the beats of his own heart, i.e. ‘his own heartbeats’) as in (164)c. Thus this example shows that the FOC-constituent can be bigger than in the cases of restrictive, possessor or possessum *propre*.

The FOC constituent can probably even be bigger than the DP containing *propre* and extend to the VP containing *propre*. This is a possible hypothesis for agentive *propre* (cf. appendix).

5. Conclusion

The goal of this chapter was to derive the different readings involving prenominal *propre*. I have done so by assuming a unique lexical entry for *propre* expressing the idea of closest relation and the variety of readings arises from the principle of minimization that imposes a pragmatic effect on *propre* if it has no impact on truth conditions: non-truth-conditional *propre* satisfies this principle by being relevant or focused.

Thus, a theory of relevance for non-truth-conditional adjectives and a theory of focus allow us to predict all the different kinds of readings for *propre*. In particular, the target of focus alternatives is subject to size variability going from the AdjP to the VP containing *propre*. If non-truth-conditional *propre* is directly targeted (accented), it obeys the principle of minimization by inducing alternatives (possessor *propre*); if it is part of a focused constituent, it does so by being relevant with respect to the focus alternatives (possessum

propre): either it gives the criterion for the condition of contrast, or it justifies the scale involved with focus operators like E, *even* or *only*.

The following table recapitulates the different representations deriving the different readings of possessive DPs containing *propre*.

Unfocused <i>propre</i>	his own noun <i>Truth-conditional effect and/or pragmatic effect: relevance</i>	(52) Claire took her own car. (5) Naturally, I love my own mother!
Focused <i>propre</i>	his [OWN _F] _{FOC} noun <i>Pragmatic effect: induces focus alternatives + possibly relevance for association with focus + possibly truth-conditional effect</i>	(53) [Claire took her [OWN _F] _{FOC} car]~ C (159)E[Anne disinherited her [OWN _F] _{FOC} children]~ C.
Possessor <i>propre</i>	[his _F OWN _F noun] _{FOC} <i>Pragmatic effect: induces focus alternatives + possibly relevance for association with focus + possibly truth-conditional effect</i>	(60) [Paul drove [her _F OWN _F children] _{FOC} home]~ C (61) E[Julie burglarized [her _F OWN _F apartment] _{FOC}]~ C
Focused <i>son</i>	[HIS _F] _{FOC} own noun <i>Truth-conditional effect and/or pragmatic effect: relevance</i>	(63) [Paul drove [HIS _F] _{FOC} own children home]~ C
Possessum <i>propre</i>	[his _F own _F NOUN _F] _{FOC} <i>Pragmatic effect: relevant for association with focus and/or truth-conditional effect</i>	(91)E[Medea killed [her _F own _F CHILDREN _F] _{FOC}]~ C (98)[Sonia took [her _F own _F CAR _F] _{FOC}]~ C (132)Paul only [knows how to write [his _F own _F NAME _F] _{FOC}]~ C. (130)Personne n'a défendu Paul. Même [sa propre mère] _F a gardé le silence. (163)E[Louis does not hear [the beats of his own heart] _{FOC}]~ C

<p>his [own_F NOUN_F]_{FOC}</p> <p><i>Pragmatic effect: relevant for association with focus and/or truth-conditional effect</i></p>	<p>(93)E[Medea killed her [own_F CHILDREN_F]_{FOC}]~ C</p> <p>(100) [Sonia took her [own_F CAR_F]_{FOC}]~ C</p>
<p>his own [NOUN_F]_{FOC}</p> <p><i>Truth-conditional effect and/or pragmatic effect: relevance</i></p>	<p>(93)E[Medea killed her own [CHILDREN_F]_{FOC}]~ C</p> <p>(101) [Sonia took his own [CAR_F]_{FOC}]~ C</p>
<p>[his_F own NOUN_F]_{FOC}</p> <p><i>Truth-conditional effect and/or pragmatic effect: relevance (for association with focus)</i></p>	<p>(102)[Sonia took [her_F own CAR_F]_{FOC}]~ C</p>

Thereby, I have argued for a modified Roothian theory of focus: the possessor reading of *propre* makes clearer the necessity to distinguish between F-marking (F-marked elements are replaced by variables when considering alternatives), FOC-marking (the FOC-marked element is the constituent containing all F-marked elements and corresponding to the *wh*-phrase of the question under discussion) and focus domain (the focus domain is the domain in which alternatives are considered and it is delimited by the squiggle operator).

Deriving the possessum reading of *propre* has also provided a new and independent argument for the covert focus sensitive operator E similar to *even*: I have shown that E is required to predict the right scope of the scalarity effect involved in most possessum readings of *propre*.

In sum, the different readings of prenominal *propre* can be derived if we combine insights from the theory of focus, the principle of minimization and a theory of relevance. Conversely, prenominal *propre* sheds new light on different aspects of focus and provides arguments to refine the theory of focus and support the existence of covert focus operators.

6. Appendix: further readings of prenominal *propre*

6.1. Description

Recall that I mentioned three specific readings in section 3.4. of chapter 1: agentive *propre*, reflexive *propre* and ownership *propre*. Here are some details about them and some possible lines of analysis for future research.

6.1.1. Agentive *propre*

The following sentence exhibits the agentive reading of *propre*.

(165) Jérôme_i a créé son_i propre site internet.
'Jérôme_i created his_i own website.'

The salient reading involves neither restrictive *propre* nor possessor or possessum *propre* even if these readings can be made available in a suitable context. Indeed, it is not required in the context that Jérôme has another website that he is not the sole owner of as would be expected under the restrictive reading; moreover, for the sentence to be felicitous, Jérôme need not have created someone else's website (cf. possessor *propre*) or something else (cf. possessum *propre*). Rather, under the most salient reading, (165) means that Jérôme created his website on his own, without any help: he did not buy it or had someone else make it for him. This can be paraphrased using *lui-même* ('himself'):

(166) Jérôme_i a créé son_i site internet lui-même.⁷⁴
'Jérôme_i created his_i website himself.'

⁷⁴ Note that while (165) does not presuppose the existence of Jérôme's website, (166) can under one reading that can be paraphrased in the following way:

33) Son site internet, Jérôme l'a créé lui-même.
'His website, Jérôme created himself.'

But the possessive pronoun does not necessarily give rise to a presupposition of existence as in the following example; it seems to depend on the scope of the possessive pronoun with respect to the creation verb.

34) Créer son site internet est difficile.
'To create one's website is difficult.'

This reading that I call agentive is quite constrained as it seems to be available only if *son propre N(om)* ('his own N(oun)') is the direct object of a creation verb in an unmoved position as in *faire son propre gâteau* ('to make one's own cake'), *fabriquer ses propres vêtements* ('to make one's own clothes')...etc. Thus, the agentive reading is not available if *propre* combines with a prepositional complement:

(167) #Le propre site internet de Jérôme a été créé.
'#Jérôme's own website has been created.'

It is not available either if the object DP involving *son propre* has been moved, e.g. left dislocated:

(168) #Son_i propre site internet, Jérôme_i l'a créé.
'#His_i own website, Jérôme_i created it.'

Also, agentive *propre* is preferably the direct object of a creation verb with the agent of the creation being the subject coreferent to the possessive pronoun: this reading is less acceptable with another kind of verb (a), and is not available if the agent of creation does not correspond to the possessor (b).

(169) a. ?Jérôme_i a nettoyé son_i propre appartement.
'?Jérôme_i cleaned his_i own apartment.'
b. #Jérôme_i pense que ses amis ont créé son_i propre site internet.
'#Jérôme_i thinks that his friends created his_i own website.'

It is hard to interpret sentence (a) as meaning that Jérôme cleaned his apartment himself, without any help. More radically, (b) does not imply that Jérôme's friends created his website on their own.

Furthermore, this reading is not even available if *son propre* is embedded in the object.

(170) #Jérôme_i a créé le site internet de son_i propre frère.
'#Jérôme_i created his_i own brother's website.'

6.1.2. Reflexive *propre*

I called reflexive *propre* the use of *propre* in DPs where the possessum and the possessor corefer.

(171) Julien_i est son_i propre ennemi.
'Julien_i is his_i own enemy.'

Here, both the possessum *son propre ennemi* ('his own enemy') and *son* ('his') refer to the same individual, namely Julien. This can be paraphrased using *lui-même* as the possessor in a PP:

(172) Julien_i est l'ennemi de lui_i-même.
'Julien_i is the enemy of himself_i.'

This reading is only available with state verbs like *être* ('be'), *devenir* ('become'), *paraître* ('appear')... Moreover, in the absence of *propre*, it requires a detailed context and stress on *son* or doubling of it:

(173) a. Julien_i n'est pas l'ennemi de Pierre, il_i est SON_i ennemi.
b. Julien_i n'est pas l'ennemi de Pierre, il_i est son_i ennemi à lui_i.
'Julien_i is not Pierre's enemy, he_i is HIS_i enemy.'

Based on (173) that looks like paraphrases of possessor *propre*, the reflexive reading seems to correspond to a particular subcase of possessor *propre*: the possessor is contrasted with other contextual possessors, but it turns out that the target possessor corresponds to the possessum. However, note that the contextual alternative that is required does not necessarily contrast with the possessor:

(174) a. Julien n'est pas l'ennemi de Pierre, Julien_i est son_i propre ennemi.
'Julien is not Pierre's enemy, Julien_i is his_i own enemy.'
b. Personne n'est l'ennemi de Julien_i, Julien_i est son_i propre ennemi.
'Nobody is Julien's enemy, Julien_i is his_i own enemy.'

In (a), the possessor, i.e. *son* referring to Julien, is contrasted with Pierre, another contextual possessor. But in (b), the situation is reverse, the alternatives target the possessum this time as it means that nobody else is Julien's enemy but Julien himself. In other terms, it seems that reflexive *propre* is a particular subcase of possessor or possessum *propre*. I devote a specific name to it as only in this case do the possessor and the possessum refer to the same individual due to the use of a state verb.

6.1.3. Ownership *propre*

Similarly, what I call ownership *propre* seems to correspond to a specific subcase, i.e. that of restrictive *propre* due to the use of a possession verb.

(175) Lucie a son propre appartement.
'Lucie owns her own apartment.'

Indeed, (175) implies that Lucie is the sole owner of her apartment as expected with restrictive *propre*.

But the particularity of ownership *propre* is that possession seems to be expressed by three means, i.e. the possession verb, the possessive pronoun and *propre*. Furthermore, ownership *propre* presents an indefinite flavor: the existence of the possessum is not presupposed, while usually *son*, like any definite determiner, does presuppose the existence of the referent of the DP. This is illustrated in the following examples:

(176) a. Je veux mon propre appartement.
'I want my own apartment.'
b. Luc espère qu'on va lui donner sa propre clef.
'Luc hopes that he will be given his own key.'

Thus (a) means that I want to have an apartment that exclusively belongs to me; but obviously, the existence of this apartment is not presupposed. Similarly in (b), the existence

of a key exclusively belonging to Luc is not presupposed since he precisely wishes there will be one. This absence of a presupposition of existence despite the definite determiner *son* relies on the presence of a verb of possession (such as *have* or *own*) or transfer of possession (such as *give* or *provide*) and *propre*. Without *propre*, this reading is harder to get:

- (177) a. ?Je veux mon appartement.
 'I want my apartment.'
 b. ?Luc espère qu'on va lui donner sa clef.
 'Luc hopes that he will be given his key.'

6.2. Hypotheses: antecedent as focus target or VP as focus domain

6.2.1. Contrasting the antecedent

Interestingly, these three readings (cf. a) can be paraphrased (cf. b) by contrasting the antecedent of *son propre* with other alternatives. This suggests that these readings are subcases of possessor *propre*.

- (178) a. Jérôme_i a créé son_i propre site internet.
 'Jérôme_i created his_i own website.'
 b. Personne d'autre n'a créé le site internet de Jérôme.
 'Nobody else created Jérôme's appartement.'

- (179) a. Julien_i est son_i propre ennemi.
 'Julien_i is his_i own enemy.'
 b. Personne d'autre n'est l'ennemi de Julien.
 'Nobody else is Julien's enemy.'

- (180) a. Lucie a son propre appartement.
 'Lucie owns her own apartment.'
 b. Personne d'autre n'a l'appartement de Lucie.
 'Nobody else owns Lucie's appartement.'

Also, the fact that these readings only locally arise suggests that the focus domain is subject to locality constraints.

In other words, based on these readings, it seems that in certain circumstances to be determined, focused *son propre* can contribute to contrasting its antecedent with other alternatives, if the antecedent occurs in a local domain. This would be worth investigating further in future work.

6.2.2. Agentive *propre*: a big FOC domain

In the case of agentive *propre*, we could formalize this idea by assuming that the subject is treated as a quantifier binding *his* and the focus domain corresponds to the predicate created by abstraction over the subject $\lambda x. x \text{ created } x\text{'s own website}$:

(181) Jérôme [1. t_1 created [his_1 's own website]_{FOC}]~ C

If we hypothesize that *his* and *own* are F-marked, the alternatives are of the form $\lambda x. x \text{ created } y\text{'s website}$. Depending on the context, this could either correspond to *Jérôme created someone else's website* (possessor *propre*) or *someone else created Jérôme's website* (agentive *propre*).

The problem of this hypothesis is that it overgenerates as it predicts that in general, the binder may vary in the alternatives, but it is not the case in the following examples:

(182) Jérôme a créé SON site.
'Jérôme created HIS website.'

(183) Jean est fier de LUI/lui-même.
'Jean is proud of HIMSELF.'

The first sentence cannot have as alternative that someone else created Jérôme's website, nor the second one that someone else is proud of Jean.

Instead, we could hypothesize that it is not the focus domain that is smaller than the proposition, but the FOC constituent that is bigger than the DP containing *propre* but extends to the VP containing *propre*.

(184) [Jérôme [created his own website]_{FOC}]~ C

The question is now what to F-mark outside *own* (which is prosodically marked) in order to obtain the right reading.

My hypothesis is that the verb *created* and *own* are F-marked. Given that they do not form a constituent, the FOC-marked constituent is the smallest constituent containing them, namely the VP, according to the argument presented when examining possessor *propre*:

(185) [Jérôme [created_F his own_F website]_{FOC}]~ C

This means that the alternatives are of the form *Jérôme Y his x website* and the question under discussion amounts to: *concerning his website, what did Jérôme do?*

Depending on the context, the alternatives could be that Jérôme bought his website or made it do by someone else, which indeed gives rise to the correct reading. Furthermore, even if *created* and *own* do not form a constituent, I propose that they do not form two separate issues but one (hence the unique FOC constituent corresponding to the VP), because they are intrinsically related: it is because Jérôme created his website that it is his own; what you create is what is characteristic of you in the closest way, that's why this reading specifically occurs with creation verbs. Thus *own* here satisfies the principle of minimization by contributing to inducing focus alternatives (it is prosodically marked) and specifying the condition of contrast: the issue is ultimately to know if Jérôme's website is intrinsically his own (if created by him) or not (if made by someone else). The constraints on the FOC-constituent moreover explain why this reading only arises in a syntactic

configuration where *his* is the head of the object of a creation verb and corefers with the subject.

