Synchronie und Diachronie der Partizipialkongruenz im Katalanischen

Catalan Participle Agreement: Syntactic Features and Language Change

Dissertation
zur Erlangung des akademischen Grades
Doktor der Philosophie
bei der Fakultät für Geisteswissenschaften
Fachbereiche Sprache, Literatur, Medien I & II
der Universität Hamburg

vorgelegt von

Jorge Vega Vilanova
aus Tortosa (Spanien)

Hamburg, im Februar 2018

Erstgutachterin:	Prof. Dr. Susann Fischer
Zweitgutachter:	Prof. Dr. Eric Fuß
Drittgutachter:	Prof. Dr. Christoph Gabriel

Datum der Disputation: 14.12.2018

To Alexander

Abstract

In some Romance languages, the past participle of compound tenses agrees under certain conditions in gender and number with a close enough direct object (1). This phenomenon is known as Past Participle Agreement (PPA).

(1) a. Hem vist / *vistes les noies al jardí. Catalan
have.1Pl see.PP.Def / see.PP.FPl the girl.FPl in-the garden
b. Les noies, les hem vist / vistes al jardí.
the girl.FPl CL.Acc.3FPl have.1Pl see.PP.Def / see.PP.FPl in-the garden
'We have seen the girls in the garden.'

Although PPA is a familiar construction in Romance, some aspects of it are still poorly understood. Its high degree of intra-linguistic and cross-Romance variability and optionality, and the clear tendency to disappear over time are challenges for any account of PPA. The aim of this dissertation is to discern which properties, processes and operations are involved in the morphological realization of PPA in order to achieve an accurate synchronic and diachronic explanation for the phenomenon. More specifically, my discussion focuses on three central issues: i) the analysis of optionality as an effect of the Interface Hypothesis (e.g. Sorace 2006), which would point to a multi-factorial trigger for PPA; ii) the reinterpretation of different language change processes (e.g. grammaticalization, parametric change and syntactic change due to economy) in the light of current minimalist assumptions and the relation of these three processes to each other; and iii) the link between morphological change and syntactic change.

PPA is commonly claimed to depend on certain positional rules. Basically, agreement is assumed to be the consequence of the DO occupying a designated position, but evidence for the existence of this position is seen in participle agreement itself, which leads to circular explanations and does not account for the optionality of PPA. Obenauer (1992) and Salvà i Puig (2017), for instance, show that PPA correlates with specificity and aspect, respectively. An interpretation of these facts on the basis of the Interface Hypothesis (IH) is, however, at odds with current assumptions of syntactic theory. For these reasons, I have adopted a new perspective to deal with PPA, namely the redefinition of grammaticalization as a process that affects the emergence and properties of formal features stored in lexical items. Inspired by traditional ideas on language change, I have claimed that the doubling of semantic features due to pragmatic or information structure requirements is responsible for the grammaticalization of formal features. This idea is captured under the grammaticalization cline in (2). In this way, syntactic structures are generated by

pragmatic requirements (cf. Givón 1976). Also, since grammaticalization is a gradual process that applies to syntactic features, morphological optionality is expected to arise in some of the stages, which gives rise to the attested interface effects. This also implies that syntactic change precedes morphological change (cf. Cole et al. 1980, Fischer 2010).

(2) doubled semantic features [σ] > (simple) [σ] + [iF]/[uF] > simple [σ]+ Ø

On the basis of newly collected data on PPA in Old Catalan (by means of a corpus search with over 2000 tokens coded for several morpho-syntactic and semantic features) and Modern Catalan (by means of an acceptability judgment task), I have tested whether my proposal can adequately explain the development of object-verb agreement in Catalan and, more generally, in Romance.

The results of my analysis stress that several assumptions w.r.t. syntactic theory and language change should be reconsidered. First, subject and object placement and movement are not triggered by [case] but rather by the uninterpretable φ-features on the verb. This is due to the pronominal nature of the verbal inflection, which is understood as a semantic doubling and, afterwards, may be grammaticalized. Consequently, the role of case in syntax and language change should be redefined. Second, PPA is a cyclic change closely related to clitic doubling. Third, the three processes of language change mentioned above influence each other (e.g. the bundling of object φ-features and accusative case in a single functional head – a syntactic simplification – has a direct impact on the grammaticalization of these features). Fourth, since the different linguistic modules (narrow syntax, the conceptual-intentional and the articulatory-perceptual interfaces) are independent from each other, the IH should be replaced by concepts such as syntactic complexity or parsing difficulties in order to account for the attested interface effects. Finally, the analysis of my data shows that 'true' optionality is possible and that morphological change follows syntactic change.

Zusammenfassung

In einigen romanischen Sprachen weist das Partizip Perfekt in zusammengesetzten Verbformen unter gewissen Bedingungen Kongruenz in Genus und Numerus zu einem nahe genug gelegenen Objekt (1), ein Phänomen, welches unter der Bezeichnung *Past Participle Agreement* (PPA) bekannt ist.

(1) a. Hem vist / *vistes les noies al jardí. Katalanisch
haben.1Pl sehen.PP.Def / sehen.PP.FPl das Mädchen.FPl im Garten
b. Les noies, les hem vist / vistes al jardí.
das Mädchen.FPl CL.Acc.3FPl haben1Pl sehen.PP.Def / see.PP.FPl im Garten
'Wir haben die Mädchen im Garten gesehen.'

Obwohl PPA eine bekannte Konstruktion der romanischen Sprachen darstellt, sind einige Aspekte der Konstruktion bislang nur unzureichend erklärt worden. Der hohe Grad an übereinzelsprachlicher Variabilität und Optionalität, und die klare Tendenz zum Schwund sind schwierige Themenkomplexe, die in jeder Annäherung zu diesem Phänomen Beachtung finden sollten. Das Ziel meiner Dissertation besteht darin, die Eigenschaften, Prozesse und Operationen, die die morphologische Realisierung von PPA beeinflussen, aufzuzeigen, um eine präzise Erklärung der synchronen und diachronen Daten zu vorzuschlagen. Dabei setzt meine Interpretation des Phänomens drei besondere Schwerpunkte: i) die Auffassung von Optionalität als Schnittstelleneffekt unter Berücksichtigung der *Interface Hypothesis*, IH (z.B. Sorace 2006), was auf einen multifaktoriellen Auslöser von Kongruenz deuten würde; ii) eine Erweiterung der Definition bestimmter Sprachwandelprozesse (z.B. Grammatikalisierung, Re-Parametrisierung und syntaktischer Wandel durch Prinzipien der Sprachökonomie) unter Berücksichtigung aktueller minimalistischer Annahmen und die Bestimmung der Beziehungen dieser Prozesse untereinander; und iii) der Zusammenhang zwischen morphologischem und syntaktischem Wandel.

Üblicherweise wird angenommen, dass PPA mit der Satzstellung zusammenhängt. Demzufolge entsteht Kongruenz dadurch, dass das direkte Objekt eine bestimmte Position im Satz belegt. Die Evidenz für diese Position wird hier allerdings in der Partizipialkongruenz selbst gesehen, was zu Zirkularität führt und die Optionalität von PPA nicht zu erkären vermag. Obenauer (1992) und Salvà i Puig (2017) dagegen haben gezeigt, dass PPA mit Spezifität und Aspekt korreliert. Allerdings erweist sich eine Interpretation dieser Fakten unter Berücksichtigung der IH als problematisch, wenn man die IH um die neuesten Annahmen der syntaktischen Theorien ergänzen möchte. Aus diesem Grund wird in der vorliegenden Dissertation eine neue Perspektive

eingenommen, nämlich eine Erweiterung der Definition von Grammatikalisierung als Prozess, der die Entstehung und Eigenschaften von formalen Merkmalen, welche im Lexikon gespeichert sind, miteinbezieht. Aufbauend auf traditionellen Ansichten zum Sprachwandel wird die Dopplung von semantischen Merkmalen aufgrund pragmatischer bzw. informationsstruktureller Erfordernisse als für die Grammatikalisierung formaler Merkmale verantwortlich angesehen. Diese Idee ist in dem Grammatikalisierungsgefälle in (2) dargestellt. Dementsprechend entstehen syntaktische Strukturen durch pragmatische Bedingungen (vgl. Givón 1976). Da der Prozess der Grammatikalisierung graduell ist und nur syntaktische Merkmale betrifft, ist in einigen Entwicklungsstufen morphologische Optionalität zu erwarten. Auch Schnittstelleneffekte sind auf diese Weise erklärbar. Hieraus wird außerdem ersichtlich, dass syntaktischer Wandel morphologischem Wandel vorangehen muss (vgl. Cole et al. 1980, Fischer 2010).