Based on this hypothesis, we could add the following line to the table summarizing the readings at the end of the chapter:

Agentive <i>propre</i>	<i>Pragmatic effect: induces focus alternatives and relevant for the condition of contrast</i>	(165) [Jérôme [created _F his own _F website] _{FOC}]~ C
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Chapter 3: How *son propre* sheds light on Binding Theory⁷⁵

1. Roadmap

The aim of this chapter is to show how the behavior of *son* when combined with possessor *propre* sheds light on Binding Theory, i.e. how it rehabilitates the condition A of the classical Binding Theory (cf. Chomsky 1986) and provides evidence against coargumenthood-based theories (cf. a.o. Pollard and Sag 1992; Reinhart and Reuland 1993). Recall that in section 4 of chapter 1 (see from p. 50) - based on a systematically controlled questionnaire, I demonstrated that possessor *son propre* requires a locally c-commanding antecedent if the antecedent is inanimate, i.e. inanimacy and locality correlate; but possessum *son propre* does not impose such locality conditions on the antecedent even if it is inanimate. In this chapter, I will concentrate on possessor *son propre* and further determine the notion of locality using inanimates as probes.

More specifically, after reviewing the two main competing theories on binding (section 2), namely the classical view (cf. Chomsky 1986) and the coargument view (cf. Pollard and Sag 1992; Reinhart and Reuland 1993), I will argue against the second one, i.e. the predicate-based theories of binding that relate locality to coargumenthood. I will do so based on the behavior of *son* when combined with possessor *propre* (section 3): it demonstrates that the coargument view is too weak since inanimate possessor *son propre* is subject to locality conditions in non-coargumental positions (section 3.1.); even more problematically, this theory is also too strong since inanimate possessor *son propre* does not have to be bound

⁷⁵ Part of this chapter is joint work with Dominique Sportiche.

by its coargument when it occurs in a coargumental position (section 3.2.); finally, the criterion used by the coargument view to evaluate locality, namely coargumenthood, is not independent since it is the same criterion as that used to distinguish between anaphors that are exempt from condition A and those that are not exempt (section 3.3.). Moreover, the behavior of French *lui-même* (lit. ‘him-same/even’, roughly ‘himself’) corroborates the conclusions drawn from the behavior of possessor *son propre* (section 4). Therefore, using inanimacy as an independent criterion for evaluating locality, I will rehabilitate the classical theory against the coargument view (section 5.1.): I will show that the notion of a structurally defined local syntactic domain (i.e. roughly the smallest XP with subject as demonstrated in sections 3.1.3. for *son propre* and 4.1. for *lui-même*) is required for accounting for the behavior of anaphors. This will allow us to motivate binding domains with phase theory (subsections 5.1.1., 5.1.2., 5.1.3.); I will specifically propose that regular (non-exempt) anaphors must be bound in the spellout domain containing them. Simultaneously, I will provide support for the necessity of exemption (from condition A) as put forth by proponents of the coargument theory: the classical condition A needs to be complemented by a theory of exemption (section 5.2.); however, the criterion is not based on coargumenthood, but to interpretive properties related to animacy. Therefore, we need to distinguish between different types of anaphors: regular (non-exempt) anaphors, exempt (from condition A) anaphors, and also subject-oriented anaphors, which probably obey a third system of anaphoricity (section 5.3.).

2. Two competing views of Binding Theory

2.1. The classical view (Chomsky: 1981, 1986)

The theory of anaphora proposed by Chomsky (1981: 188) within the Principles-and-Parameters framework stipulates that natural language pronouns may be subclassified into two sets whose distributional properties are as follows:

- 1) a. Condition A: an anaphor is bound in its governing category.
b. Condition B: a pronominal is free in its governing category.

A pronoun is said to be bound if it has an antecedent that c-commands it and they are coindexed, and free otherwise. Governing category is the name given by Chomsky to any NP or S containing a governor for the pronoun and a subject, where the subject subsumes the subject of the clause, in the usual sense, and that of small clauses and DPs.

According to these distributional principles, binding is obligatory for an anaphor and must take place within the domain defined by the minimal subject (the governing category), but for a pronominal, binding is optional and may only take place beyond the minimal subject. Subjects are thus presented as barriers for syntactic anaphora. Pronouns abiding by principle (1)a are assumed to be typically represented in English by reflexive pronouns (*himself, herself...etc*) and by the reciprocal expression *each other*, and pronominals by personal pronouns such as *he, him, she, it, they...*

- 2) a. Liz_j saw herself_j/**her*_j.
b. Liz_j saw herself_j/**her*_j leave in the mirror.
c. Liz_j left when Bob called her_j/**herself*_j.

Thus in (a), *herself* is acceptable unlike *her* because the binding domain, i.e. the whole sentence defined by the minimal subject *Liz*, contains the antecedent *Liz*. In (b), *herself* is governed by *saw* so that S, i.e. the whole sentence, is again the governing category in which

herself must be bound and *her* must be free. But in (c), the reverse holds because the domain corresponds to the clause *Bob called her/herself* that does not include the antecedent *Liz*.

This theory predicts complementary distribution between anaphors and pronominals. But this meets several empirical challenges. In particular, English anaphors and pronominals are known to freely alternate (i.e. not to be in complementary distribution) in picture NPs and genitive positions:

3) They_i thought that [pictures of {them_i/themselves_i}] would be on sale.

4) John and Mary_i love {their_i/each other_i's} children.

Chomsky solves this problem in *Knowledge of Language* (1986: 171)⁷⁶ by claiming that anaphors have broader binding domains than pronominals: the domain of anaphors is the smallest complete functional complex⁷⁷ containing a c-commanding DP while the domain of pronominals is the smallest complete functional complex containing them. This correctly predicts that pronominals and reflexives are not in complementary distribution when they appear within the subject position as in (3) or (4). Thus in (3), the binding domain of the reflexive *themselves* is the whole sentence (since *they* is the only DP c-commanding *themselves*) while that of the pronominal *them* is the embedded clause; in (4), the anaphor *each other* must be bound within the whole sentence (again, *John and Mary* is the only DP c-commanding *each other*) while the pronominal *their* must be free within the domain *their children*.

⁷⁶ Other formal solutions have been proposed to explain these deviant cases (see a.o. Zribi-Hertz 1989: 700-703 and Huang and Liu 2001: 4-8 for a review). Also see Manzini and Wexler 1987, Dalrympe 1993.

⁷⁷ A complete functional complex is basically a predicate where all arguments are saturated.

Furthermore, reflexives and anaphors freely alternate in some PPs:

5) They_i heard the stories about {them_i/themselves_i}.

6) John_i hid the book [behind {him_i/himself_i}].

In this case, the solution consists in assuming that reflexives and pronominals do not actually occur in the same syntactic context (Chomsky 1986: 173): a silent category occupies the position of the subject only when the pronoun is present so that the binding domain is smaller in this case:

7) a. (They_i heard the stories about themselves_i).
b. They_i heard (the e_j stories about them_i).

But these solutions, whatever their merit, are insufficient as reflexives and pronouns also freely alternate in positions other than subjects or PPs - like emphatic⁷⁸ contexts, which are discussed by e.g. Keenan (1988) under the heading 'complex anaphors'.

8) a. John_i thinks that Mary is taller than {him_i/himself_i}.
b. John_i believes that letter was sent to {either him_i or Mary/either Mary or himself_i}.
c. John_i believes that letter was sent to {everyone/no one} but {him_i/himself_i}.
d. As for {him_i/himself_i}, John_i said he_i wouldn't need to move.
e. John_i thinks that Mary hates even himself_i.

A difference in the size of binding domains cannot account for such cases: if the binding domain is large enough to allow binding of reflexives in these emphatic contexts, it should also be in the corresponding non-emphatic contexts, which is not borne out: in the following example, *himself* is disallowed in (b), but not in (a).

9) a. John_i believes that letter was sent to {everyone/ no one} but {him_i/ himself_i}.
b. John_i believes that letter was sent to {him_i/*himself_i}.

⁷⁸ This term is used by Zribi-Hertz (1989) as a descriptive term in this context. The examples (3)-(12) are cited by Zribi-Hertz 1989: 698-700.

Moreover in languages other than English, anaphors and pronominals are also known to freely alternate in complement positions within embedded clauses, with their antecedent in the main clause, as in Latin, Korean, Icelandic, Chinese... etc. Such examples involving reflexives are known as instances of long distance binding.

10) Orat te pater_i ut ad {eum_i/se_i} venias. [Latin]
 asks you father to to pron/anaph come.SUBJUNCTIVE.2sg
 'Your father_i asks you to come to him(self)_i.'

11) Na-ka Bob_i-eke [Mary-ka {k_i/caki_i}-l_il coahantako] malhayessta. [Korean]
 I-SUBJ Bob-DAT [Mary-SUBJ pron/anaph-OBJ love] told
 'I told Bob_i Mary loves him(self)_i.'

12) Jón_i segir að Sigga elski {hann_i/sig_i}. [Icelandic]
 Jon says that Sigga loves pron/anaph
 'John_i says that Sigga loves him(self)_i.'

For these reasons – among others -, another kind of theory, i.e. predicate-based theories, has been proposed to distinguish between reflexives that need to be bound and reflexives that are exempt from this requirement.

2.2. The coargument view

The argumentation of the coargument view can be reconstructed as follows: the classical binding theory does not predict the acceptability of anaphors in certain positions, in particular long distance reflexives. Therefore, a theory of exemption is needed: depending on the position they occupy, either anaphors must be bound or they are exempt from condition A. In a nutshell, what proponents of the coargument view propose is that reflexives are exempt when they do not have any coargument; in other words, positions

without any available coargument are exempt positions for reflexives.⁷⁹ Coargumenthood is the crucial notion for this kind of theories.

2.2.1. Pollard and Sag: 1992

In Pollard and Sag (1992),⁸⁰ this requirement is couched within the framework of Head-Driven Phrase Structure grammar in the following way:

13) Principle A: a locally o-commanded anaphor must be locally o-bound.

14) Local o-command: A locally o(bliqueness)-commands B just in case the content of A is a referential parameter and there is a SUBCAT list⁸¹ on which A precedes (i.e. is less oblique than) B

15) Local o-binding: A locally o-binds B just in case A and B are coindexed and A locally o-commands B. If B is not o-bound, then it is said to be locally o-free.

In other words, Pollard and Sag (1992)'s Condition A stipulates that an anaphor must be coindexed with a lexical coargument if there is one. Here are some examples to briefly illustrate how the theory works:

16) Max_i criticizes himself_i.

17) *Max_i's mother likes himself_i.

18) *Max_i says that Mary likes himself_i.

In (16), Max locally o-binds *himself* since they are coindexed and *Max* precedes *himself* on the SUBCAT list of *criticize*; therefore, principle A is obeyed. However in (17) and (18),

⁷⁹ As will be specified in (29), there is a slight difference between Pollard and Sag (1992) and Reinhart and Reuland (1993): according to the latter, one of its coargument must be a subject for the reflexive to be non-exempt.

⁸⁰ Pollard and Sag (1992)'s theory has been amended by Pollard (2005), which in effect gives up the coargument view.

⁸¹ A SUBCAT list is basically an ordered list of syntactic arguments.

himself and *Max* are not in the same SUBCAT list so that *himself* is not locally o-bound and principle A is violated.

2.2.2. Reinhart and Reuland: 1993

As for Reinhart and Reuland (1993), they distinguish between SELF anaphors (complex anaphors like English *himself* or Dutch *zichzelf*) and SE anaphors (simplex anaphors like Dutch *zich*) and formulate binding requirements as follows:

- 19) Condition A: an i-reflexive-marked predicate is i-reflexive.
- 20) Condition B: an i-reflexive predicate is i-reflexive marked.
- 21) A predicate is i-reflexive iff (at least) two of its arguments are i-coindexed.
- 22) A predicate (formed of P) is i-reflexive marked iff either P is lexically reflexive with respect to an i-indexed argument, or one of P' i-indexed arguments is a SELF anaphor.

Their binding conditions do not directly concern the distribution of anaphors, but their theory is predicate-based and is about reflexivity. Here are the same examples again to illustrate how this theory works:

- 23) Max_i criticizes himself_i.
- 24) * Max_i 's mother likes himself_i.
- 25) * Max_i says that Mary likes himself_i.

In (23), the predicate *criticize* is reflexive-marked since the anaphor *himself* is an argument of *criticize*. Condition A therefore requires that this predicate be reflexive. This is indeed the case, since the anaphor is coindexed with a coargument, namely *Max*, thus condition A is met. However in (24), *himself* is an argument of *like* so that *like* is reflexive-marked; but *himself* is not coindexed with its coargument *Max's mother* (but only with a subpart of it);

condition A is therefore violated. Similarly in (25), *himself* reflexive-marks *like* but is not coindexed with its coargument *Mary*, but the argument of another predicate *Max*, which is ruled out by condition A.

Disregarding irrelevant details, both theories thus amount to assuming that an anaphor must be bound by a coargument if there is one, otherwise it is exempt from binding requirements. This accounts for contrasts like (26) that are not predicted by the classical theory:

- 26) a. *It angered him_i that she tried to attract himself_i.
b. It angered him_i that she tried to attract a man like himself_i.

Chomsky (1986) wrongly predicts both sentences to be ungrammatical as the intended antecedent for *himself*, i.e. *him*, is situated outside its binding domain that corresponds to the embedded infinitive, i.e. *PRO to attract himself/a man like himself*. However, these two sentences crucially differ if we adopt the coargument view: in (a), *himself* has a coargument, i.e. *PRO* controlled by *she*, but is not bound by it, therefore the sentence is correctly predicted to be ungrammatical; but in (b), *himself* does not have any coargument since it is not the complement of *attract* but only part of it, and is thus predicted to be exempt from Condition A, which correctly derives the acceptability of the sentence.⁸²

In sum, predicate-based theories like Pollard and Sag (1992)'s and Reinhart and Reuland (1993)'s solve the empirical problems faced by the classical binding theory by invoking exempt positions, i.e. positions in which reflexives do not need to be bound.

⁸² This relies on the assumption that the preposition *like* does not form a predicate with subject, which is far from clear. The natural assumption is that *like* has a subject and *man like himself* is a relative.

2.2.3. Exempt positions

There are three main cases of exempt positions. First, reflexives are exempt when they are the single argument of a predicate, in particular in DPs or PPs like the following:

27) Lucie_i saw a picture of herself_i.

28) Max_i rolled the carpet over himself_i.

In (27), the anaphor *herself* is the only argument of *picture* and is thus exempt from condition A; similarly in (28), *himself* is the single argument of the preposition *over*; moreover, the PP *over himself* is not an argument of the verb *roll*, but an adjunct, so it is not a coargument of *Max*.

Technically speaking in Reinhart and Reuland (1993), the exemption comes from the fact that the predicates *picture* and *over* are not syntactic predicates according to (29) since they do not have any external argument,⁸³ and condition A applies to syntactic predicates; condition A is thus not violated.

29) The syntactic predicate formed of (a head) P is P, all its syntactic arguments, and an external argument of P (subject). The syntactic arguments of P are the projections assigned theta-role or Case by P.

Second, reflexives are exempt when they are part of a coordination as illustrated by (30).

30) Max_i boasted that the queen invited Lucie and himself_i for a drink.

Here, the anaphor is embedded in an argument: the complement of *invite* is *Lucie and himself*, which is not itself a SELF anaphor. Hence, *the queen invited Lucie and himself* is not reflexive-marked. Thus, *himself* is exempt from condition A.

⁸³ It is however not clear that a preposition like *over* does not have a subject.

The third case where reflexives are exempt according to Reinhart and Reuland (1993) corresponds to focus anaphors: they assume that condition A applies at LF and the focused expression undergoes movement at LF; in examples like the following, the anaphor is no longer in an argument position as shown in the representation in (b), and is therefore exempt:⁸⁴

- 31) a. This letter was addressed only to myself_i.
b. myself_i (This letter was addressed only to e_i).

In sum, positions subdivide in two disjoint subsets according to the coargument view: coargumental positions exhibit complementarity between reflexives and pronominals, while in non-coargumental positions, reflexives and pronominals do not compete because reflexives are exempt from condition A. In the latter case, discourse strategies (e.g. related to perspective, or more generally accessibility) may apply to distinguish between pronouns and anaphors, but this is not ruled by condition A and non-complementarity is therefore allowed by the grammar. This accounts for examples such as (3)-(9) that challenge the classical binding theory.

3. Arguments from *son propre*

The coargument view seems to be superior to the classical view since the former can account for examples that remain problematic under the classical view. In this section, I will show that possessor *son propre* is actually a counterexample for predicate-based theories, which leads to the rehabilitation of the classical theory (at least for French). The argumentation is as follows: the coargument view is too strong in that *son propre* need not

⁸⁴ It is not entirely clear how this would work under a copy theory of movement.

be coindexed with a coargument in non-exempt positions; it is also too weak since inanimate possessor *son propre* obeys locality constraints in what coargument theories characterize as exempt positions. It is therefore not the type of position (coargumental vs. non-coargumental) that is crucial, but the type of antecedent (animate vs. inanimate); in other terms, a theory of exemption is indeed necessary, but should not be based on the absence of coargumenthood, but on the interpretation of the antecedent. Probing the data configuration will lead to the conclusion that the classical theory can be maintained for non-exempt anaphors, but needs to be complemented to incorporate the possibility of exemption. In sum, the idea that condition A regulates the distribution of anaphors – and not reflexive predicates – will be rehabilitated because a criterion independent from locality, namely inanimacy, can be provided to distinguish between exempt and non-exempt anaphors.

3.1. Why the coargument view is too weak

3.1.1. The case of possessor *son propre* under the coargument view

First, data involving possessor *son propre* demonstrate that the coargument view is too weak: *son propre* is subject to syntactic restrictions of locality even when it is supposed to be exempt.

Note that the argumentation will be based on an element – *son propre* – that is not part of the well-known cases of anaphors studied in the framework of binding theory. But by arguing that the coargument view is too weak, I will thereby demonstrate that *son propre* is an anaphor, since the argument precisely consists in showing that *son propre* obeys locality requirements with respect to its antecedent. It is therefore not problematic that the

argumentation hinges on new empirical observations; on the contrary, it will simultaneously reveal the existence of an unknown anaphor.

All examples will involve possessor *son propre*: as has been said, this chapter only concentrates on it since only possessor *son propre* (unlike possessum *son propre*) exhibits a correlation between animacy and locality. To guarantee this reading, the examples will have to be read in appropriate contexts that involve alternatives to the possessor (e.g. by using means like contrast or questions exposed in the previous chapters); the possessum reading – anyway non-salient and hardly available in the following examples – will have to be ignored. In most cases, explicit alternatives to the possessor will occur in the sentence itself to make the possessor reading even more salient.

Recall the following contrast from chapter 1:

- 32) a. [Ce pont]_i dispose de son_i (propre) architecte.
'[This bridge]_i has its_i (own) architect.'
- b. [Ce pont]_i a l'air très fragile. Son_i (*propre)⁸⁵ architecte a reçu moins de moyens que les autres architectes de la région.
'[This bridge]_i looks very fragile. Its_i (*own) architect got less means than the other architects of the area.'
- c. [Cet enfant]_i a l'air très perturbé. Sa_i (propre) mère passe moins de temps à la maison que les autres mères de la classe.
'[This child]_i looks very disturbed. His_i (own) mother spends less time at home than the other mothers of the children in the class.'

(32) illustrates that inanimacy and locality of the antecedent correlate, i.e. if the antecedent is inanimate, it must locally bind *son propre*: thus in (a), inanimate *ce pont* ('this bridge') locally binds *son propre* and the sentence is grammatical, while in (b), *ce pont* and *son propre* are not clausemate which makes *propre* unacceptable; however in (c), the

⁸⁵ As is standard, the star (*) is used contrastively: it does not necessarily mean that the sentence is completely unacceptable, but as shown in the questionnaire presented in the appendix of chapter 1, it indicates that the sentence is significantly more degraded than the corresponding sentence without a star.

antecedent *cet enfant* is animate, and the sentence is fine even if it is not in the same clause as *son propre*.

However, the coargument view does not predict the two sentences (a) and (b) to differ in terms of grammaticality: in both examples, *son propre* is predicted to be exempt from condition A. Indeed, in both (a) and (b), *son propre* is the single argument of the nominal predicate *architecte* ('architect'), so that there is no coargument it could be coindexed with, which exempts it from condition A.

Note that strictly speaking under Reinhart and Reuland (1993)'s theory, *son propre* is not predicted to be exempt in this case since it does reflexive-mark the predicate *architecte* ('architect'): indeed, *son propre* is an argument of *architecte*, namely the external argument, and *architecte* is a syntactic predicate according to the definition in (29). Thus strictly speaking, *son propre* is predicted to be non-exempt and condition A to be violated in both sentences (which is also incorrect). However, given the new findings on the subject since Reinhart and Reuland (1993)'s theory (in particular, the adoption of the VP-internal subject hypothesis), it seems unreasonable to assign to the subject a specific status as compared to the other arguments of the verb: it is unclear why the predicate *picture* would be different in *his picture* and *a picture of himself*, i.e. correspond to a syntactic predicate in the former example as opposed to the latter. In fact, Reinhart and Reuland themselves (1993: footnote 49) suggest for other reasons that the property necessary to enable a head P to form a syntactic predicate may be eventhood rather than subject. In Reuland (2011: 250), syntactic predicates are redefined as having to denote an event, and verbs have an e-role (event role) whereas N's and P's do not. In sum, the spirit of Reinhart and Reuland

(1993)'s theory indeed predicts *son propre* to be exempt in both (32)a and b even if it does not actually do so before the change operated in Reuland (2011).

Assuming that *son propre* is exempt in (32), it should be acceptable whatever the position of the antecedent is according to the coargument view since condition A does not apply: in particular, clausemateness should not matter. But (32) suggests it does since inanimate *son propre* is grammatical when the antecedent is clausemate as in (a), but not when it is not as in (b).

In other terms, condition A of the coargument view is too weak to predict the contrast between (a) and (b). This is not a direct argument against the coargument view since in principle, we could simply add another condition to account for the contrast. In particular, advocates of the coargument view themselves (Pollard and Sag 1992: 271-279; Reinhart and Reuland 1993: 673) suggest that discourse constraints like perspective or accessibility may regulate the use of exempt anaphors. Thus at first glance, it seems possible to maintain the coargument view if we suppose that the contrast between (b) and (c) is due to additional constraints related to discourse: both contain exempt *son propre* so that condition A does not apply, but the difference in animacy accounts for the difference of grammaticality because of other kinds of constraints.

Nevertheless, if this was the case, why would (a) contrast with (b)? Since both (a) and (b) exhibit inanimate *son propre*, they are expected to behave the same with respect to discourse constraints. But inanimate *son propre* is only acceptable when the antecedent occurs in the same clause as in (a): locality is crucial when correlating with inanimacy as more generally shown by the questionnaire presented in chapter 1. It can therefore be concluded that the coargument view does not draw the right dividing line between exempt

and non-exempt anaphors: the division should not be based on coargumenthood, but on the interpretive properties of the antecedent related to animacy; and condition A is not based on coargumenthood but on locality as will be defined. This will allow us to predict that only in (c) is *son propre* exempt: it is not subject to locality conditions because it is animate. But in (a) and (b), *son propre* is actually not exempt because condition A does not rely on coargumenthood, but on locality.

3.1.2. Assessing c-command

The first defining criterion for locality is c-command: inanimate *son propre* must be c-commanded by its antecedent as illustrated by the following contrast:

- 33) a. [Ce problème]_i inclut sa_i (propre) solution et celle du problème précédent.
 ' [This problem]_i includes its_i (own) solution and that of the previous problem.'
 b. Les annexes de [ce problème]_i incluent sa_i (*propre) solution et celle du problème précédent.
 'The appendices of [this problem]_i include its_i (*own) solution and that of the previous problem.'

In (a), the inanimate antecedent *ce problème* ('this problem') c-commands *sa propre* and the sentence is perfectly grammatical as opposed to (b) where the antecedent does not c-command *sa propre*.

The following example makes clear that the relevant notion is indeed c-command and not subject orientation: like (33), it exhibits a contrast with respect to c-command between (a) and (b), but in this case, the antecedent appears in an object position instead of a subject position.

- 34) a. J'ai lavé [la fontaine]_i avec sa_i (propre) eau par souci d'économie.
 'I washed [the fountain]_i with its_i (own) water out of concern for saving water.'

- b. J'ai lavé les rebords de [la fontaine]_i avec sa_i (*propre) eau par souci d'économie.
 'I washed the edges of [the fountain] with its_i (*own) water out of concern for saving water.'

Here *sa propre* is c-commanded by its antecedent *la fontaine* ('the fountain') occurring in the object position in (a), but it is not in (b), and the absence of c-command correlates with the ungrammaticality of *propre*.

Also, note that inanimate *son propre* is not subject to intervention effects, whether with animates or inanimates:

- 35)a. [Ce problème]_i amène les étudiants/l'étudiant à sa_i (propre) solution et à celle du problème précédent.
 '[This problem]_i leads the students/the student to its_i (own) solution and that of the previous problem.'
 b. [Le fleuve]_i emporte les déchets/tout déchet vers sa_i (propre) embouchure.
 '[The river]_i sweeps waste/every waste away towards its_i (own) mouth.'

In (a), *sa propre* is anteceded by the inanimate *ce problème* ('this problem') even though the animate *les étudiants* ('the students') intervenes. Similarly in (b), *sa propre* is bound by *le fleuve* ('the river') even if *les déchets* (pl. 'waste') is an intermediate c-commander. This is so whether the intervener agrees (in number) with *sa propre* or not as indicated in each example. These sentences show that inanimate *son propre* does not need to be bound by the closest binder, nor does it give priority to animate antecedents over inanimate ones. This will matter for examples showing intervention effects with subjects in the next subsection (cf. (39)b, (40)b, (41)b).

3.1.3. Calibrating binding domains

The antecedent must not only c-command inanimate *son propre*, it must also occur in the local domain of inanimate *son propre*, which can be characterized as the smallest XP with

subject containing it as will be shown. This generalization is based on sentences involving TPs, small clauses and DPs.

First, the status of *son propre* differs in the following sentences depending on whether its antecedent occurs in the smallest TP containing it or not:

- 36)a. [Cette auberge]_i fait de l'ombre à son_i (propre) jardin et au jardin de la maison voisine.
'[This inn]_i gives shade to its_i (own) garden and to the garden of the neighboring house.'
- b. [Cette auberge]_i bénéficie du fait que [_{TP} son_i (*propre) jardin est plus spacieux que celui des auberges voisines].
'[This inn]_i benefits from the fact that [_{TP} its_i (*own) garden is more spacious than that of the neighboring inns].'
- c. [Cette auberge]_i bénéficie du fait que [_{TP} les touristes préfèrent son_i (*propre) jardin à ceux des auberges voisines].
'[This inn]_i benefits from the fact that [_{TP} the tourists prefer its (*own) garden to that of the neighboring inns].'

In (a), *son propre* and its antecedent *cette auberge* ('this inn') belong to the same TP and the sentence is natural. However in (b) and (c), the antecedent *cette auberge* is the subject of the main clause while *son propre* occurs in the embedded clause (subject in (b), object in (c)), which means that the antecedent is outside the smallest TP containing *son propre*, and the sentence is degraded. This shows that the local binding domain must at least be the tensed TP containing the anaphor.

This is so whatever type of proposition is involved as exemplified by the following pair of sentences: while (36) presents a complement proposition, (37) and (38) exhibit an adjunct proposition and the same contrast obtains, i.e. the sentence is degraded when the antecedent does not occur in the smallest proposition including *son propre*.

- 37)a. [Cette montagne]_i est moins réputée pour son_i (propre) sommet que pour le sommet voisin auquel elle donne accès.
'[This mountain]_i is less renowned for its_i (own) summit than for the neighboring summit it gives access to.'

b. [Cette montagne]_i attire beaucoup de gens parce que son_i (*propre) sommet est l'un des sommets les plus escarpés du pays.

'[This mountain]_i attracts many people because its_i (*own) summit is one of the steepest summits in the country.'

38)a. [Ce problème]_i inclut sa_i (propre) solution et celle du problème précédent.

'[This problem]_i includes its_i (own) solution and that of the previous problem.'

b. [Ce problème]_i présente peu de difficultés pour que les élèves puissent trouver sa_i (*propre) solution plus rapidement que celle des problèmes précédents.

'[This problem]_i presents few difficulties so that the students can find its_i (*own) solution more quickly than that of the previous problems.'

The same contrast obtains with non-finite TPs:

39)a. [Cette défaite supplémentaire]_i a entraîné ses_i propres conséquences.