(2) gedoppelte semantische Merkmale [σ] > (einfaches) [σ] + [iF]/[uF] > einfaches [σ]+ Ø

Auf der Basis neu erhobener Daten zu PPA im Altkatalanischen (mittels einer Korpussuche, die über 2000 für unterschiedliche morphosyntaktische und semantische Merkmale kodierte Tokens zählt) und Neukatalanischen (mittels eines Akzeptabilitätsurteilstest) wurde untersucht, ob die o.g. Annahmen die diachrone Entwicklung von Objekt-Verb-Kongruenz sowohl im Katalanischen als auch in anderen romanischen Sprachen erklären können.

Den Ergebnissen dieser Dissertation zufolge sollten einige gängige Annahmen in Bezug auf Syntaxtheorie und Sprachwandel revidiert werden. Erstens wird die Stellung und Bewegung des Subjekts und des Objekts nicht durch Kasus bestimmt, sondern durch die nicht-interpretierbaren φ-Merkmale des Verbs. Dies ergibt sich aus dem pronominalen Charakter der Verbalflexion, die als semantische Dopplung dient und grammatikalisiert werden kann. Demzufolge sollte die Rolle von Kasus in der Syntax und im Sprachwandel überdacht werden. Zweitens stellt die Entwicklung von PPA einen zyklischen Wandel dar, vergleichbar zu dem der klitischen Dopplung. Drittens beeinflussen sich alle drei Sprachwandelprozesse gegenseitig (beispielsweise hat die Bündelung der φ-Merkmale des Objekts mit Akkusativkasus innerhalb eines funktionalen Kopfes – d.h. syntaktische Vereinfachung – direkte Auswirkung auf die Grammatikalisierung derselben Merkmale). Viertens, da linguistische Module (d.h. *narrow syntax* und die konzeptuelle-intentionale und artikulatorische-perzeptive Schnittstellen) unabhängig voneinander agieren, sollte die IH durch Konzepte wie Komplexität oder *Parsing*-Schwierigkeiten ersetzt werden, um die belegten Schnittstelleneffekte zu begründen. Meine Daten zeigen außerdem, dass ‘echte’ Optionalität möglich ist und dass morphologischer Wandel syntaktischem Wandel folgt.

Table of Contents

List of Abbreviations and Symbols

1, 2, 3	Grammatical person
Acc	Accusative
Adv	Adverb
AgrO	Object agreement
AgrOP	Object agreement phrase
AgrS	Subject agreement
AgrSP	Subject agreement phrase
AP	Articulatory-perceptual
ART	Article
ASC	Absolute Small Clause
Asp	Aspect
AspP	Aspect phrase
C_{HL}	Computational system for human language
CL	Clitic
CLD	Clitic Doubling
CLLD	Clitic Left Dislocation
ClVoice	Clitic voice
COND	Conditional
C	Complementizer
CI	Conceptual-intentional
CP	Complementizer phrase
Dat	Dative
Def	Default
Dem	Demonstrative
Dim	Diminutive
DO	Direct Object
DOM	Differential Object Marking
D	Determiner
DP	Determiner phrase
ec	Empty category
EPP	Extended projection principle
EXPL	Expletive
F	Feminine
FUT	Future
iF	Interpretable feature
IH	Interface Hypothesis
IMPF	Imperfective
IND	Indicative
IO	Indirect Object
IP	Inflection phrase
LF	Logical Form
LI	Lexical item
LOC	Locative
M	Masculine
MP	Minimalist Program
N	Noun
Neut	Neuter
Nom	Nominative
NP	Noun phrase
O / Obj	Object
Part	Partitive
Part°	Participant
PartP	Participant Phrase
PRF	Perfective
PRTC	Particle
PST	Past tense
PF	Phonological Form
Pl	Plural
PP	Prepositional phrase
PstPrt	Past Participle
PPA	Past Participle Agreement
Prn	Pronoun
Refl	Reflexive
REL	Relative
S / Subj	Subject
Sg	Singular
SMT	Strong Minimalist Thesis
SO	Syntactic object
Spec	Specifier
SUBJ	Subjunctive
t	Trace
T/Tns	Tense
TP	Tense phrase
uF	Uninterpretable feature
UG	Universal Grammar
V / Vb	Verb
v	Light verb
val	Value
VP	Verb phrase
vP	Light verb phrase
*	Ungrammatical
√	Grammatical
#	Infelicitous

List of Tables

List of Figures

Introduction

Grammatical relations are one of the most pervasive and elusive concepts in linguistic theory and the application of these notions to the analysis of complex phenomena, such as subject agreement and object agreement (the topic of this dissertation), is intricate. The labels of 'subject' and 'object' are intuitive designations for certain linguistic artifacts used, for example, to make typological distinctions. SVO and SOV languages show fundamental syntactic differences. However, the nature of grammatical relations as primitives of language has been challenged at least since Keenan's (1976) seminal paper. A subject is defined as the argument with the most properties out of a list of subjecthood tests. Provided that the object is defined as a 'non-subject' argument, the properties of the object will be even more heterogeneous than those of the subject. Although subject-verb agreement is very common as a diagnostic for subjecthood, the role of object-verb agreement seems to be more difficult to characterize. In this dissertation, I would like to take a closer look at object agreement in Romance languages, more specifically, in Catalan. In order to do this, I will focus on the feature composition of the object and how object features trigger different syntactic phenomena – scrambling, object shift, differential object marking, clitic doubling and past participle agreement. My main interest, however, will be the distribution and loss of past participle agreement (PPA), i.e. the agreement in number and gender between the direct object (DO) and the past participle in compound tense forms.

The distribution of PPA across Romance is quite variable: Some languages (e.g. Romanian, Spanish and Portuguese) do no longer have agreement; other languages (e.g. Italian and Standard French) have agreement, which, in turn, follows strict rules; in a third group of languages (e.g. spoken French and Catalan) PPA is optional. There are only few authors that have investigated the problem of optionality in PPA. Obenauer (1992), for instance, argues that the use of agreeing morphology or default markings on the participle gives rise to different readings. Under the one reading, the object is discourse-linked, under the other one, it is not. If this applies to Catalan as well, the alternation between agreeing and default morphology would correspond to two different syntactic structures, so that the choice between the two variants is not arbitrary. This

would represent a move towards a more economical syntactic architecture, one in which there would only exist one possible derivation for each of the two outputs and no place for 'true' optionality, i.e. a free choice among two or more parallel structures that are otherwise completely equivalent. But is it actually the case that any case of variation can be dealt with in this way?

Not only has the problem of optionality been neglected for the most part, analyses of PPA in Old Romance too have been scarce. In most diachronic accounts, there is a gap between a stage when PPA is obligatory without any restrictions whatsoever, and the modern variety which shows a positional rule (i.e. agreement is only triggered by objects that precede the participle) and is constrained to a few certain constructions. The motivation for such a disparity in Old and Modern Romance, however, has not been thouroughly discussed. I will show that a more detailed look at the diachronic development of participle agreement is very rewarding as it reveals many interesting facts, not only w.r.t. the object syntax in Romance, but also w.r.t. general questions of language change and syntactic theory.