'[This additional defeat]_i entailed its_i own consequences.'

b. [Cette défaite supplémentaire]_i a poussé les habitants à supporter ses_i (*propres) conséquences en plus de celles de l'occupation.

'[This additional defeat]_i led the inhabitants to endure its_i (*own) consequences on top of those of the occupation.'

In (b), *ses propres* occurs in an infinitival clause containing a subject (i.e. PRO controlled by *les habitants* ('the inhabitants')) while the antecedent *cette défaite supplémentaire* ('this additional defeat') is the subject of the matrix clause, i.e. is outside the infinitival clause; in this case, the sentence is not natural, as opposed to (a) where *ses propres* and the antecedent occur in the same proposition. Also, note that this is not due to an intervention effect with the animate *les habitants* ('the inhabitants') since it has been shown in (35) that inanimate *son propre* is in principle not subject to such intervention effects.

Similarly, the contrast in (40) shows that a small clause also constitutes a binding domain:

40)a. [Cette peinture]_i possède ses_i (propres) composants et des composants plus communs.

'[This paint]_i includes its_i own components and more common components.'

b. [Cette peinture]_i a rendu les ouvriers allergiques à ses_i (*propres) composants et à ceux d'un autre type de peinture similaire.

'[This paint]_i made the workers allergic to its_i (*own) components and to those of another type of similar paint.'

In (b), the subject of the small clause *les ouvriers* ('the workers') intervenes between *ses propres* and the antecedent *cette peinture* ('this paint') subject of the matrix clause; the sentence is degraded unlike (a) that does not involve any small clause.

Finally, the same holds if *son propre* sits in a DP with subject:⁸⁶

41) a. [Cette entreprise]_i suscite l'admiration de son_i (propre) patron et la colère des patrons concurrents.

'[This company]_i arouses the admiration by its_i (own) manager and the anger of the competing managers.'

b. [Cette entreprise]_i suscite l'admiration des employés pour son_i (*propre) patron et leur colère contre les patrons concurrents.

'[This company]_i arouses the admiration of the employees for its_i (*own) manager and their anger against the competing managers.'

c. [Cette entreprise]_i suscite votre admiration pour son_i (*propre) patron et votre colère contre les patrons concurrents.

'[This company]_i arouses your admiration for its_i (*own) manager and your anger against the competing managers.'

In (b) and (c), *son propre* is part of a DP with subject and its antecedent is outside this DP; in other terms, the subject of the DP *les employés* ('the employees') in (b) or *votre* ('your') in (c) intervenes between *son propre* and its antecedent, which makes the sentence unacceptable. This contrasts with (a) where *son propre* appears in the same DP without subject.

All these pairs of examples strongly suggest that inanimate possessor *son propre* is subject to locality, in the sense that it must be bound within a local domain corresponding to the smallest XP with subject containing it. This requirement has been illustrated using tensed TPs, infinitival TPs, APs and DPs. This argues against the coargument view that predicts *son*

⁸⁶ DPs with subject constitute a problem for Reuland (2011) where syntactic predicates are redefined as having to denote an event, and Ns do not have an event role. This problem is not manifest in Reuland (2011) as only *himself*, not *itself*, is examined. It should be tested whether the antecedent must occur within the DP when *itself* appears in a DP with subject.

propre to be exempt in all the previous sentences, thus not subject to syntactic requirements but only possibly to discourse constraints. But the case of inanimate *son propre* makes clear that we do not deal with discourse constraints like point of view⁸⁷ since such constraints should equally rule out inanimate *son propre* disregarding locality. In sum, the previous examples rehabilitate the classical binding theory against the coargument view in the following sense: the crucial notion is not coargumenthood, but that of a structurally defined local domain in which the anaphor needs to be bound.

3.1.4. Inclusive reference

The case of inclusive reference corroborates the idea that inanimate *son propre* is an anaphor subject to classical condition A. This corresponds to cases where the reference of the anaphor is included in (cf. partial binding) or includes (cf. split antecedent) the reference of the antecedent (cf. a.o. Lasnik: 1989; Den Dikken et al.: 2001). The coargument views that we are discussing predict inclusive reference to be impossible with non-exempt anaphors because coindexation is interpreted as referential identity or semantic binding. However it is clear that exempt anaphors do allow partial binding; this is illustrated below.

- 42)a. John_i told Bill_j that no one but themselves_{i+j} should do this.
b. *John_i showed Bill_j themselves_{i+j}.
c. [John_i and Mary]_j thought that no one but himself_i should do this.

⁸⁷ It is not as clear that discourse constraints like accessibility (mentioned by Reinhart and Reuland 1993) could not play a role with respect to locality: thus Ariel (1990) suggests that both the saliency of the antecedent and the distance between the antecedent and the pronoun are crucial criteria for determining the accessibility of the antecedent. Assuming that inanimates are less salient than animates, this could give an explanation for why there is a correlation between locality and animacy. But first, this would still argue against the coargument view since adopting this kind of theory would make no use of coargumenthood. Moreover, the problem of this theory like other pragmatic theories of binding is that it predicts optionality and possibility of overriding the rule if the context is manipulated; but this is not the case, there is no escape from structures. As suggested by Ariel herself, discourse constraints like accessibility do not work at the level of sentences but rather at the level of discourse: accessibility may govern whatever optional decisions are left by the grammar. At the level of sentences, they may give an historical explanation of the grammaticalization process, i.e. how such systems of binding may have arisen.

d. *[John_i and Mary]_j showed Sue himself_i.

(a) and (b) correspond to instances of split antecedent: the reference of *themselves* corresponds to the sum of the reference of the split antecedent *John* and *Bill*. Thus *themselves* is not coindexed with any coargument in (a) nor in (b) for different reasons. In (a), this comes from the fact that *themselves* does not have any coargument since it is not an argument of *told*; therefore, *themselves* is exempt and is correctly predicted to be acceptable. In (b), this is due to split antecedence: *themselves* is not coindexed with any of its coargument, but with their sum; therefore, *themselves* is not exempt this time, and is correctly predicted to be ungrammatical.

The case of inanimate *son propre* again shows the coargument view to be too weak. Recall that *son propre* is predicted to be exempt when it is the only argument of the nominal predicate it combines with. Therefore, it should be able to exhibit inclusive reference in such cases, but it is not borne out as illustrated by the following examples:

43)a. [*The school has a garden, but the teachers' houses do not*]

L'école_i et les maisons des instituteurs font de l'ombre à son_i (*propre) jardin, mais pas au jardin de la mairie.

'The school_i and the teachers' houses give shade to its_i (*own) garden, not to the garden of the town hall.'

[son propre \subset antecedent]

b. [*The school and the teachers' houses have a common garden.*]

?? L'école_i fait de l'ombre à leur_{i+j} (*propre) jardin, mais pas au jardin de la mairie.

'The school_i gives shade to their_{i+j} (*own) garden, not to the garden of the town hall.'

[antecedent \subset son propre]

c. [*The school and the teachers' houses have each a garden.*]

?? L'école_i fait de l'ombre à leurs_{i+j} (*propres) jardins, mais pas au jardin de la mairie.

'The school_i gives shade to their_{i+j} (*own) gardens, not to the garden of the town hall.'

[antecedent \subset son propre]

In all (a), (b) and (c) involving inclusive reference, *son propre* is predicted to be exempt by the coargument view since it does not have any coargument. But in neither of them is it

acceptable whether it is an instance of partial reference as in (a) or an instance of split reference as in (b) and (c).

To sum up, the case of inanimate possessor *son propre* demonstrates that the coargument theory of binding is too weak: even when predicted to be exempt, inanimate *son propre* obeys syntactic requirements of locality. Furthermore, the notion of locality can be defined drawing on an independent diagnostic, namely inanimacy, which identifies *son propre* as subject to locality. Based on this diagnostic, locality turns out to correspond to the delimitation of a structurally defined domain as in classical theory: sentences involving TPs, APs and DPs show that the binding domain of inanimate *son propre* is the smallest XP with subject containing it.

3.2. Why the coargument view is too strong

Not only is the coargument view too weak, it is also too strong. Indeed, it predicts that an anaphor occupying a coargumental position should be coindexed with a coargument. But the distribution of *son propre* in examples like the following demonstrates that this is incorrect.

44) Marie_i a vendu son_i propre portrait de Jean_k.
'Mary_i sold her_i own picture of John_k.'

In (44), *son propre* ('her own') is a coargument of *Jean* ('John'). Therefore, it should be coindexed with *Jean* according to the coargument view.⁸⁸ But it is not: *son propre* is coindexed with *Marie*. The sentence is grammatical though, which shows that condition A is

⁸⁸ This is not so under Reuland (2011)'s theory: since the N does not have an event role, *portrait* ('picture') does not form a syntactic predicate, and *son propre* is exempt. However, this theory is problematic in cases like (41) as we have explained.

not violated. In terms of Reinhart and Reuland (1993)'s theory, the nominal predicate *portrait* is a syntactic predicate in (44) since it has an internal and an external argument; moreover, it is reflexive-marked as one of its arguments is a SELF anaphor: therefore, it should be reflexive according to condition A; but this is not the case as the two arguments are not coindexed.

It could be objected that the anaphor is a focused anaphor in this case (as argued in the second chapter, *son propre* is focused); that's why it is exempt given that under Reinhart and Reuland (1993)'s theory, a focused anaphor moves at LF to a non-argumental position. However, this would predict that possessor *son propre* is always exempt from condition A since it induces focusing of the possessor as argued in chapter 2. But this is not the case as shown in the previous section: inanimate *son propre* is subject to syntactic restrictions of locality; and it is not sufficient to add discourse constraints to solve the weakness of the prediction; the notion of syntactic locality must be modified, i.e. coargumenthood must be replaced by local domain.

3.3. Why the coargument view is not independently justified

In the previous sections, I have shown based on possessor *son propre* that the coargument view makes incorrect predictions: it is too weak in that it does not predict that inanimate *son propre* is subject to locality restrictions when occupying exempt positions, while it is actually the case; it is too strong in that it incorrectly predicts that *son propre* should be coindexed with a coargument when it occurs in a non exempt position, while it is not borne out.

3.3.1. Anaphoricity of *son propre*

It could be objected that this argumentation crucially relies on the behavior of an element, namely *son propre*, which is not standardly known to be an anaphor and may not be one. There are three answers to this. First, the internal structure of *son propre* makes it similar to SELF anaphors: it is complex since a pronoun (*son*, just like *him* in *himself* or *zich* in *zich zelf*) combines with another element (*propre*, like *self* in *himself*); also, it seems to be referentially defective in Reinhart and Reuland (1993)'s terms since it cannot refer to some entity in the world (cf. (73) in chapter 1). Second, the argumentation against the coargument view has demonstrated that *son propre* is subject to locality restrictions, which is precisely the way to identify anaphors. Third, the same argumentation can be made using French *lui-même* (lit. him-same/even) as will be shown in the next section. The behavior of *lui-même* demonstrates that the locality restrictions on *son propre* are not specific to *son propre* or possessives, but really hold for anaphors in general (at least in French).

The behavior of *son propre* is therefore legitimate as an argument against coargument views of binding as part of the argument consists in showing that it is subject to locality restrictions and such distributional properties are crucial definitional criteria for anaphors; this thereby provides empirical evidence for adding a new element to the pool of anaphors. Crucially, if it is possible to simultaneously base on *son propre* the argument against coargument views of anaphors and show that *son propre* is an anaphor – without being circular, it is because an independent diagnostic is provided to identify anaphoric *son propre*, namely inanimacy. And this is precisely the third argument I want to make against the coargument view: not only does it make wrong predictions (too weak and too strong), it is also unjustified as it does not rest on independent criteria.

3.3.2. Distinguishing between regular and exempt anaphors

The problem raised by the discovery of exempt anaphors for the formulation of condition A is as follows. Condition A is originally stated to regulate the distribution of a type of morphologically distinct pronouns, namely anaphors like *himself*; in this case, anaphors can be defined as elements subject to condition A. But once we identify instances of these very pronouns as not subject to condition A, namely exempt anaphors, this definition does not make sense anymore. Indeed, either we need to redefine condition A such that it deals with all cases of anaphors (the failed attempt in Chomsky (1986)), or we need to divide anaphors into two subsets, regular anaphors subject to condition A and anaphors exempt from condition A. But in this case, we cannot define anaphors any more as elements subject to condition A, all the more since regular and exempt anaphors are not morphologically distinct (e.g. *himself*). Logically, there are several possible ways to deal with the problem of having to account for the distribution of regular anaphors and exempt anaphors. The first question is to know if the two sets are in complementary distribution or overlap; and there are four possible answers to this: given an instance of an anaphor (a) it is never both regular and exempt; (b) if it is regular, it is exempt; (c) if it is exempt, it is regular; (d) it can be both regular and exempt. The second question is to identify the determining criterion or condition for one use or the other or both. Otherwise, there is no independent motivation for the system, and it would be impossible to decide in case of overlap.

3.3.3. Independent criterion for locality

The problem of the coargument view is that it does not provide an independent criterion. As it has been shown, the coargument view amounts to formulating condition A as follows: an anaphor must be bound by a coargument if there is one. The distinction between regular and exempt anaphors relies on the type of position, i.e. on the distribution of anaphors: there is complementary distribution between regular and exempt anaphors and to know whether an anaphor is regular or exempt, we need to look at the position it occupies. The problem is that in the first place, exempt positions are defined based on the distribution of anaphors. In other words, the notion of locality relying on coargumenthood has been determined based on the behavior of anaphors, and the behavior of anaphors is defined as depending on coargumenthood. There is no criterion independent from locality that allows us to distinguish between regular and exempt anaphors.

Actually, both Pollard and Sag (1992) and Reinhart and Reuland (1993) suggest an independent criterion, but each proves to be incorrect. Pollard and Sag (1992) take complementarity with pronouns as crucial for regular anaphors, but this fails viz. (45): in (a), the anaphor should be exempt, but it is not; in (b), it should be non-exempt, but the pronoun is also acceptable (cf. Heim 1998):

- 45)a. *John_i and Mary like him_i/himself_i.
- b. Everybody_i thinks that only he_i likes him_i/himself_i.

As for Reinhart and Reuland (1993), they propose that regular (unlike exempt) anaphors must be semantically bound by their antecedents. This predicts only sloppy readings in ellipsis, but this fails too as illustrated in (46): in this sentence, even though *himself* is not exempt, the strict reading is possible as shown by Kehler (2005):

46) John_i defended himself_i before Bill did.

Similarly, the following sentence is ambiguous between a strict reading (i.e. nobody else defended John) and a sloppy reading (i.e. nobody else defended himself).

47) Only John_i defended himself_i.