Current linguistic theories, especially within the Minimalist Pogram (MP), have tried to reduce the syntactic apparatus to a minimum (e.g. Chomsky 1993 and ff.). Language is considered to be an optimal solution to legibility at the conceptual-intentional (roughly equivalent to LF) and articulatory-perceptual (roughly equivalent to PF) interfaces. The syntactic operations of Merge and Move do not distinguish among grammatical relations – the only restriction on Merge and Move is that the output must be legible by the interfaces. The question that arises then is how an overgeneration of ungrammatical structures can be avoided if the application of syntactic operations is almost unrestricted. The same question can be formulated concerning language change: Why does change seem to follow similar patterns in unrelated languages and with respect to independent phenomena? Why is change not random? The composition of formal features in lexical items imposes some limits to what can be merged or must be moved in narrow syntax. This way, certain limits to variation can be established. However, the consequences of the new insights on grammar brought about by the MP have not yet been fully articulated for a diachronic explanation of language.

Language change cannot be understood as a unified process as there is a range of factors that are involved in it. One of the central claims with respect to parametric change in recent years is that the lexicon is the locus of variation (cf. the Chomsky-Borer Conjecture as exposed in Baker [2008:353]). Different parameter values are encoded in the properties of lexical items (LIs) and LIs are also subject to processes of grammaticalization, e.g. semantic bleaching, phonological

reduction, etc. Accordingly, one of the main claims of my dissertation is that grammaticalization applies not only to LIs, but also to units larger than this (e.g. affecting pragmatically conditioned routines such as the use of topicalization or focalization procedures) or smaller than this (e.g. affecting the formal features contained in an LI). I will further argue that the organization of formal features among functional heads, bundled within or split over different heads, has syntactic effects that do not necessarily have to be defined as parametric effects or effects of grammaticalization. I do agree that syntax itself is invariable in the sense that the syntactic operations comprised in universal grammar (UG) do not admit variation. However, different combinations of features in the lexicon can lead to different syntactic structures formed according to general constraints of Merge and Agree. I will call this kind of variation 'syntactic change' and am aware of the ambiguity of the term. Certain types of grammaticalization, (re-)parametrization and syntactic change can thus be considered to be intertwined to some extent since all three processes depend on the properties of the lexicon. One of the main goals of my dissertation is thus to shed light on the interrelation between these three processes of change by means of providing an analysis of PPA in Catalan.

Whereas syntactic structures can be more or less directly derived from the elements that enter the numeration – they are to a certain degree predictable – certain outcomes of language change are in some occasions unexpected. Language change is sensitive to many factors, language-internal and language-external ones. For instance, it has been shown that the emergence and spread of clitic doubling (CLD) do not only depend on the grammaticalization of the clitic pronoun, but also on the specification of the verb movement parameter (cf. Fischer et al. 2019). Hence, both parametrization and grammaticalization are involved in the development of CLD. Contact languages, cognitive pressures, normative models, the need for expressivity, etc. can have an influence on the expected patterns of change. Language-internal factors too can lead to variability and optionality. This has been suggested by the Interface Hypothesis (IH), which claims that phenomena that require the integration of information from different language modules (e.g. syntax, morphology, semantic…) are computationally more complex and therefore more vulnerable in language acquisition (cf. Sorace 2006, White 2011 and related work). According to this, optionality and variability are not unlikely to arise for phenomena positioned at the interfaces. As I will show, PPA can be analyzed from a morphological, syntactic or semantic/pragmatic perspective. Hence, there are good reasons to believe that PPA should be considered an interface phenomenon. Under this view, part of the variability across Romance and within each Romance language, or variety, in which PPA is productive (Italian, French and Catalan) could thus be explained. But is the IH compatible with a syntactic theory according to which the

different modules of grammar (i.e. narrow syntax, the conceptual-intentional interface and the articulatory-perceptual interface) are independent of each other? What role does morphology play in a minimalist view of grammar, and especially, in language change?

In this dissertation, I will try to give an answer to the aforementioned questions. I will first examine the distribution of PPA in some of the Romance languages (namely, Italian, French and Catalan) trying to accommodate the data to the Interface Hypothesis. In doing so, I will show that the optionality and variability of participle agreement conform to the expectations of the IH. What is more, I will show that the same features that correlate with PPA – i.e. definiteness, specificity and aspect – are involved in seemingly unrelated phenomena such as scrambling, CLD and DOM. Two leading ideas of my research – the Interface Hypothesis and a strict separation between narrow syntax and the interfaces – make opposite predictions for the analysis of optionality. Under the IH, variability is due to processing difficulties derived from the cognitive complexity of phenomena that require an integration of heterogeneous information. On the contrary, a strict independence from the interfaces would imply that the correspondence between syntactic output and interface interpretation is quite strong. In the first case, true optionality seems to be possible; in the latter case, true optionality is unwelcome.

The diachronic analysis of PPA provides more clues to understand the link between the different grammar modules. Assuming a restrictive syntactic model and applying it to language change in the way illustrated above, I will reconsider how the emergence of interface effects can be ascribed to the basic syntactic operations and the interaction between different processes of language change. My analysis will be based on a corpus search in Old Catalan until the 19th century. A total of 2162 tokens were collected and coded for several morpho-syntactic and semantic features, excerpted from prose texts that were supposed to reflect more or less accurately traits of spontaneous or spoken speech. The corpus was complemented by data from an acceptability judgment task for Modern Catalan. As I have suggested above, I assume that language change predominantly affects the properties of formal features, i.e. which features are instantiated and the different ways of associating them with LIs. Additionally, I will claim that pragmatics and information structure constitute an important trigger for change. More concretely, pragmatics and information structure give rise to doubling structures, which represent the first step towards the grammaticalization of formal features. The pragmatic markedness of doubling may be reduced by converting the doubling construction into syntactic agreement. Once the doubled features have entered the syntactic derivation, grammaticalization applies to the newly formed features. The process ends in the deletion of formal features, as soon as they do no

longer provide relevant syntactic cues that make it possible for the language learner to acquire them – e.g. movement.

In this proposal, language change primarily affects the lexicon and changes in the morphological realization follow syntactic change – an idea already supported by Cole et al. (1980) and Fischer (2010), among others. In this sense, variation may correspond to different syntactic structures (and trigger different semantic interpretations) in one period, but still be due to true optionality in the next stage. Morphological markers can survive syntactic change for some time as a relic of a previous stage, as an 'embellishment' with stylistic connotations exclusively.

The analysis of the loss of PPA in Catalan will serve as a testing ground for the assumptions made about optionality, grammar architecture and language change. The results of my dissertation will be divided into the following three domains of interest: i) The analysis of the features involved in PPA, viewing the phenomenon from the perspective of the IH; ii) the interaction between different processes of language change (taking into account current minimalist assumptions); and iii) the relationship between morphological and syntactic change. These have led to the formulation of the three groups of hypotheses that will be presented in Chapter 4.

My dissertation is divided into three parts. In Part One, I will present an overview of what has been said about PPA in general as well as in Catalan so far. I will first discuss Italian and French data taken from the literature, as well as the most important accounts that have tried to explain the distribution of agreement in these languages (Chapter 1). These include traditional approaches based on the grammaticalization of the auxiliary verb and reanalysis of the small clause containing the past participle and the DO, socio-linguistic and stylistic approaches, semantic and pragmatic approaches, and syntactic accounts (classical generative accounts as well as accounts following minimalist premises). In Chapter 2, I will address the problem of optionality and point out arguments that support the idea that PPA is an interface phenomenon. Catalan data are discussed in Chapter 3, following the same structure of argumentation as for Italian and French.

In Part Two, I will provide the theoretical background necessary for the subsequent analysis of object agreement (Chapter 5). On this basis, I will develop new ideas about language change and grammaticalization (Chapter 6), presenting the main claims of my dissertation. More specifically, I will propose a grammaticalization cline for formal features that integrates the effects of information structure and pragmatics into the lexicon and the syntax. In Chapter 7, I will show

that this proposal successfully explains the different diachronic stages of subject-verb agreement in Romance.