Some theories related to logophoricity (e.g. Huang and Liu: 2001) attempt to determine the condition crucial for exemption. This can be reconstructed as follows: if the anaphor refers to a center of perspective, it is exempt. But there are two problems with such views: first, as shown by the heterogeneous literature on logophoricity (starting with Clements: 1975), it is difficult to provide a clear and unified definition of center of perspective; second, if we choose to define exempt anaphors, it is hard to determine if they can be or must be exempt, since referring to a center of perspective is not incompatible with having a local antecedent.

However, what *son propre* shows is that there is at least a way to independently identify regular anaphors, namely inanimacy: if the anaphor refers to an inanimate, it must be a regular anaphor, i.e. subject to locality requirements. This is compatible with all theories of logophoricity since a center of perspective must minimally be animate. But as opposed to logophoric views, it is not a condition that liberates an anaphor from condition A (if it is a center of perspective, it need not follow condition A), but a condition that subjects an anaphor to condition A (if it is inanimate, it must follow condition A). Therefore, using inanimacy as a diagnostic, we have a way to justify the notion of locality relevant to anaphoricity, as inanimacy is independent from locality. Here is thus the new picture of syntactic anaphoricity: there are two types of anaphors, i.e. regular and exempt anaphors, that do not exhibit the same distribution and condition A only regulates the distribution of

regular anaphors. Inanimates cannot be exempt anaphors; condition A can therefore be formulated based on the behavior of inanimates.

The next questions concern the behavior of animates and that of exempt anaphors: are animates necessarily exempt or are they just able to be? Is it sufficient to identify exempt anaphors as animates or do we need to refine the animacy condition? To answer these questions, we need in particular to check if there is a difference between animates in local contexts and in non-local contexts. I leave these questions for further research (Charnavel: in progress), and in the next section, I show that the notion of locality that we have determined is not specific to possessives as the same arguments as those with *son propre* can be made using *lui-même*.

4. Further arguments from *lui-même*

4.1. *Lui-même* and locality

Like *son propre*, *lui-même* (lit. *him-same/even*; close to *himself* but not quite the same) is not standardly described as an anaphor; in fact, the behavior of *lui-même* is poorly understood. For instance, Zribi-Hertz (1995) assumes that *lui-même* is specific in that it is a bindable expression unspecified for locality and disjoint reference; but this does not make any precise prediction.

However, the behavior of *lui-même* becomes clearer if we use the tool presented for *son propre*, namely inanimacy. Indeed, *lui-même* is subject to locality if it is inanimate but not if it is animate. This is illustrated by the following sentences using an uncontroversial version of locality, namely clausemateness:

- 48)a. [La Terre]_i tourne autour d'elle_i-*(même).
 'The earth]_i revolves around it_i*(self).'
- b. [La Terre]_i subit l'effet gravitationnel des nombreux satellites qui tournent autour d'elle_i-(*même).
 '[The earth]_i is subject to the gravitational effect of the numerous satellites that revolve around it_i (*self).'
- c. De son point de vue, Marie_i souffre de la présence des nombreuses personnes qui tournent autour d'elle_i-(même).
 'From her viewpoint, Mary_i suffers from the presence of many people that move around her_i(*self).

Thus (a) contrasts with (b) because the inanimate antecedent *la Terre* ('the earth') is in the same proposition as *elle-même* in (a) but not in (b); this correlates with a contrast in grammaticality: *elle-même* is only acceptable in (a). However, when the antecedent is animate as in (c) (*Marie*), the sentence is acceptable even if *elle-même* is embedded in another clause. Thus inanimacy and locality correlate for *elle-même*, which suggests that it behaves like an anaphor.

Moreover, inanimate *lui-même* supports the hypothesis that a complex anaphor must be bound within the smallest XP with subject containing it as argued for *son propre*.

First, (49) illustrates the c-command requirement:

- 49)a. [La Terre]_i tourne autour d'elle_i-*(même).⁸⁹
 '[The earth]_i revolves around it_i*(self).'
- b. Les satellites de [la Terre]_i tournent autour d'elle_i-(*même).
 'The satellites of [the earth]_i revolve around it_i(*self).'

Elle-même can take *la Terre* ('the earth') as antecedent when it c-commands it as in (a), but not when it does not as in (b).

⁸⁹ Note that the sentence with c-command of the antecedent is degraded in the absence of *même* (an effect of condition B) while a similar sentence with *son propre* is not degraded in the absence of *propre*.

As in the case of *son propre*, there is no subject orientation involved since the same holds when the antecedent occupies the object position instead of the subject position:

- 50)a. J'ai roulé [le tapis]_i sur lui_i-*(même).
 'I rolled [the carpet]_i on it_i*(self).'
 b. J'ai roulé les bords [du tapis]_i sur lui_i-(*même).
 'I rolled the edges of [the carpet]_i on it_i*(self).'

Like *son propre*, inanimate *lui-même* is not subject to intervention either: as far as the antecedent is in the local domain of *lui-même*, other elements can intervene between *lui-même* and the antecedent, whether animate and inanimate, singular or plural:

- 51)a. [La Lune]_i attire l'eau de la Terre/les océans vers elle_i-même.
 '[The moon]_i attracts the earth's water/the oceans to itself.'
 b. [La Lune]_i attire les êtres humains/l'homme vers elle_i-même.
 '[The moon]_i attracts human beings/mankind to itself.'

Also, (52) shows that like inanimate *son propre*, inanimate *lui-même* does not license an antecedent outside the smallest tensed clause it occurs in, whatever the type of clause (complement clause in (b) and (c), adjunct clause in (d) and (e)) and whatever the position of *lui-même* is (subject in (b) and (e), object in (c) and (d)).

- 52)a. [La Terre]_i tourne autour d'elle_i-*(même).
 '[The earth]_i revolves around it_i*(self).'
 b. [La Terre]_i pâtit du fait qu'elle_i-(*même) n'a pas la priorité sur les hommes.
 '[The earth]_i suffers from the fact that it_i*(self) does not get priority on humans.'
 c. [La Terre]_i subit le fait que de nombreux satellites tournent autour d'elle_i-(*même).
 '[The earth]_i suffers from the fact that many satellites revolve around it_i*(self).'
 d. [La Terre]_i connaît le phénomène des marées en partie parce que la Lune tourne autour d'elle_i-(*même).
 '[The earth]_i has tides partly because the moon revolves around it_i*(self).'
 e. [La Terre]_i est la seule planète bleue du système solaire parce que contrairement aux autres, elle_i-(*même) est dotée d'une atmosphère comportant du dioxygène et est recouverte d'eau liquide.
 '[The earth]_i is the only blue planet of the solar system because contrary to the others, it_i*(self) has an atmosphere containing dioxygen and is covered by liquid water.'

Similar judgments obtain if *lui-même* appears in an infinitival clause while the antecedent is in the matrix clause. Thus in (53), the PRO (controlled by *les invités* ‘the guests’) subject of the non-finite clause intervenes between *le tapis* (‘the carpet’) and *lui-même*; and in (54), the subject *les hommes* (‘humans’) occurs between *elle-même* and the antecedent *la Terre* (‘the earth’). Since *lui-même* is not in principle subject to intervention as illustrated in (51), this is a question of domain.

53)a. [Le tapis]_i est enroulé sur lui_i-même.

'[The carpet]_i is rolled on itself_i.'

b. Du fait de sa beauté, [le tapis]_i n'incite pas les invités à marcher sur lui_i-(*même), mais à côté.

'Because of its beauty, [the carpet]_i does not lead the guests to step on it_i (*self), but on the side.'

54)[La Terre]_i ne peut pas rendre les hommes responsables d'elle_i-(*même).

'[The earth]_i cannot make humans responsible for it(*self).'

Finally, (55) presents the same fact as above with a DP with subject, and (56) with a PP with subject.

55)a. [Cette loi]_i a provoqué la colère des habitants contre elle_i-(?même) et contre ceux qui l'ont votée.

'[This law]_i aroused the anger of inhabitants against it_i(?self) and those who voted for it.'

b. [Cette loi]_i a provoqué leur/notre colère contre elle_i-(?même) et contre ceux qui l'ont votée.

'[This law]_i aroused their/our anger of inhabitants against it_i(?self) and those who voted for it.'

56)[L'enceinte du château]_i cache les habitants derrière elle_i-(?même).⁹⁰

'[The wall of the castle]_i hides the inhabitants against it_i(?self).'

⁹⁰ Examples like this suggest that Ps can have subjects. Note that both Reinhart and Reuland (1993) and Reuland (2011) would make wrong predictions here: the former would incorrectly predict *lui-même* to be exempt because Ps do not have a subject according to them; the latter would predict so because Ps do not have an event role according to him.

In both cases, the subject of the DP or PP *les habitants* ('the inhabitants') intervenes between *elle-même* and the antecedent, respectively *cette loi* ('this law') or *l'enceinte du château* ('the wall of the castle').

All these examples lead to the same conclusion as the sentences involving *son propre*: the domain relevant for anaphoricity appears to be the smallest XP with subject containing the anaphor.

4.2. *Lui-même* and the coargument view

Even if *lui-même* and *son propre* exhibit the same pattern with respect to locality and animacy, they do not argue against the coargument view in the same way: in fact using *lui-même*, the argument about the weakness of the coargument view (too weak) is weaker, and the argument about its strength (too strong) is stronger.

First, *lui-même* does not make the same point as *son propre* because it is not always predicted to be exempt according to the coargument view. Recall that most cases of *son propre* are supposed to be exempt under predicate-based theories since it is the only argument of the nominal predicate it combines with (or Ns do not have an event role). This does not hold for *lui-même* that is an argument of a verbal predicate in most cases. Therefore, all the previous examples are correctly ruled out by the coargument view for one of the two following reasons: either they violate condition A as *lui-même* is not coindexed with a coargument while there is one (cf. (48)b, (49)b, (50)b, (52)c-d, (53)b, (54), (55), (56)); or they fall under the case of nominative anaphora (cf. (52)b, e) which is

excluded in different ways depending on the implementation of the coargument view: in Reinhart and Reuland (1993)'s theory, this is excluded by the Chain Condition in (57), while Pollard and Sag (1992) must stipulate a specific principle against nominative anaphors.

57) **Condition on Chains:** a maximal A-chain $(\alpha_1, \dots, \alpha_n)$ contains exactly one link $-\alpha_1$ that is both +R and Case-marked.

Therefore, the previous examples involving *lui-même* do not directly argue against the coargument view, they only do so if coupled with the sentences involving *son propre* because they exhibit the same pattern for a non-possessive and support our definition of the binding domain.

But *lui-même* more directly argues against the coargument view too. First, the same holds as *son propre* when *lui-même* is the single argument of a nominal predicate: it is predicted to be exempt by the coargument view but is actually subject to locality as illustrated by the following sentences:

58)a. [Cette loi]_i a entraîné la publication d'un livre sur elle_i-même et sur son auteur.
'[This law]_i led to the publication of a book about itself_i and its author.'

b. *[Cette loi]_i est si importante que les journalistes prédisent la publication d'un livre sur elle_i-même et sur son auteur.

*[This law]_i is so important that the journalists predict the publication of a book about itself_i and its author.'

59)a. [La Grande roue]_i a éjecté les enfants au-dessus d'elle_i-même.

'[The big wheel]_i ejected the children above itself_i.'

b. *[La Grande Roue]_i a été fermée après que des enfants ont été éjectés au-dessus d'elle_i-même.

*[The big wheel]_i has been closed after children got ejected above itself_i.'

60)a. [Cette atrophie]_i tue tout, hormis elle_i-même.

'[This atrophy]_i kills everything except itself_i.'

b. *[Cette atrophie]_i est très dangereuse parce que rien ne résiste à ce genre de problème hormis elle_i-même.

*[This atrophy]_i is very dangerous because nothing resists to this kind of problem except itself_i.'

- 61)a. [Ces résultats]_i ont de la valeur en eux_i-mêmes.
 '[These results]_i have value in themselves_i.'
- b. *[Ces résultats]_i sont prometteurs même si le chercheur ne reconnaît pas encore de valeur en eux_i-mêmes.
 '*[These results]_i are promising even if the researcher does not recognize value in themselves_i yet.'

In all these examples, *lui-même* is the single argument of a preposition (respectively *sur*, *au-dessus de*, *hormis*, *en*) and the PP is not an argument, but an adjunct. Under the coargument view, *lui-même* is therefore predicted to be exempt; note that as opposed to *son propre*, it is so even under the strict version of Reinhart and Reuland (1993) since these prepositional predicates lack an external argument and are therefore no syntactic predicates, thus not subject to condition A; this is also so under Reuland (2011)'s theory since these prepositional predicates do not have an event role. However in all these cases, (a) contrasts with (b): the sentence (a), in which *lui-même* and the antecedent are clausemate, is grammatical, but the sentence (b), in which they are not in the same clause but *lui-même* is embedded in an adjunct clause, is degraded. This is accounted for under my view since *lui-même* is inanimate in these sentences and is not locally bound by its antecedent, but the coargument view is too weak to explain such cases just as in the case of *son propre*.

More importantly, *lui-même* provides an additional and crucial argument as compared to *son propre*. It shows that it need not be coindexed with a coargument even if it is an argument of a verbal predicate. Recall that *son propre* demonstrates that the coargument view is too strong because even when it is an argument of a nominal predicate that exhibits several arguments, it need not be coindexed with one of them (cf. 44). But one version of the coargument view (namely Reuland 2011) suggests that predicates without any event

argument (like most nominal predicates) are not subject to condition A. However, animate *lui-même* shows the same pattern with respect to verbal - thus eventive - predicates:

- 62)a. Marie_i s'inquiète du fait que ses enfants dépendent d'elle_i-même.
'Mary_i is worried that her children depend on herself_i.'
b. [L'avenir de Marie_i]_k ne dépend pas d'elle-même_i, mais de ses parents.
'[Mary_i's future] does not depend on herself_i, but on her parents.'

In (62), *elle-même* is an argument of the verb *dépendre de* ('depend on') that has a subject and is therefore subject to condition A according to the coargument view. Thus *elle-même* should be coindexed with its coargument but it is not. Nevertheless, there is no violation of condition A since the sentence is perfectly grammatical. Therefore, predicate-based theories are too strong here since they incorrectly predict ungrammaticality of *elle-même*. However under my view, the sentence is grammatical because *elle-même* is animate and therefore need not be locally bound by the antecedent.

Note that focus rescues the sentence under Reinhart and Reuland (1993)'s theory: according to them, a focused anaphor moves at LF to a non-argumental position and is therefore exempt. Assuming that *lui-même* is a focused anaphor in (62)a thus correctly predicts that *lui-même* is exempt and the sentence is grammatical. However, this would incorrectly predict that the same holds with inanimate *lui-même*, but this is not borne out:

- 63)a. [La Terre]_i est dégradée par les êtres humains même si leur avenir ne dépend que d'elle_i-(*même).
'[The earth]_i is degraded by human beings even if their future only depends on it_i(*self).'
- b. Les habitants de [la Terre]_i dépendent d'elle_i-(*même).
'The inhabitants of [the earth]_i depend on it_i(*self).'

Here, Reinhart and Reuland (1993) would also predict *lui-même* to be exempt - thus acceptable - due to focus. But in fact, the sentence is not grammatical: this is so under my

view because the antecedent is not in the local domain of *lui-même* in (a) and does not c-command it in (b).

In sum, *lui-même* strongly supports the arguments based on *son propre* against the coargument view. First, it exhibits the same correlation between locality and inanimacy, thus corroborating the efficiency of inanimacy as an independent diagnostic to test for locality. Then, it confirms the hypothesis that the local domain in which an anaphor must be bound is the smallest XP with subject containing it. Finally, it demonstrates that the coargument view is irreparably too strong since even in the case of verbal - thus eventive - predicates, *lui-même* need not be coindexed with a coargument.

Therefore, *son propre* and *lui-même* show that the coargument view makes wrong predictions for complex anaphors and is not independently justified. This has simultaneously revealed the existence of two French anaphors and provided an independent tool to test for anaphoricity, namely inanimacy. This also partly rehabilitates the classical binding theory as will be shown in the next section.

5. Rehabilitating the classical Binding Theory?

The argumentation against the validity of coargumenthood for condition A has rehabilitated the notion of a structurally defined local domain that was advocated by classical condition A. At the same time, it has been shown that a theory of exemption based on animacy is required. These two facts can be reconciled by the following hypothesis:

standard condition A is basically right but needs to be integrated in a more complex system of anaphoricity: it only regulates one type of anaphors.

5.1. Local domain and phase theory

5.1.1. Defining binding domain

The previous data involving inanimate *son propre* and *lui-même* demonstrate that the crucial notion for condition A is not coargumenthood, but that of a local domain in which the anaphor must be bound by its antecedent. More precisely, the relevant domain turns out to basically correspond to the smallest XP with subject containing the anaphor. This is very close to the formulation of the classical binding theory and thus rehabilitates it: Chomsky (1986) basically assumes that an anaphor must be bound within the smallest XP with a subject c-commanding it within the same clause.

A problem with the classical theory is that it predicts that the binding domain of an anaphor must contain a subject c-commanding it distinct from the anaphor. But the data previously presented suggest that the anaphor itself can correspond to the subject constituting the binding domain: inanimate *son propre* or *lui-même* occupying the subject position of a TP or a position within its subject cannot be bound outside of this TP (cf. (36)b, (37)b, (52)e).

However, this is not so in the case of DPs: many of the previous examples show that *son propre*, which occupies the subject position of a possessive DP, can be bound by an antecedent occurring outside of this DP.

These facts suggest that binding theory can be reduced to the theory of phases (Chomsky 2005): this theory gives a way to deal with the discrepancy between TPs – an anaphor in

the subject of TP cannot be bound by an antecedent outside of it – and DPs – an anaphor occupying the subject of DP can be anteceded by an element outside of it - as will be explained. The basic hypothesis explored is the following: an anaphor and its antecedent cannot belong to different spellout domains. This means that inanimate anaphors are ruled out by condition A if they are not bound within their spellout domain, i.e. within their phases, and this has the advantage of motivating condition A.

According to Chomsky (2000, 2001, 2005a, b), phases provide the infrastructure of a theory of syntactic derivation. For Chomsky (2000, 2001, 2005a, b), the phrase vP, headed by the external argument-introducing little v, and the phrase CP, headed by the complementizer C, correspond to phases. Within a phase, lexical material is inserted and constituents may move up to higher phase-internal syntactic positions. At the end of a phase, the material in the complement to the head of the phase is spelled out, that is rendered unavailable to further syntactic computation.

This will explain the difference of anaphoric behavior in TPs and DPs as follows. A subject of TP has to belong to the spellout domain of its phase, i.e. the complement of the phase head C: the subject of TP cannot move to the periphery of the CP phase to escape spellout. However, a subject of DP can escape immediate spellout by moving to its periphery as will be explained.

Let's examine in more details how to account for the different cases of anaphoric behavior under the phase-based hypothesis.

5.1.2. The different cases of domain

5.1.2.1. TPs

The phase-based hypothesis makes a prediction different from classical binding theory concerning TPs: while Chomsky (1986)'s theory predicts that the binding domain of the anaphor must contain a subject c-commanding it distinct from the anaphor, the phase-based hypothesis implies that the anaphor itself can correspond to the subject constituting the binding domain. This follows from the assumption that a CP corresponds to a phase, i.e. the material in the complement of C is spelled out; the subject of TP cannot escape it. In such cases, the anaphor – in the subject of TP - occurs in the complement of the head of a phase CP, i.e. spellout domain, while the antecedent does not belong to the same spellout domain; this is predicted to be ruled out by condition A.

Some of the previous examples (repeated below) show that this is borne out:

- 64) [Cette auberge]_i bénéficie du fait que [TP son_i (*propre) jardin est plus spacieux que celui des auberges voisines].
‘[This inn]_i benefits from the fact that [TP its_i (*own) garden is more spacious than that of the neighboring inns].’

Thus in (64), *son propre* appears within the subject of the embedded clause. The classical theory predicts that the binding domain corresponds to the whole sentence since the only subject c-commanding *son propre* is the subject of the main clause, namely *cette auberge* ('this inn'). *Son propre* is bound within this domain as its antecedent is precisely *cette auberge* ('this inn'), so that condition A should not be violated: the classical theory incorrectly predicts the sentence to be grammatical while it is degraded. But under the phase-based theory, *son propre jardin* ('its own garden') must be bound within its phase, i.e. the CP containing it; moreover, it cannot move to the periphery of CP to escape spellout.

Son propre is not bound within this domain as the antecedent *cette auberge* ('this inn') is outside of the embedded clause. The phase-based theory makes the right prediction here.

It also correctly predicts the ungrammaticality of *lui-même* in the following sentence previously mentioned:

65) [La Terre]_i pâtit du fait qu'_[TP] elle_i-(*même) n'a pas la priorité sur les hommes].
'[The earth]_i suffers from the fact that it_i(*self) does not get priority on humans.'

Again, the binding domain of the anaphor *elle-même* corresponds to the embedded clause under the phase-based theory: the embedded TP corresponds to a spellout domain; it does not matter that this subject is precisely the anaphor. Since the antecedent *la Terre* ('the earth') is not included in this TP, this correctly predicts to violate condition A and make the sentence ungrammatical.

However, note that this time, the classical view also rules out the sentence, but for a different reason: it here appeals to a principle about nominative anaphors. For instance, Rizzi (1990) proposes that the absence of nominative anaphors is to be understood in terms of what he calls the 'Anaphor-Agreement effect': anaphors cannot occur in agreeing positions.

A first issue with this hypothesis is that it is not the case that *lui-même* can never occur in the subject position:

66) Au début c'est sa belle-soeur qui va venir prendre ses enfants, puis _[TP] elle-même viendra]. (google)
'lit. At the beginning, it is her sister-in-law that will pick up her children, then herself will come.'

Here, *elle-même* is perfectly grammatical even if it occupies the subject position of the sentence *elle-même viendra* (lit. herself will come, i.e. 'she will come herself'). Therefore given (66), a principle such as Rizzi (1990)'s is too strong. However under my view, (66) is

fine because *elle-même* is animate and therefore exempt from condition A; in fact, inanimate *elle-même* cannot occur in subject position of a TP as shown below.

- 67) Le tremblement de terre a d'abord fait tomber les bâtiments à côté de la tour.
Puis elle-(*même) s'est écroulée.
'First, the earthquake made the buildings next to the tower fall down. Then it(*self) collapsed.'

A second issue is that the classical view would rule in *lui-même* if it is embedded in the subject of an embedded clause and the antecedent appears in the main clause:

- 68) * $[La\ Terre]_i$ a bénéficié du fait que $[TP\ des\ photos\ d'elle_i\text{-}même\ et\ de\ son\ satellite\ ont\ montré\ les\ effets\ néfastes\ de\ la\ pollution]$.
'* $[The\ earth]_i$ benefited from the fact that pictures of $self_i$ and its satellite showed the harmful effects of pollution.'

In (68), *elle-même* occurs within the subject of the embedded TP *des photos d'elle-même* ('pictures of itself'). Under Chomsky (1986), the binding domain is therefore the whole sentence as the only subject c-commanding the anaphor is *la Terre* ('the earth'). Since the binding domain includes the antecedent, i.e. *la Terre* ('the earth'), it incorrectly predicts the sentence to be fine since condition A is obeyed. But under the phase-based theory, the binding domain is the embedded clause, which correctly predicts the ungrammaticality of the sentence since inanimate *elle-même* is not bound within this domain.

The same holds if we embed *son propre* in the subject position of a subordinate clause. Since *son propre* is anyway already embedded in its DP, this only confirms what was shown in (64).

- 69) $[Ce\ musée]_i$ indique que $[TP\ l'équipe\ de\ son_i\ (*propre)\ conservateur\ collabore\ avec\ d'autres\ conservateurs\ de\ musée]$.
' $[This\ museum]_i$ indicates that the team of $its_i\ (*own)$ curator collaborates with other curators.'

Note that this predicts that English examples like the following do not involve an anaphor subject to condition A but an exempt anaphor; indeed, *themselves* is here animate.⁹¹

70) They_i thought that some pictures of themselves_i were on sale.

Nevertheless, it remains true that English *himself* can never occupy the subject position itself even if the antecedent is animate:

71) *John said that himself left.

We will partly examine in the last subsection how to reconcile English data with French data.⁹² This probably comes from an independent constraint and thus does not argue against the phase-based hypothesis.⁹³

In sum, the phase-based hypothesis appears to be superior to classical binding theory in that it correctly predicts that anaphors occurring in subjects of TPs must be bound within this TP: the antecedent must appear in the same spellout domain as the anaphor (the anaphor must be interpreted in the spellout domain containing it), i.e. the complement of the phase head C.

⁹¹ But *itself* in the same position is predicted to be ruled out under the phase-based theory. This needs to be tested.

⁹² Similarly, Chinese anaphor *ziji* is shown not to be exempt when embedded in the subject position of an embedded clause by Huang and Liu (2001: 31); the same holds for anaphoric *ta ziji*. This can be due to the fact that *ziji* is subject oriented and therefore subject to another system of anaphoricity as mentioned in the last section of this chapter.

⁹³ The difference between French *lui-même* and English *himself* with respect to animate subjects (*lui-même viendra* vs. **himself will come*) may come from the fact (independent from binding theory) that French has a richer agreement system than English and thus, *lui-même* can occur on its own as subject unlike *himself* that needs to combine with *he* (e.g. *he himself will come*). Languages like Italian that exhibit an even richer agreement system allow silent subject pronouns (prodrop languages).

5.1.2.2. *Small clauses*

What about small clauses? The example (40)b repeated below suggests that small clauses form a phase:

- 72) [Cette peinture]_i a rendu [_{AP} les ouvriers allergiques à ses_i (*propres) composants et à ceux d'un autre type de peinture similaire].
'[This paint]_i made [_{AP} the workers allergic to its_i (*own) components and to those of another type of similar paint].'

Indeed, *ses propres* cannot take as antecedent *cette peinture* ('this paint') that occurs outside of the small clause. This is accounted for if we assume that the small clause constitutes a phase since *cette peinture* and *ses propres* do not belong to the same spellout domain.⁹⁴

However, the following example demonstrates that if the anaphor occupies the subject position of the small clause, it can be bound from outside of it:

- 73) [Cette nouvelle peinture]_i a rendu [_{AP} son_i propre fabricant dépendant du fabricant de la marque concurrente].
'[This new paint]_i made [_{AP} its_i own producer dependent on the producer of the rival brand].'

In (73), *son propre* occurs in the subject position of a small clause and licenses *cette nouvelle peinture* ('this new paint') as antecedent even if it is not included in the small clause. Under the phase-based hypothesis, this suggests that *son propre* is situated at the edge of the small clause phase, that's why it is visible to a higher antecedent.

But the subject of a small clause can serve as an antecedent for an anaphor present in the small clause:

⁹⁴ This hypothesis is compatible with Sportiche (1995)'s argumentation that small clauses in fact correspond to CPs.

- 74) La crise a rendu [_{AP} [ces publicités]_i nécessaires à leurs_i propres producteurs et à ceux des sites qui les hébergent].
 ‘The crisis made [_{AP} [these advertisements]_i necessary to their_i own producers and those of the websites that host them].’

Thus in (74), *ces publicités* (‘these advertisements’) occupies the subject position of the small clause and correctly binds *leurs propres*.

Therefore, we need to assume that there are two positions for the subject of a small clause: the lower one is within the spellout domain of the small clause and can therefore serve as a binder for anaphors in the small clause; the higher one is outside the spellout domain, i.e. at least at the edge of the phase, and is thus accessible to material outside of the small clause. This means that in (74), it is the trace of the subject occurring in the lower position that binds *leurs propres* as illustrated below (the spellout domain is represented by bold brackets); the higher position is at least as high as the edge of the phase and does not belong to the spellout domain.

- 75) The crisis made [_{AP} [these advertisements]_i [_{t_i} necessary to their_i own producers and those of the websites that host them]].

In sum, the binding facts concerning small clauses are compatible with the phase-based hypothesis if we suppose the existence of two positions for the subject, one within the spellout domain and one outside of it – at least as high as the edge of it -, i.e. if we assume that A-movement (as opposed to A-bar movement in CP as will be shown below) stops at the edge of the phase.

Similarly, Sauerland (2003) demonstrates that there is a reconstruction site for A-movement at the edge of vP, below negation in (76) (on the ‘not every’ reading, which may require a special intonation):

- 76) Every child₁ doesn’t [vP _ seem to his₁ father to be smart].

5.1.2.3. *vPs*

Concerning *vP*, it does not seem that their phasal status (cf. Chomsky 2000) has consequences on binding facts given examples like the previous one. In addition, Fox (2000) argues on the basis of sentences such as (77) that there is a reconstruction site at the left edge of *vPs* that do not involve *seem*.