In Part Three, I will apply the proposal to object-verb agreement, i.e. to past participle agreement in Catalan. Methodological questions related to the corpus as well as the acceptability judgment task, and the results of the analysis of the data collection are presented in Chapter 8 and 9, respectively. These results can be summarized as a linguistic cycle, similar to some of the proposals for clitic doubling (e.g. van Gelderen 2011, Vega Vilanova et al. 2018). In Chapter 10, I will develop an analysis for PPA in Catalan combining the grammaticalization cline of formal features with some additional language change processes. I will conclude this dissertation (Chapter 11) with some comments on the repercussions my analysis of PPA might have on general assumptions about grammatical theory and language change.

PART ONE

Past Participle Agreement in Romance Languages: An Overview

The linear order of a sentence does not always reflect the original connections between its different components. Underlying adjacency at deep structure may be altered by syntactic operations that apply to certain elements but perhaps not to other closely related ones. Hierarchical relations can thus be concealed if the governing element is displaced, moved to the left or right of the governee. Intervening constituents may give rise to discontinuous relations. All in all, the word string in actual utterances at the surface level may greatly differ from the base-generated structure. Syntactic tree representations are aimed at making these connections explicit, showing which elements are closer than others, e.g. building syntactic chains. Speakers usually resort to positional or morphological cues to recover structural constituency. Hence, morphological agreement is considered to be one of the most common and successful mechanisms to guarantee the cohesion of the structure, making hierarchical relations between discontinuous constituents explicit (cf. Corbett 2006).

The distribution of morphological cues, however, is not completely predictable and reliable. It has been commonly assumed that word order (i.e. syntactic position) and overt morphology can be assigned the same function or, rather, they stand in an inverse relation. Both serve to identify grammatical relations and the hierarchical relations of the syntactic constituents to each other (see e.g. Fischer 2010 and references therein). In this sense, when flexional affixes (nominal case and verbal φ-features) are more and more reduced, the relatively free constituent placement shifts to a more rigid word order, as was the case in the transition from Old to Modern English and French. Position is certainly a strong means of designating grammatical relations to the different event participants: the subject, often the most agentive argument of the clause, is usually higher than all other object arguments – hence, the preference for SVO word order arises. The correlation between overt morphology and syntactic position seems to be quite strong and applies to a wide range of Indo-European languages. A gradual deterioration of case systems and, at the same time, increasing restrictions on word order, by which both subject and object placement are affected, can often be observed (e.g. Roberts 1997). Alternatively, it is not the loss of case morphology that affects word order restrictions but rather the other way round, namely, syntactic changes render morphology obsolete. As Fischer et al. (2019) suggest, a change in verb

movement, an assumed core parameter of language design, can lead to a limitation of the positions available for the object to move. This ends in a configuration where the position of the arguments coincides with the case or theta-role position (e.g. the base-generated position). If, in addition, the object is focalized or, more generally, it receives any special pragmatic meaning, this information is expressed by particular syntactic constructions such as dislocations or cleft sentences. Clitic doubling also emerges under such conditions. Crucially, morphological changes in the clitics' category (from being pronominal elements to being reduced to agreement markers) are also involved in clitic doubling. In a word, the development of syntactic structures can be motivated independently of morphology, but morphology sometimes reacts to the new syntactic conditions. This can be formulated as a general economy principle: if syntax can assume a task that was formerly performed by the morphological component exclusively, language economy will be inclined to eliminate redundant cues. Processes such as phonological reduction are the result of morphological change.

As I have just suggested, the interaction between syntax and morphology is by far not an uncontroversial issue. It is commonly assumed that the presence of morphological material can be associated with specific syntactic operations. However, it seems to be the case that syntactic operations and structures can also lack any morphological correspondence, i.e. they are covert. The question is thus whether morphology is necessarily an expression of syntax. If not, the first claim (the attribution of morphological material to syntactic operations) is nothing else but the generalization of a probably strong tendency, but the possibility of 'meaningless' morphological variation – 'true optionality' – still exists. This would have evident consequences for the analysis of certain phenomena. For example, the assumption that the subject agrees with the verb even in the absence of case marking and verbal flexion is rather uncontroversial. Pre-verbal subjects in languages without agreeing morphology are interpreted as a reflex of the subject raised to the specifier position – understanding agreement, e.g., as a strict Spec-Head relation as in Kayne (1989a) or Koopman (2006) – to enter into a syntactic agreement relation with the verb. Overt morphology and word order are cues for a syntactic operation. If the morphological cue is dropped through morphological change (probably due to phonological erosion), word order changes (i.e. the fixation of word order, as has been attested in English and many Romance languages) can be used to recover information otherwise lost. Rigid word order is thus a solid cue for the syntactic operation formerly marked by morphology. But is it possible to find cases in which syntax evolves independently of its morphological counterpart?

In this respect, object-verb agreement is an interesting case. On the one hand, systematic case marking has disappeared in many languages, among them all Romance languages. Some elements

that have been analyzed as case markers (e.g. the preposition-like element *a*) are actually subject to quite different restrictions. Animacy and/or specificity, as I will show in Chapter 2.3, are crucial for the analysis of the phenomenon known as differential object marking (DOM). On the other hand, evidence for a specific syntactic position devoted to object agreement is far less convincing than evidence for a specifier position to which the subject is moved. What is more, the postulation of the existence of an 'object position' in Romance languages relies on the presence vs. absence of agreement morphology on the past participle (henceforth PPA, past participle agreement). In turn, agreement morphology is made dependent on the use (or not) of this object position. Since there is no independent motivation for any syntactic operation concerning object agreement, this kind of explanation runs the risk of being circular. The necessity of such a position for object-verb agreement emerged partly for theory-internal reasons – symmetry and uniformity of the theoretical system – and was inspired by observations on certain constructions in languages where object agreement is more or less consistently realized by overt morphology on the verbal inflexion (e.g. Basque or Hungarian).

A closer look at object agreement phenomena, and especially PPA, is thus very promising: It might provide new insights on the nature and organization of the functional projections over the VP domain. This is useful information not only to understand other phenomena loosely connected to PPA, but also the diachronic path of weakening and loss of participle agreement attested in all the Romance languages. Finally, this discussion will allow for a reconsideration of the interplay between morphological and syntactic change, which will be addressed in Part Three. On the basis of my analysis of PPA, I will claim that true morphological optionality, detached from any syntactic correlates, is possible under certain circumstances (cf. Fuß 2017).

In this section, I will present the main facts we know about PPA in Romance languages. In Chapter 1, I will revise some Italian and French data. I will also introduce several accounts on PPA since it has started attracting the attention of scholars in the 80s. In Chapter 2, I will discuss some aspects of PPA to which, in my opinion, not enough attention has been paid so far. I will suggest that specificity is especially relevant to the understanding of how PPA works. This has, in fact, far-reaching consequences, since many seemingly unrelated phenomena concerning the direct object can be linked through specificity. Under these assumptions, PPA should be captured as an interface phenomenon. I will conclude this chapter by presenting proposals that relate PPA to phenomena such as clitic doubling and DOM. In Chapter 3, I will apply these observations and explanations to French and Italian PPA to Catalan data. Chapter 4 sums up the section.

Chapter 1. General Remarks on Past Participle Agreement

1.1 Past Participle Agreement in French and Italian

Past participle agreement (PPA) can be defined as a construction in which the past participle within a compound tense form agrees in gender and number with a close enough direct object (usually, but not necessarily, in the same clause and/or subcategorized by the agreeing participle). PPA is, however, very sensitive to various properties of the sentence in which it appears. The auxiliary verb (BE vs. HAVE) and certain attributes of the direct object (e.g. position with respect to the verb) are involved in PPA in some way. Additionally, there are specific restrictions in each Romance language. The realization of the participle is not a categorical choice across Romance. On the contrary, it shows different conditions in each language. PPA has disappeared in Spanish, Portuguese and Romanian, but in standard/literary French, normative Italian and Catalan, the contexts of realization of PPA are quite divergent from one language to the other: In some cases, it is categorically obligatory, in other cases agreement is optional or even ungrammatical, depending on the construction. PPA should thus be considered a complex phenomenon.