- 77)a. Which of the papers that he₁ wrote for Ms. Brown₂ did every student₁ get her₂ to grade _ ?
b. *? Every student got her₂ to grade the first paper that he wrote for Ms. Brown₂.
c. [_{TP} every student₁ did [_{vP} which of the papers that he₁ wrote for Ms. Brown₂ [_{vP} get her₂ to grade _]]]

The observation is that (77)a is perfectly acceptable on a reading where the first pronoun is bound by the quantified subject and the second pronoun is coreferent with the name in the relative clause, as indicated by the coindexing. However, the surface structure in (77)a violates the c-command requirement on binding of pronouns, suggesting that the *wh*-expression must be reconstructed for interpretation. Reconstruction to the origin site, marked with an underline, should create a Principle C violation of the type seen in (77)b, suggesting that there must be another reconstruction site between the quantified subject and the pronominal object, as depicted in (77)c.

The presence of a reconstruction site at the left edge of *vP* means that the thematic position of the subject is within the spellout domain of *vP*. Therefore, *vP* as a phase does not prevent a subject to bind an anaphor in *vP* as is often the case.⁹⁵

⁹⁵ A problem may arise with raising infinitivals. The presence of a *vP* phase correctly predicts the ungrammaticality of the following sentence:

35) *John seems to Mary_i to [_{vP} like herself_i].

Herself is correctly predicted to be unacceptable because the antecedent *Mary* is not in its spellout domain. However, the following example is more problematic:

36) John seems to Mary_i to [_{vP} sleep] as often as herself_i.

5.1.2.4. DPs

Finally concerning DPs, the facts are as follows (cf. (41) repeated below): if the anaphor is contained in a DP without subject, it can be bound outside of it, otherwise, the subject of the DP blocks binding of the anaphor:

- 78)a. [Cette entreprise]_i suscite [_{DP} l'admiration de son_i (propre) patron] et la colère des patrons concurrents.
'[This company]_i arouses [_{DP} the admiration by its_i (own) manager] and the anger of the competing managers.'
- b. [Cette entreprise]_i suscite [_{DP} l'admiration des employés pour son_i (*propre) patron] et leur colère contre les patrons concurrents.
'[This company]_i arouses [_{DP} the admiration of the employees for its_i (*own) manager] and their anger against the competing managers.'
- c. [Cette entreprise]_i suscite votre admiration pour son_i (*propre) patron et votre colère contre les patrons concurrents.
'[This company]_i arouses your admiration for its_i (*own) manager and your anger against the competing managers.'

This fits the phase-based hypothesis if we suppose that DPs without subject do not constitute phases⁹⁶ but those with subject do. More precisely, we can hypothesize like Svenonius (2004) that since clausal and nominal structures seem generally parallel, there can be at least two phase heads in the DP corresponding to C and v. This means that when the DP has a subject, the node equivalent to v, call it n, is the head of a phase. Moreover just

Here, *herself* may be outside of the vP if the structure is as indicated, i.e. if *as often as herself* is not part of the vP phase. In that case, the sentence is predicted to be grammatical. Note that the grammaticality of this configuration should be tested with inanimate *itself* to make sure it is a non-exempt anaphor. But this is not possible since the experiencer of *seem* has to be animate.

Would such an example be ungrammatical, this could constitute an argument in favor of the presence of another phase (in addition to vP) in raising infinitives, namely TP, while the possibility of raising to subject is considered to be an argument against the presence of TP phases in such structures.

Note that control infinitives do not raise the same questions since they are argued to contain a CP phase that will directly predict the right behavior for anaphors.

⁹⁶ The same seems to hold for VPs: they are not a phase when they lack a subject as illustrated below:

- 37) Mary_i T [_{VP} seem to herself_i t_i to be a good candidate].

Here, *Mary* can bind *herself* from outside VP (it does not c-command *herself* before raising, thus cannot bind it from inside VP). Given the hypothesis that the anaphor must be interpreted within its spellout domain, this suggests that VP is not a phase in this case, i.e. when it does not have a subject. Nevertheless, note that this example cannot really show this fact, since *herself* is animate and could thus be exempt. But as said earlier, experiencers of *seem* have to be animate, which makes the structure impossible to test with inanimate *itself*.

as for vP and small clauses, two positions can be hypothesized for the subject of n, so that an anaphor within the NP can be bound by its subject, but an anaphor occupying the subject position of the DP can have a binder outside the DP.⁹⁷ In fact, the following examples suggest that this is borne out:

- 79)a. [Cette entreprise]_i suscite [_{DP} l'admiration de ses_i propres employés pour les employés de l'entreprise sous-traitante].
'[This company]_i arouses [_{DP} the admiration of its_i own employees for the employees of the subcontractor].'
b. [La Terre]_i subit les conséquences de [_{DP} l'intérêt de ses_i propres habitants pour les potentiels habitants d'autres planètes].
'[The earth]_i suffers from the consequences of [_{DP} the interest of its_i own inhabitants in potential inhabitants of other planets].'

In both (a) and (b), *ses propres* occurs in the subject position of the DP and the antecedent is not included in the DP. This is compatible with the phase-based hypothesis if we suppose that *ses propres* has moved through the edge of the nP phase.

In sum, the phase-based hypothesis makes correct predictions for all cases. The simplest case is when the anaphor occurs in a TP, which corresponds to the spellout domain of the phase headed by C: the antecedent must appear in this TP whether the anaphor is the subject or not. The situation is more complex when the anaphor occurs in XPs like small clauses, vPs or DPs. In those cases, the anaphor can be bound from outside if there is no subject (the XP is not a phase in that case); if there is a subject (the XP is a phase), this subject can be bound from outside, but this subject can also bind an anaphor within the XP:

⁹⁷ There is however a distinction between DPs and vPs/small clauses with respect to extraction. While DPs lacking a subject always allow extraction, those with subject never do. This contrasts with vPs and small clauses that do allow extraction even when they have a subject. This suggests that the edge of vPs or small clauses is tolerant of multiple elements while the edge of DPs is not (the subject blocks extraction).

the subject is both inside and outside the spellout domain (at the edge), which means that there are two positions for the subject.

5.1.3. Some predictions

The phase-based hypothesis makes further predictions. We know that A-bar movement does not supply binders for anaphors as exemplified in (80). This is illustrated in (81) for inanimate *son propre*:⁹⁸

80) *Who_i did friends of [each other]_i kill?⁹⁹

81) [Quel monument]_i est-ce que son_i (*propre) architecte a montré à l'architecte du musée ?
 '[Which building]_i did its_i (*own) architect show to the architect of the museum?

Here, *quel monument* ('which building') moves to the specifier position of C by so-called A-bar movement. At surface structure, it occurs in a position likely to bind *son propre* but *propre* is not acceptable, which shows that A-bar movement does not provide antecedents for anaphors. This supports the phase-based hypothesis as A-bar movement corresponds to movement crossing over phase heads (into the edge). In (81), *quel monument* moves to the edge of the CP phase and thus does not belong to the spellout domain of *son propre* that corresponds to TP; moreover its trace does not c-command *son propre* within the spellout

⁹⁸ The same holds for inanimate *lui-même*:

38) *La planète_i dont l' orbite t_i ne dépend que d' elle-même...
 the planet_i of-which the orbit t_i depends only on itself.

⁹⁹ Given that *each other* is animate here, this example suggests that animacy is not sufficient to exempt anaphors from condition A as I will show later on.

A similar example can be constructed with inanimate *each other*:

39) *What_i did each other_i's owners destroy t_i?

domain. Therefore, the hypothesis that the anaphor and its antecedent must belong to the same spellout domain makes the right prediction here.¹⁰⁰

To sum up, the binding data involving *son propre* suggest that binding domains correspond to spellout domains: the anaphor must be interpreted within the spellout domain containing it. This phase-based hypothesis provides a deeper explanation for the existence of binding domains: they arise from the cyclicity of derivations that is based on much independent evidence.

More generally, the phase-based hypothesis relates the definition of the binding domain to the identification of phases. Therefore, it can be tested based on the phases that are argued for to exist; conversely, binding data can be added as potential arguments for the existence of such and such phase. This is a twofold research line for future work.

5.2. Exemption

In the previous section, the classical definition of the binding domain has been slightly modified. Furthermore, it has been claimed that the standard binding theory must be complemented by a theory of exemption: given much empirical evidence already mentioned, I adopt the distinction – also used by proponents of the coargument view –

¹⁰⁰ However, movement to the edge allows anaphors to escape condition A as illustrated below:

40) I told John_i which pictures of himself_i I like ~~which pictures of himself_i?~~

Here, the anaphor *himself* does not have to be bound within the lower spellout domain (the embedded TP), but is bound within the higher TP after movement to the edge of the embedded CP. This is so because *which pictures of himself* is a single object remerged in another position: it is therefore not **contained** within the lower spellout domain. Thus it is crucial to specify this in the proposed condition A: an anaphor must be interpreted within the spellout domain **containing it** (i.e. all copies of it).

Note that this point is here illustrated with an animate for simplicity but this should be demonstrated with an inanimate.

between regular anaphors – here defined as anaphors subject to condition A, i.e. non-exempt anaphors - and anaphors exempt from condition A; but I have argued that the dividing line is not based on the syntactic type of position – as proposed by the coargument view - but on interpretive properties of the antecedent related to animacy: what we can tell at least is that inanimates are never exempt. With respect to classical binding theory, the scope of condition A is thus reduced so that it only regulates regular anaphors, which are at least independently identified by their inanimacy.

In fact, as experimentally shown by Kaiser and Runner (2005), animate anaphors in DPs with subject can be bound by an antecedent outside the DP since they can be exempt from condition A:

- 82)a. John_i likes Mary's pictures of himself_i.
b. John likes Mary_i's pictures of herself_i.

In (a), *himself* is not bound within the DP with subject *Mary's picture of himself*, which contravenes classical condition A. But given our proposal that only inanimates are necessarily exempt, we correctly predict that *himself* and *herself* need not be subject to condition A; that's why they can equally license *John* or *Mary* as antecedents.

Once we have defined locality and specified the scope of condition A, the next issue is to construct a precise theory of exemption.

5.2.1. Criterion for exemption

As seen before, inanimacy is a necessary and sufficient condition to subject anaphors to condition A. Does it mean that animacy is the right dividing line between regular anaphors – inanimates - and exempt anaphors – animates? It may be the case that animacy is only necessary, but not sufficient to exempt anaphors from condition A: is animacy sufficiently

fine-grained as an interpretive criterion to distinguish between exempt and non-exempt anaphors?

In other words, here are the implications that we need to complete:

- 83)a. Inanimates → subject to condition A (must be locally bound)
- b. Exempt from condition A (need not be locally bound) → animates
- c. ? → Exempt from condition A
- d. Subject to condition A → ?

We know that inanimates MUST be locally bound and that elements that NEED NOT be locally bound must be animate. But we must investigate if there are specific interpretive properties for anaphors that ARE locally bound or if anything goes; conversely, we must further examine the properties of anaphors that ARE NOT locally bound given that animacy is a necessary but perhaps not sufficient condition.

I suspect that the property that should replace the question mark in (83)c, i.e. the independent criterion to identify exempt anaphors, is logophoricity, i.e. roughly being anteceded by a center of perspective (and thus non-logophoricity in (83)d). This would mean that not all animates qualify for exemption, but additional interpretive properties related to logophoricity are required, i.e. only animates that are in a specific relation to their antecedents need not obey condition A. In other words, the contrast animate/inanimate would be refined into logophoric/non logophoric: logophoric animates are exempt from condition A while non-logophoric animates are subject to it; inanimates, which cannot be logophoric, must always obey condition A. This issue in relation to logophoricity will be explored in further research (Charnavel: in progress).

Note that the fact that animates can be subject to condition A is compatible with the possibility of binding anaphors that are mixed animates and inanimates as exemplified below:

- 84)a. [Les derviches et la terre]_i tournent sur eux_i-mêmes.
'[Dervishes and the earth]_i spin on themselves_i.'
b. [Les yogis et les horloges atomiques]_i sont sensibles à leurs_i propres rythmes internes.
'[Yogis and atomic clocks]_i are sensitive to their_i own internal rhythms.'

In both (a) and (b), the antecedents correspond to conjunct of animates and inanimates; therefore the anaphor locally bound by this antecedent is neither animate nor inanimate but a mix. Nevertheless, this does not prevent binding.

5.2.2. Overlap between regular and exempt anaphors

A further question is how to divide up regular and exempt anaphors. Under the coargument view, they are in complementary distribution since the dividing line is the type of position (coargumental vs. non-coargumental). Under my hypothesis, this is not obvious, since the dividing line between regular and exempt anaphors is based on an interpretive criterion, i.e. logophoricity. Specifically, the issue concerns animates that respect condition A, i.e. are bound within their spellout domain: are they both regular anaphors and exempt anaphors? Are they only regular (i.e. they cannot be logophoric)? Are they only exempt (i.e. they must be logophoric)? I suspect that there is in fact overlap in distribution between regular and exempt anaphors: a given anaphor can be both regular – obey condition A – and exempt – be logophoric: the sets of regular anaphors and exempt anaphors are not disjoint, neither with respect to their nature (morphology), nor with respect to their distribution (position). But this issue needs further investigation (Charnavel: in progress).

5.3. Further systems of anaphoricity

There remain two issues with our theory. First, so-called anaphors SE in Reinhart and Reuland (1993)'s theory are not dealt with. Second, some data that we will examine seem to suggest that our theory is too weak for SELF anaphors since even disregarding logophoricity, animates cannot occur in certain positions.

I will not treat the first issue as it does not concern *son propre*, *lui-même* or even French: it may be the case that French does not have any simplex anaphor (the status of *soi* (\approx 'oneself') will be examined in the next chapter and that of the reflexive clitic *se* in the next paragraph). The null hypothesis is that simplex anaphors like Dutch *zich* are not subject to condition A, but to other conditions to be determined (for example, they seem to be generally subject-oriented); their relation with logophoricity would also be worth investigating.

The second issue arises from examples like the following:

85)?? $Jean_i$ pense que Marie examinera lui_i -même.
'?? $John_i$ thinks that Marie will examine himself $_i$.'

Here, *lui-même* or *himself* are animates; they are furthermore logophoric (roughly, the antecedent is an attitude holder) under any theory of logophoricity (since the attitude verb *pense* 'think' is present), so that they are predicted to be exempt from condition A. Nevertheless, it turns out that they are long distance bound by *Jean* ('John') and that the sentence is degraded. This suggests that interpretive properties like logophoricity are not sufficient conditions for exemption, but another principle is at stake.

Concerning French, we can observe that this ungrammaticality also holds with a local antecedent:

86)?? Jean_i examinera lui_i-même.
'John will examine himself.'

In (86), even if *lui-même* is locally bound, the sentence is still ungrammatical. This contrasts with the following example already mentioned:

87)Marie_i s'inquiète du fait que ses enfants dépendent d'elle_i-même.
'*Mary_i is worried that her children depend on herself_i.'