1.1.1 Basic Data

Belletti (2006, 2008) offers a comprehensive overview of the general rules governing PPA in Standard Italian and Standard French, in an attempt to sum up data dispersed in the literature dealing with this construction. Her starting point is Burzio's (1981) idea that only moved objects can trigger PPA. In other words, passivization, reflexivization or ergative verb raising (cf. Perlmutter 1978) are the crucial operations that allow participles to agree. However, the presence of a trace bound by a displaced object is not enough to cover all cases where PPA is obligatory or banned in one language or the other. Crucially, the chain formed by the moved object and its trace cannot predict the occurrence of object agreement in French and Italian: It is a necessary but not sufficient condition for agreement.

Basically, the following conditions have been identified in Italian and French:

A) PPA in Italian is:

- obligatory with unaccusative verbs (verbs that require the auxiliary BE):

(1.1) Maria è **partita**.[1]
Maria be.3Sg leave.PP.FSg
'Maria has left.' (Belletti 2006: 495)

- obligatory with passive morphology (BE+participle, but also with impersonal *si*), both in the main verb and in the passive auxiliary. This also applies to causative verbs and other restructuring (modal) verbs as long as they are formed with the auxiliary BE (Belletti 2006:513 fn. 3).

(1.2) Maria è **stata** **assunta**.
Maria be.3Sg be.PP.FSg hire.PP.FSg
'Mary has been hired.' (Belletti 2006: 495)

(1.3) Ultimamente si sono **costruite/*o** molte case.
lately CL.Refl.3 be.3Pl build.PP.FPl/*Def many house.FPl
'In the last time, many houses have been built.' (Belletti 2006: 496)

- obligatory if a 3rd person accusative clitic precedes the verb:

(1.4) a. L' ho **vista/*o**.
CL.Acc.3FSg have.1Sg see.PP.FSg/*Def

b. Le ho **viste/*o**.
CL.Acc.3FPl have.1Sg see.PP.FPl/*Def

c. Li ho **visti/*o**.
CL.Acc.3MPl have.1Sg see.PP.MPl/*Def
'I have seen her/them.' (Belletti 2006: 495-96)

- optional with 1st and 2nd person clitics:

(1.5) Mi/ti ha **vista/o**.
CL.1Sg/2Sg have.3Sg see.PP.FSg/Def
'(S)he has seen me/you.' (Belletti 2006:496)

- obligatory with reflexive/reciprocal clitics, both in accusative (1.6a) and in dative (1.6b)[2]. This category also includes the inherent reflexive/ergative *si*-constructions of Burzio (1986). Both

[1] In all examples of past participle agreement, the past participle is boldface and the controller of agreement is underlined.

types of constructions could be regarded as subsets of unaccusative constructions in Italian (cf. Sorace 2000). As other unaccusatives, they require the auxiliary BE and trigger obligatory PPA.

(1.6) a. Mi sono **guardata** allo specchio.
CL.1Sg be.1Sg watch.PP.FSg to-the mirror
'I have watched myself in the mirror.' (Belletti 2006:496)

b. Gianni e Mario si sono **stretti** la mano.
Gianni and Mario CL.Refl.3 be.3Pl shake.PP.MPl the hand.FSg
'Gianni and Mario have shaken hands.' (Belletti 2006:497)

B) PPA in French is:

- obligatory in unaccusative sentences with the auxiliary BE:

(1.7) Elles sont **venues**.
they.FPl be.3Pl come.PP.FPl
'They came.' (Belletti 2006: 496)

- obligatory with passive morphology, but only on the lexical verb (the passive auxiliary requires HAVE to form compound tense forms):

(1.8) Ces sottises ont **été** **faites** par les élèves de cinquième.
this stupid thing.FPl have.3Pl be.PP.Def do.PP.FPl by the students of 5th grade
'These stupid things have been done by the 5th grade students.' (Belletti 2006: 496)

- optional if an accusative clitic precedes the verb[3]:

(1.9) Ces sottises, Jean ne les a jamais **faites/fait**.
this stupid thing.FPl Jean not CL.Acc.3Pl have.3Sg ever do.PP.FPl/Def
'These stupid things, John has never done them' (Belletti 2006: 497)

- optional with preposed wh-elements:

[2] The reflexive or reciprocal clitic forms a chain with the co-referential subject of the clause. It has therefore been discussed whether PPA is governed by the clitic (arguably in object position) or the subject (Le Bellec 2009). One additional and crucial argument for considering agreement with the subject in these sentences comes from the fact that reflexive and reciprocal clitics do not have morphological case distinctions.

[3] This is irrespective of the person specification. However, Audibert-Gibier (1992) claims that PPA with 3rd person clitics is always more stable than agreement with 1st and 2nd person clitics, both in Italian (where agreement is optional) and in spoken French.

(1.10) Voilà les sottises que Jean n' aurait jamais **faites/fait**.
here are the stupid thing.FPl REL Jean not have.COND.3Sg ever do.FPl/Def
'These are the stupid things that John would never have done.' (Belletti 2006:496)

- obligatory with reflexive/reciprocal clitics (again, these constructions can be understood as a subset of unaccusative constructions, hence they are formed with the auxiliary BE, and show obligatory PPA):

(1.11) Elles se sont **reprises**.
They.FPl CL.Refl.3 be.3Pl recover.PP.FPl
'They have recovered.' (Belletti 2006:497)

From these examples, it is clear that even closely related languages, such as French and Italian, do not fully coincide in the realization of PPA: what is optional in one language may be obligatory, or even banned, in the other. Furthermore, after a closer look at the data, two facts are apparent: first, in all contexts where PPA occurs the object is placed in pre-verbal position (but not all pre-verbal objects trigger obligatory agreement, i.e. object placement is a necessary but not sufficient condition); second, all clauses with the auxiliary BE have obligatory agreement, whereas only some contexts with auxiliary HAVE show agreement, and not always obligatorily. Other more fine-grained differences between PPA in French and in Italian are discussed in Kayne (1985) and Le Bellec (2009).

The data presented so far were mainly collected by grammaticality judgments, but these are not always reliable sources of information. Grevisse (1993), for example, describes (or recommends) several rules for French participle agreement, which are commonly felt as 'artificial' by native speakers[4]. Taking this into consideration, Le Bellec (2009) offers a complete overview of PPA in French and Italian, with an abundance of useful data – although without paying special attention to the optional/obligatory character of PPA in both languages. She first organizes the data according to the grammatical relation carried out by the agreement controller: the subject or the direct object. Unaccusative verbs and passives, as already mentioned in Belletti (2006), trigger obligatory agreement, not only in these two languages, but also in Spanish and Portuguese, provided that the auxiliary verb is BE. She then examines the conditions for PPA with preposed DOs when the auxiliary is HAVE, both in French and in Italian. Although in both languages there

[4] Brissaud & Cogis (2008) argue that PPA is acquired very late in French, probably at the end of compulsory education. This fact suggests that it is not really part of current spoken French. Kayne (1985:73), however, claims that even French speakers that do not usually use agreement are still able to judge in which contexts agreement would be possible or not. A similar idea is implicitly assumed by Obenauer (1992).

often is agreement, there are significant differences as well. Besides the restrictions for clitics and relative pronouns, she shows that partitive clitics trigger obligatory agreement in Italian in any configuration. Following Grevisse (1993:1335), she claims that PPA controlled by partitive clitics in French is possible (yet optional) only when the entire object DP is pre-verbal (1.12). Mass nouns and atelic verbs (e.g. *goûter* 'to savour' as opposed to *recevoir* 'to receive') generally disallow PPA (1.13). In fact, restrictions based on verbal aspect are also found in other Romance varieties (see Chapter 3.3 below). Still, PPA with partitives is considered rather marginal in French (but see Daviau 2013 for a quantitative study on spoken French in Canada).