Here, *elle-même* can be long distance bound by *Marie*. It can also be locally bound:

88)Marie_i dépend d'elle_i-même.
'Mary_i depends on herself_i.'

Such contrasts ((87)-(88) vs. (85)-(86)) where locality does not seem to play a role probably constitute the reason why *elle-même* was not recognized as an anaphor, all the more since inanimates had not been looked into.

But crucially, the ungrammaticality of *lui-même* correlates with the grammaticality of the reflexive clitic *se* and vice versa.

89)a. ?? Jean_i examinera lui_i-même.
b. Jean_i s'_iexaminera.¹⁰¹
'John_i will examine himself_i.'

90) a. ?? Jean_i décrit le paysage à lui_i-même.
b. Jean_i se_i décrit le paysage.
'John_i describes the landscape to himself_i.'

91)a. Marie_i dépend d'elle_i-même.
b. *Marie_i se_i dépend.
'Mary_i depends on herself_i.'

¹⁰¹ I use index on *se* as a simplification to symbolize the intended interpretation. But this does not mean that I assume that *se* is the element that indeed bears the index; it may well be the case that a silent element is at stake here and *se* corresponds to a voice. But I will not treat *se* in details here (see Sportiche (in press) for further details).

In (89), *se* expresses reflexivity of the direct object, and in (90) that of the indirect object; in both cases, *lui-même* cannot replace *se*. However in (91), the verb *dépendre* ('depend') is not compatible with *se* and correlatively, *lui-même* is perfectly fine. Descriptively, it seems that *se* is not allowed when the complement of the verb is introduced by a non-dative preposition, and that *lui-même* is precisely licensed in such cases. Similarly, *se* is not compatible with passive constructions but *lui-même* is:¹⁰²

- 92)a. *Jean_i s_i'a été assigné.
 b. Jean_i a été assigné à lui_i-même.
 'John_i has been assigned to himself_i.'

Also, *se* is subject-oriented but *lui-même* can take a non-subject as antecedent:

- 93)a. Marie a présenté Jean_i à lui_i-même.
 'Mary introduced John_i to himself_i.'
 b. Marie_k s_{*i/k}'est présenté Jean_i.
 'Mary_k introduced John_i to himself_i/herself_k.'

Based on all these examples, it seems that some economy principle is at stake: if *se* is available, it must be used and blocks use of *lui-même*.

Note nevertheless that when *se* is available, *lui-même* can also be acceptable if it is added to *se*; this gives rise to focusing of the object:

- 94) Jean_i s_i'examinera lui_i-même.
 'John_i will examine HIMSELF_i.'
 95) Jean_i se_i décrit le paysage à lui_i-même.
 'John_i describes the landscape to HIMSELF_i.'

Furthermore, even when *se* is not effectively available – since *se* does not allow long distance reflexivity – the same contrast holds between constructions that in principle license *se* and those that do not:

¹⁰² Cf. Rizzi (1986), Sportiche (in press) for further details.

- 96)a. * Jean_i pense que Marie s_i'examinera.
 b. ?? Jean_i pense que Marie examinera lui_i-même.
 '??John_i thinks that Marie will examine himself_i.

- 97)a. * Marie_i s'inquiète du fait que ses enfants se_i dépendent.
 b. Marie_i s'inquiète du fait que ses enfants dépendent d'elle_i-même.
 'Mary_i is worried that her children depend on herself_i.'

Thus (97) involves a construction (*dépendre de* 'depend on') that does not license *se* (cf. (91)b) and as expected, *elle-même* is grammatical. In (96)a, coreference between *Jean* and the object of *examinera* ('will examine') is not available either with *se*, because *se* cannot express long distance reflexivity; but (96) involves a verb (*examiner* 'examine') that in principle licenses *se*: *examiner* ('examine') licenses *se* at short distance (cf. (89)b); therefore, *lui-même* cannot be used as shown in (b). In this case, we need to use the pronominal clitic *le* ('him') with or without *lui-même*:

- 98) a. Jean_i pense que Marie l_i'examinera.
 'John_i thinks that Marie will examine him_i.
 b. Jean_i pense que Marie l_i'examinera lui_i-même.
 'John_i thinks that Marie will examine HIM_i.

Note that the pronoun is also possible in (97):

- 99) Marie_i s'inquiète du fait que ses enfants dépendent d'elle_i.
 'Mary_i is worried that her children depend on her_i.'

In sum, the generalization concerning *lui-même* is as follows: *lui-même* can be bound by an antecedent (local or not; in the latter case, it needs to be animate) if it participates in a construction that cannot in principle involve the reflexive clitic *se*. In other words, given that *se* is subject-oriented and can only express reflexivity of the direct or indirect object, *lui-même* is disallowed when it occupies an object position.

But this is so unless the antecedent is a local c-commanding object position (cf. (93)); in this case, *lui-même* can occupy an object position:

- 100) a. Marie a présenté Jean_i à lui_i-même.
 b. * Marie s_i'est présenté Jean_i.
 'Mary introduced John_i to himself_i.'
 c. Marie_i s_i'est présenté Jean.
 d. ?? Marie_i a présenté Jean à elle_i-même.
 'Mary_i introduced John to herself_i.'

Thus in (a), *lui-même* occupies an object position (indirect object) but is acceptable because the antecedent is the object *Jean* and *se* cannot express the same meaning as shown in (b); but if the antecedent is the subject, *se* is available as in (c) and correlatively, *elle-même* is degraded as shown in (d).

However, a long distance object antecedent does not easily license use of object *lui-même*, which remains problematic for the generalization presented:

- 101) ?Marie a informé Jean_i qu'on présenterait Suzanne à lui_i-même.
 '??Mary informed John_i that one would introduce Susan to himself_i.'

In any case, predicates seem to play a role here, just as proponents of the coargument view argue: *lui-même* is degraded when it is the argument of a predicate that in principle licenses *se* (and the antecedent is not a local object). I therefore propose that a third system of anaphoricity interferes: it is represented by *se* in French that can be hypothesized to be related to Voice (i.e. basically a dedicated head in the spine of the tree that is related to reflexivity; cf. Sportiche: in press); in English, *himself* is ambiguous in corresponding to both *se* and *lui-même* (cf. forthcoming Ahn's dissertation).¹⁰³

Finally, note that the examples involving ungrammatical *lui-même* are preceded by ??, not a star *. This is due to the fact that *lui-même* largely improves if strongly focused:

¹⁰³ Another option would be to suppose that *lui-même* is never an argument on its own but always accompanies another element (*se*, pronoun...etc). In the reflexive cases without *se*, this would mean that there is a silent reflexive pronoun.

- 102) (?) Jean_i pense que Marie examinera LUI_i-MEME.
'?John_i thinks that Marie will examine HIMSELF_i.

This sentence basically amounts to the following involving clitic doubling:

- 103) Jean_i pense que Marie l'_iexaminera LUI_i-MEME.
'?John_i thinks that Marie will examine HIMSELF_i.

Such exemption by focus recalls Reinhart and Reuland (1993)'s hypothesis about focused anaphors (see Ahn's forthcoming dissertation for details about focus and *himself*).

To sum up, I hypothesize that three systems of anaphoricity coexist: a first system regulating locally bound anaphors within a single clause very close to Chomsky's (1986) Condition A; a second system (possibly further diversified) dealing with so-called exempt anaphors (including logophoric usages); and a third system regulating locally bound subject-oriented anaphors (which captures some of the basic insights found in the approaches to anaphors in terms of syntactic coargumenthood) and sensitive to focus structures. This chapter was primarily devoted to the first system; the two other systems would require further investigation, but I leave these issue for further research.

6. Conclusion

The goal of this chapter was to investigate the behavior of anaphors based on French data involving *son propre* and *lui-même*. We have shown that we need to distinguish between regular anaphors that obey condition A of binding theory and anaphors that are exempt from it: the classical binding theory, which targets regular anaphors, must be

complemented by a theory of exemption, which discriminates between anaphors subject to condition A and those that are not subject to it.

What we can tell is that inanimates are never exempt so that inanimacy turns out to be a useful tool for evaluating locality. Based on this independent criterion, we have demonstrated that regular anaphors must be bound within a local domain that roughly corresponds to the smallest XP with subject containing the anaphor. This allows us to motivate the existence of binding domains with phase theory: we propose that a regular anaphor must be interpreted within the spellout domain containing it.

The fact that inanimates are never exempt from condition A does not mean that animates are always exempt and animacy is the criterion for exemption. I suspect that it is not animacy, but more specifically logophoricity (roughly being a center of perspective) that conditions exemption, but I leave this issue for further research.

Conclusion

1. Summary

The general question underlying this study is whether the compositional view is tenable over the infinite range of linguistic structures that a speaker can lawfully create by linguistic generative procedures: is it possible to deduce properties of complex structures from the individual properties of minimal parts together with general rules of composition?

In this work, I have tried to apply this ambitious research program to a single word: the French adjective *propre*. We have observed that *propre* makes extremely varied and complex contributions to the sentences it occurs in, thus bearing on several theoretical issues at the interface between syntax, semantics and pragmatics. Carrying out this research program means understanding how these complex contributions can be factored out in properties of *propre* proper, and general properties of grammar. Given the varied contributions made by *propre*, we started with an assumption of parsimony, an initial, methodologically strongest position according to which there is a unique element *propre*, thus increasing our explanatory burden as all these varied properties must, as a result, be derived, rather than individually stipulated.

Here are the main upshots of this project:

- 1- **Parsimony:** it seems tenable to assume that *propre* has a unique lexical entry. We analyze *propre* as a raising adjective that selects a small clause headed by the predicate of possession POSS, which it characterizes as most canonical or specific.

The rich DP-internal distribution of *propre* results from different possessive structures and the variety of its readings (e.g. restrictive, possessor, possessum) comes from different interactions with focus.

- 2- **Focus:** a revised Roothian theory of focus (incorporating focus projection) was proposed to account for possessor and possessum readings of *propre*, as well as further readings too depending on the size of the target of focus, and a principle of minimization justifying association with focus. Also, the scalarity effects induced by possessum *propre* and its various scope possibilities argue for the existence of a covert focus operator akin to *even* (E).
- 3- **Binding:** inanimate possessor *son propre* (unlike possessum *son propre* and animate possessor *son propre*, like other inanimate anaphors such as *lui-même*) cannot be exempted from condition A and thus provides a tool for evaluating locality. We conclude that condition A should constrain the distribution of non-exempt anaphors by making reference to a local binding domain defined as the smallest XP with subject containing them. We also conclude that this domain can be given a phase theoretic account by reformulating it as follows: a non-exempt anaphor must be interpreted within the spellout domain containing it.

2. Open questions

These results are far from exhausting all the issues raised by *propre*. There remain many open questions well worth investigating in future work.

Perhaps, the most striking issue revealed by this study is that of the relation between

binding and focus. I have shown that only possessor *son propre* (unlike possessum *son propre*, which does not have the same constraints) must be locally c-commanded by its antecedent when it is inanimate. This difference between possessor and possessum *propre* in terms of locality underscores a systematic interaction between binding and focus. Such an empirical link between binding and intensification has already been documented (cf. a.o. König and Siemund: 2005): in many languages from diverse languages families, the elements that serve as reflexives are either identical to the elements serving as adnominal intensifiers (e.g. English *himself*, Chinese *ziji*) or partially overlap with adnominal intensifiers (e.g. Malayalam *avan tanne*, Dutch *zichzelf*). But this link between intensification and binding is usually claimed to be morphologically accidental or historically driven (cf. a.o. Bergeton and Pancheva: 2004 for English *himself*); more radically, Bergeton (2004) argues for the independence between binding and intensification. The behavior of *son propre* clearly demonstrates the presence of a synchronic link between binding and focus: first, as I demonstrate, *propre* combines with *son* in a compositional way (*son propre* does not form an opaque lexical entry separate from *son*); second, *propre* induces two main focus-based interpretations (possessor and possessum readings) and anaphoric properties only arise when the possessor, i.e. the referent of the antecedent, is targeted by focus. This recasts the question of the interaction between binding and focus in a synchronic light, underscoring once again the strongly compositional nature of linguistic structures. A possible line of analysis to account for this interdependence would be to relate focus domains to binding domains: the binding difference between possessor and possessum *propre* could derive from the presence or not of the antecedent in the domain of focus alternatives.

Independently of their interactions, understanding focus and binding individually also requires more work.

Concerning focus, we have pointed out some issues in the current theories of focus, specifically in relation with focus projection, focus domains and covert focus sensitive operators like E; the possibility for traces to be understood as focused has also been mentioned as an open question (and probably bears on the copy theory of traces). The behavior of *propre* has shed some light on these questions, but much more needs to be done.

Concerning binding, our phase-based hypothesis relates the definition of binding domains to the identification of phases. This makes predictions to be tested in two directions: on the one hand, binding data can now be used as tools for exploring the theory of phases; on the other hand, the phase hypothesis can be tested with more binding data. Also, the relation between the anaphoric system of non-exempt anaphors and that of subject-oriented anaphors, which has been mentioned at the end of chapter 3, requires further research. All these questions call for crosslinguistic investigations.

Furthermore, using inanimate anaphors as probes has allowed us to further understand the behavior of non-exempt anaphors. But as we have mentioned, this does not mean that animate anaphors are necessarily exempt: we need to construct a theory of exemption. I will pursue this line of research in future work by hypothesizing that exemption relates to logophoricity. Thus it will be necessary to understand which phenomenon the notion of logophoricity exactly covers and thus to clarify the literature on logophoricity. Moreover, precise crosslinguistic investigations should allow us to classify logophors into clearly

defined subtypes which should lead towards a formalization of logophoricity (Charnavel: in progress).

More specific issues are also topics for future work.

An analysis of the main readings of *propre* has been proposed, but further readings such as agentive, reflexive and possessor *propre* (see appendix of chapter 2) need to be understood. In particular, it seems that in those cases, focused *son propre* can contribute to contrasting the antecedent of *son* with other alternatives, but only if the antecedent occurs in a local domain. This suggests again an interaction between binding (domain) and focus well worth investigating further.

Also, French elements other than *propre* have been appealed to in this work, such as *lui-même*, and their analysis has not been completed, but been left for future work. Their behavior is interesting both for the specific understanding of French and for the theoretical issues they could shed light on, like focus or binding.

Finally, the DP-internal structure of *propre* raises further questions like that of a position dedicated for focus inside DPs or the existence of other raising adjectives behaving like *propre*.

In conclusion, even if the French word *propre* could appear to be insignificant at first glance, it turns out to deeply inform debates on many theoretical issues and raise many questions that remain open but would be worth further investigating at the interface between syntax, semantics and pragmatics. While I surely plan to address some of these many problems in future work, I will probably not manage to solve them all *on my own*.

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