(1.12) a. Des poésies, il en a **écrit(es)**.
ART.Part poem.FPl he CL.Part have.3Sg write.PP.Def(FPl)
'He wrote many poems' (Le Bellec 2009:11)

b. Des poésies, il en a **écrit /*écrites** des centaines.
ART.Part poem.FPl he CL.Part have.3Sg write.PP.Def/*FPl ART.Part hundreds
'He wrote hundreds of poems' (Le Bellec 2009:11)

(1.13) a. De la bière, j' en ai **bu/*?bue**.
ART.Part beer.FSg I CL.Part have.1Sg drink.PP.Def/*?FSg
'I drank some beer.' (Le Bellec 2009:13)

b. Des fraises, nous en avons **goûté/ ?goûtées**.
ART.Part strawberry.FPl we CL.Part have.1Pl savour.PP.Def/?FPl
'We savoured some strawberries.' (Le Bellec 2009:12)

Finally, Le Bellec looks at the role of object position in two other structures: impersonal constructions and control/raising verb constructions. She argues that the presence of the auxiliary BE is not enough to license agreement. In the case of modal and causative verbs in Italian, PPA is required only when the embedded verb is accusative or unaccusative (1.14). Auxiliary selection is conditioned by the verb selected by the modal or causative verb.

(1.14) a. Maria è **potuta** venire.
Maria.FSg be.3Sg can.PP.FSg come
'Maria could come.'

b. Maria ha **potuto** dormire.
Maria.FSg have.3Sg can.PP.Def sleep
'Maria could sleep.' (Le Bellec 2009:17)

For French control and raising verbs, it has been claimed that PPA depends on whether the controller of agreement can be reanalyzed as an argument of the control verb (modal, causative or perception verb) or not. In the first case, PPA occurs according to the preceding conditions (cliticization, wh-movement, etc.) (1.15a, *entendre la pluie* 'to hear the rain'); otherwise, PPA is

banned (1.15b, **pouvoir les personnes* 'can the people'). As Kayne (1985) shows, Italian is much less restrictive with causative verbs than French. (1.16a) is grammatical in Italian, but the equivalent example in French (1.16b) is unacceptable.

(1.15) a. La pluie que j' ai **entendue** tomber.
the rain.FSg REL I have.1Sg hear.PP.FSg fall
'The rain that I hear falling.'

b. Voici les personnes que j' ai **pu** accueillir chez moi.
there the people.FPl REL I have.1Sg can.PP.Def accommodate at my house
'Here are the people I could accommodate at my house.' (Le Bellec 2009:17)

(1.16) a. Le ha **fatte** riparare da un amico.
CL.Acc.3FPl have.3Sg make.PP.FPl repair by a friend
'He made a friend repair them.'

b. *Il les a **faites** réparer par un ami.
he CL.Acc.3Pl have.3Sg make.PP.FPl repair by a friend
'He made a friend repair them.'

1.1.2 Descriptive Generalizations

Several attempts have been made to capture the variation of PPA in Romance languages. Le Bellec herself has proposed two implicational scales, one for subject-participle agreement and the other one for object-participle agreement (Figure 1.1). Some languages show PPA in both structures, other languages have PPA only on the first scale (subject-participle). These scales are independent from each other. This allows her to account for the discrepancy between a more restrictive agreement with reflexive clitics (subject-participle agreement) but a more expanded use of agreement with moved elements (object-participle agreement) in French compared to Italian. The common denominator of both hierarchies, however, is topicality: only actants (i.e. arguments) that are considered highly topical trigger participle agreement, both in Italian and French. This explanation, however, does not account for optionality, nor for language change.

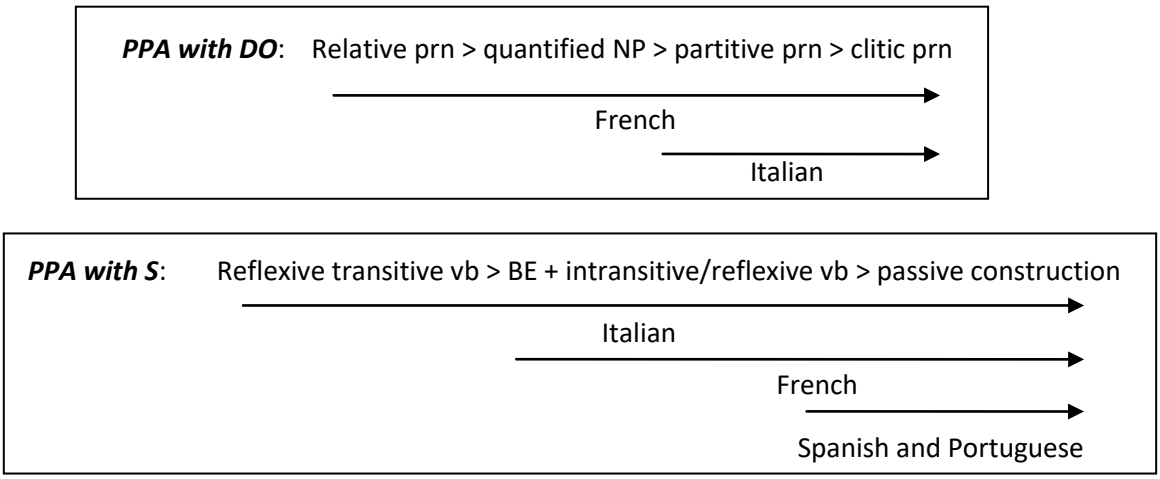


Figure 1.1. Implicational scales for PPA in Romance (Le Bellec 2009:19-20).

Smith (1995, 1996) also tries to capture the distribution of ungrammatical, optional and obligatory contexts by means of a set of unified conditions under the vague concept of 'recoverability' (see also Chapter 1.2.3). He establishes four different implicational hierarchies, object position with respect to the verb being only one of them. Elements to the left of the hierarchies are more prototypical DOs and, as such, more easily recoverable. This is interpreted as follows: more canonical DOs are not compelled to maintain agreement morphology on the participle, but atypical objects (to the right of the hierarchies) are more reluctant to lose PPA, since agreement ensures that the DO is properly identified – i.e. 'recovered' (1.17).

(1.17) a) Position of the direct object:

Post-verbal > pre-verbal

b) Identity of the DO preceding the verb:

Topic, Interrogative, Exclamative > Relative pronoun > Clitic pronoun

c) Person of the clitic:

1st and 2nd person, an 3rd person reflexive > 3rd person non-reflexive

d) Number and gender of non-reflexive pronouns:

Masculine plural > all other forms

These four hierarchies taken together cover many relevant factors involved in PPA. However, taking 'recoverability' as a binding element for all instances of agreement does not seem to be always adequate. For instance, it is not clear how this applies to clitic pronouns, since accusative clitics can quite unambiguously indicate the referent of the DO – especially 3rd person clitics, which have different forms for case, gender and number distinctions[5]. It is also difficult to

[5] Except for Spanish *leísta* dialects, which have only one form for accusative and dative case.

understand why topical constituents (or interrogatives and exclamatives) should be better recoverable than clitics. In many Romance languages (Italian, French, Spanish and Catalan among them), topics are dislocated more or less frequently and require an additional resumptive clitic in a structure known as Clitic Left Dislocation (CLLD). CLLD should be tagged as a highly topical construction – hence highly recoverable and not prone to keep agreement – but precisely this structure is the classical example for PPA (as in example (1.9)).

Le Bellec's (2009) and Smith's (1995) implicational scales are only two possible representations of the variation in Romance languages with respect to PPA. These are concerned with descriptive adequacy rather than explicative adequacy. As mentioned above (and as will be discussed in more detail in Chapter 1.2.3), it is often assumed that agreement is only possible if the object forms a chain (i.e. it has been moved) and the head of this chain is in pre-verbal position as a clitic pronoun[6], wh-moved constituent, expletive, derived subject, etc. But this can hardly be the whole story. PPA seems to require a multi-factorial analysis in order to account for the variability across Romance and the distribution of language-specific optionality. Another important question is how these agreement patterns have emerged over time. To what extent is the analysis of Old Romance data similar to the current analyses of PPA? Is it possible to trace back the diversification of the conditions for PPA to specific language change mechanisms? Are there clear tendencies in the development of PPA, helping us to better understand the variability of PPA?

In the remainder of this chapter, I will discuss the most important approaches to PPA, divided into traditional accounts (section 1.2.1), socio-linguistic and stylistic considerations (1.2.2), accounts based on a semantic or pragmatic trigger (1.2.3), classical generative explanations (section 1.2.4) and innovations of the analysis within the minimalist program (1.2.5), showing that all of them have some shortcomings, especially when one adds complex relations among object phenomena (PPA, clitic doubling, differential object marking, etc.) or between different grammatical modules (e.g. morphology-syntax-semantic), which will be dealt with in Chapter 2, to the picture.

[6] From this follows that PPA requires a movement analysis for the clitic (e.g. Kayne 1989b, Uriagereka 1995). But in this case, it is not clear why CLD is excluded when PPA applies, and vice versa, as will be shown in Chapter 2. This analysis of PPA forces either to consider with Jaeggli (1986) and Suñer (1988) that the clitic is base-generated as agreement marker in clitic doubling constructions, or to postulate an additional motivation for this incompatibility.

1.2 Previous Accounts

1.2.1 Traditional Approaches

One of the first attempts to explain PPA in Romance (mainly in French and Italian) is found in Macpherson (1967). His main idea is that PPA is a consequence of grammaticalization and reanalysis. He begins with the observation that, whereas Latin had a mostly synthetic verb paradigm, compound tenses in Romance had to develop from other constructions through reanalysis. The three components – auxiliary, past participle and direct object – originally had a different grammatical status than today. HABEO was a full lexical verb indicating possession. The DO expressed the possessed theme of this verb, whereas the past participle was a secondary predication to the object. The example (1.18a) can thus be paraphrased as 'I have a letter which is completely written'. The brackets show that the object DP and the participle are considered a single constituent, but not the verb HABEO and the participle together. Since the main verb and the participle do not need to be adjacent, word order is relatively free. In a second step (1.18b), the whole structure is reanalyzed. The lexical verb HABEO is grammaticalized and becomes an auxiliary devoid of any semantic meaning. The finite verb and the past participle are now understood as a constituent, and the DO as depending directly on the lexical verb. The interpretation is thus approximately as currently in Romance languages ('I wrote a letter'). The finite verb and the participle, building a single unit, are now often placed together. Finally, morphological agreement markers disappear and default agreement (neuter/masculine) is used instead (1.18c, not attested in Latin data). Spanish (1.18d), Portuguese (1.18e) and Romanian (1.18f) have achieved this stage; other Romance languages are still in some intermediate phase between the second and the third step. Notice that Portuguese has grammaticalized another verb (TENERE) to form the auxiliary, but otherwise the grammaticalization process is the same.

(1.18) a. [LITTERAM SCRIPTAM] HABEO
b. LITTERAM [SCRIPTAM HABEO] / [HABEO SCRIPTAM] LITTERAM
c. * LITTERAM [SCRIPTUM HABEO] / [HABEO SCRIPTUM] LITTERAM
d. he escrito (*escrita) la carta
e. tenho escrito (*escrita) a carta
f. am scris (*scrisă) scrisoarea

Basically, this approach is repeated in Smith (1995), Carmack (1996) and Berta (2015). Certainly, the description is empirically correct and probably covers the data observed in all (or almost all)

Romance languages and their varieties. However, not very much is said about how and why the last step, the actual loss of PPA, comes to be. These approaches are thus not very far from the level achieved by the implicational scales. Of course, connecting PPA to the grammaticalization of the auxiliary allows making predictions concerning word order or the aspectual interpretation of the clause, but it is difficult to account for why the morphological component should undergo this kind of change. It thus makes sense to assume that factors other than the simple linear order or constituency are at stake.

1.2.2 Some Socio-Linguistic and Stylistic Considerations

The problem of the high level of variability (and optionality) across Romance has typically been addressed from a socio-linguistic or stylistic perspective. The focus of these studies (mostly about French) is the influence of the medium (oral vs. written language) and how prestige constrains PPA (Berta 2015, Gaucher 2013, Stark 2017, etc.). Implicitly, the discussion turns around the role of normative works – even in papers that try to offer an objective description of the phenomenon. The interference of prescriptivism has led to contradicting data, as well as a confidence in not very telling orthographic criteria. It is clear that PPA is a phenomenon about to disappear. Agreeing forms sound somewhat archaic and are confined to cultivated and written registers. Hence, what we see is that language change (the progressive loss of PPA) is more advanced in colloquial speech (see also Chapter 3.2).

Socio-linguistic approaches, however, can only show some aspects of the variability of PPA according to register, but this does not really help to understand the motivation of agreement and the emergence of variation.

1.2.3 Semantic/Pragmatic Approaches

To illustrate the semantic-pragmatic perspective on the analysis of PPA, I will discuss two of such approaches that propose quite different solutions: Smith (1995, 1996) and Lazard (1994) – repeated in Le Bellec (2009).

Smith (1995, 1996) suggests that the crucial factor that explains PPA is ‘recoverability’ (see discussion above): non-recoverable objects do not easily abandon participle agreement; objects that show a more canonical behavior (i.e. that are more easily identified as object in the clause)

will be more prone to lose morphological markings. This might be true in some cases but, once more, it hardly goes beyond the descriptive level. The rather psycholinguistic notion of 'recoverability' is not easy to formalize.

Even more problematic is Smith's definition of 'ambiguous structures': PPA is not there to rescue ambiguous constructions, but potentially ambiguous ones. Pre-verbal clitics in Catalan, French and Italian often have an elided vowel when the adjacent verb begins with a vowel, which means that they cannot overtly show the gender feature of the object (1.19). This never happens (at least in cultivated and written registers) in Portuguese, Romanian and Spanish (1.20). In this sense, the 3rd person object clitic in the former group of languages is potentially ambiguous (it does not always unambiguously refer to the DO) whereas the referent of the object clitic in the latter group of languages is indicated explicitly. The referents of the object clitics in (1.19) are less 'recoverable' than the ones in (1.20); PPA is thus possible in (1.19) but ungrammatical in (1.20). The unrecoverability of the object may arise through syntactic displacement (wh-movement, pronominalization, etc.) or through the morpho-phonological properties of the object (e.g. syncretism).

(1.19) a. L' ho **visto/a**.
b. Je l' ai **vu/e**.
c. L' ha **vist/a**.
(I) CL.Acc.3Sg have.1Sg see.PP.MSg/FSg
'I have seen him/her.'

(1.20) a. Tenho -o/ -a **visto**.
have.1Sg CL.Acc.3MSg / FSg see.PP.Def

b. Lo / La he **visto**.
CL.Acc.3MSg / FSg have.1Sg see.PP.Def

c. L- am văzut / Am **văzut** -o.
CL.Acc.3MSg have.1Sg see.PP.Def / have.1Sg see.PP.Def CL.Acc.3FSg
'I have seen him/her.'

Besides the problems just mentioned, Le Bellec (2009:11) has pointed out that the behavior of the participle with respect to object relative pronouns (or even with other wh-elements) is not predicted by this account: in French, the relative pronoun has overt morphology to mark case (*qui* for nominative and *que* for accusative), whereas number and gender are not marked (except for the more formal form *lequel*); in Italian, the relative pronoun is always *che*, so there is no marking for any feature of the argument (except for the more formal form *il quale*). Thus, it would be expected that all these contexts are especially susceptible to maintaining participle agreement. On

the contrary, agreement is usually optional or even lost with relative pronouns. In other words, precisely in those contexts with greater potential ambiguity, PPA is lost first.

For Lazard (1994), the crucial factor that triggers PPA is topicality. He argues that all contexts where PPA is attested in the Modern Romance languages can be basically interpreted as topical expressions. For instance, dislocation (with or without a resumptive clitic pronoun) is a common topicalization process. Promotion to the subject position (through passivization or with unaccusative verbs) can also be understood as a means of manipulating information structure: the subject of a sentence usually coincides with the most topical constituent (cf. Chafe 1976, Li & Thompson 1976, etc.). Cliticization applies exclusively to topical constituents, and wh-pronouns that can trigger agreement (e.g. French *quel* 'which') refer to a presupposed set of referents, hence known (topical) information. However, it is not clear why some other sentences under similar conditions of topicality do not trigger agreement. Indeed, the distribution of PPA does not fully overlap with topicality. This becomes evident in the hierarchies shown at the end of Chapter 1.1. They cannot be simply embedded in a 'topicality hierarchy'. If this were the case, 1st and 2nd person clitics should be more likely to trigger agreement than 3rd person clitics, since the former (the event participants) are potentially more topical than the latter, but this is not confirmed by the data. On the contrary, 1st and 2nd person clitics are less prone to admit PPA. In other words, the distribution of optionality and obligatoriness along the scales does not correspond to different degrees of topicality.

Lazard's intuition, however, is not completely wrong. As already mentioned, pre-verbal object placement has been considered a prerequisite for PPA. Still, topic positions are usually placed at the beginning of the clause, i.e. pre-verbally and quite high in the syntactic structure, whereas the right edge is reserved to focal constituents. Thus, in many cases, topicality and object placement overlap, and syntactic operations can have an effect on the interpretation. Now, it is necessary to elucidate which of these two factors – information structure or syntactic structure, or even a combination of both – is the actual motivation for PPA. Consequently, I will devote Chapter 2 to the examination of the interaction of the different language modules for the explanation of PPA.

1.2.4 Syntactic Approaches: Position, Spec-Head Relations and AgrO

Closely related to Macpherson's analysis based on the grammaticalization of the auxiliary (Chapter 1.2.1), Lois (1990) claims that PPA depends on auxiliary selection. She observes that there seems to be a correlation between the possibility of choosing alternating auxiliaries (BE vs.

HAVE) and – at least optionally – having PPA with the auxiliary HAVE (remember that passives trigger obligatory agreement in all Romance languages). Some languages have both auxiliary alternation and agreement (e.g. French, Italian, Occitan), whereas other languages have neither of these phenomena (e.g. Spanish, Portuguese, Romanian, Walloon). Although this proposal sounds quite appealing, it faces several empirical problems. First, the possibility that these overlapping properties are due to another interfering factor or merely coincidental cannot be ruled out. Besides auxiliary selection and PPA, the languages of the first group also show these characteristics, which set them apart from non-agreeing languages: they have a special partitive clitic (*en*/*ne*), they lack differential object marking (DOM), their different perfect past tenses do not have different meanings (*il a fait*, analytical form, and *il fit*, the synthetic one, are selected for stylistic reasons only), and probably other resemblances. This is as if it were a 'macro-parameter' setting with cascade effects in several (apparently) unrelated domains, rather than a simple correlation – an object-agreement parameter, mirroring in some way the null-subject parameter (Rizzi 1982, D'Alessandro 2015). However, this is not the perspective adopted by Lois (1990), but she argues by means of the subcategorization requirements of the different auxiliaries. The second empirical problem is the fact that the correlation of PPA with auxiliary selection does not always work (see below).

In spite of these problems, Lois's analysis has some interesting points. First, she connects the grammaticalization of the auxiliary HAVE to new theta-role and case requirements. She further unifies the analysis for unergative clauses, and passives and unaccusative ones. Building on Burzio's generalization (Burzio 1986), Lois suggests that the difference between agreeing and non-agreeing languages is that in the latter, the auxiliary HAVE is underspecified for the subject theta-role and thus not endowed with accusative case, but in the former (inherited from the subcategorization framework of the main verb HABERE) the auxiliary is specified for a thematic role in subject position and assigns accusative case to the object. In agreeing languages, there are two accusative case assigners in the same clause, the lexical verb and the auxiliary. As in passive clauses, in which the inflected passive suffix of the past participle is considered an argument (Lois 1990:240), the participle in active sentences can 'absorb' the second accusative case when it is inflected for φ-features (especially, number) (1.21)[7]. PPA is thus needed to satisfy the Case Filter.

[7] For data supporting the idea of case/theta-role absorption by the participle morphology, see Chomsky (1981).

(1.21) ... les$_i$ ai [[e]$_i$ écrites [e]$_i$...]

Case Case

CL.Acc.3Pl have.1Sg write.PP.FPl

'I have written them' (Lois 1990:246)

In this context, optionality is related to the coexistence of two different feature specifications for the auxiliary in the same language (in a sense, the concurrence of 'competing grammars'). In French and Italian, the verb *avoir* and *avere*, respectively, are used both as auxiliary HAVE and as full verb of possession with a DP complement (1.22).

(1.22) a. J' ai les lettres. French

I have.1Sg the letter.FPl

'I have the letters.'

b. Les lettres, je les ai **écrites**.

the letter.FPl I CL.Acc.3Pl have.1Sg write.PP.FPl

'I have written the letters.'

On the contrary, the Spanish auxiliary HAVE (*haber*) does not admit any nominal complements. Instead, *tener* is used as verb of possession. Therefore, the possibility that *haber* assigns accusative case in compound tenses is banned.

As mentioned above, the cluster of properties shown in Lois (1990) is not categorical. Portuguese, for instance, uses *ter* both as auxiliary and as full verb of possession but has no PPA (and no auxiliary selection). Lois suggests that this is a case of homophony between two different lexical entries. Her classification of agreeing and non-agreeing languages according to auxiliary selection too is problematic. Piedmontese (as also spoken French) has no PPA although it does have auxiliary selection. The same problem appears when looking at Catalan, which has PPA but no auxiliary selection. Lois (1990) maintains that the examples of auxiliary alternation shown in Solà (1973) and Badia i Margarit (1981) are strong enough to analyze Catalan as an agreeing language, but in fact, these data are rather marginal and isolated: for most Catalan speakers, there is no auxiliary alternation; unaccusative constructions with the auxiliary BE are taken as fossilized and archaic expressions. Also, it is still unclear why this categorization is only valid for Romance languages: on the one hand, German has auxiliary alternation in a similar fashion as Italian and French, but there is no participle agreement any more; on the other hand, some Slavic languages (Polish, Russian) have extended participle agreement although they do not show auxiliary alternation.

Within most syntactic accounts, PPA relies on the syntactic position of the object. Originally, the intention was to find a unifying analysis for subject-verb and object-verb agreement: whereas it was assumed that the subject receives nominative case in Spec,IP under a Spec-Head relation, accusative case was assigned under government to the complement position – i.e. the sister of V°. In this context, Kayne (1985) claims that the past participle and the DO are inserted in a small clause [PstPrt-DO], in which the object behaves like the subject of the participle and receives its case in the specifier position, paralleling subject-verb agreement. From there, the DO optionally raises to a higher position within the IP (e.g. if it is a clitic) or CP (e.g. as a wh-element) (1.23).

(1.23) a. Je les$_i$ ai [[e]$_i$ **écrites** [e]$_i$].
I CL.Acc.3Pl have.1Sg write.PP.FPl
'I have written the letters.'

b. ... combien de tables$_i$ ils ont [[e]$_i$ [[e]$_i$ **repeintes** [e]$_i$]].
how many table.FPl they have.3Pl repaint.PP.FPl
'... how many tables they have repainted.'

Although this analysis successfully accounts for many constructions with PPA, it is not without problems. Bouchard (1987), for instance, mentions that Kayne's line of reasoning is not very convincing with respect to two issues: why a lexical NP cannot trigger agreement (i.e. why it cannot be placed in the subject position of the small clause) (1.24a) and why the subject of the main clause cannot be coindexed with a resumptive element (perhaps an empty category) in the small clause, thus triggering agreement (1.24b).

(1.24) a. *Ils ont [$_{SC}$ des tables$_i$ **repeintes** t_i].
they have.3Pl ART.Part table.FPl repaint.PP.FPl
'They have repainted the tables.'

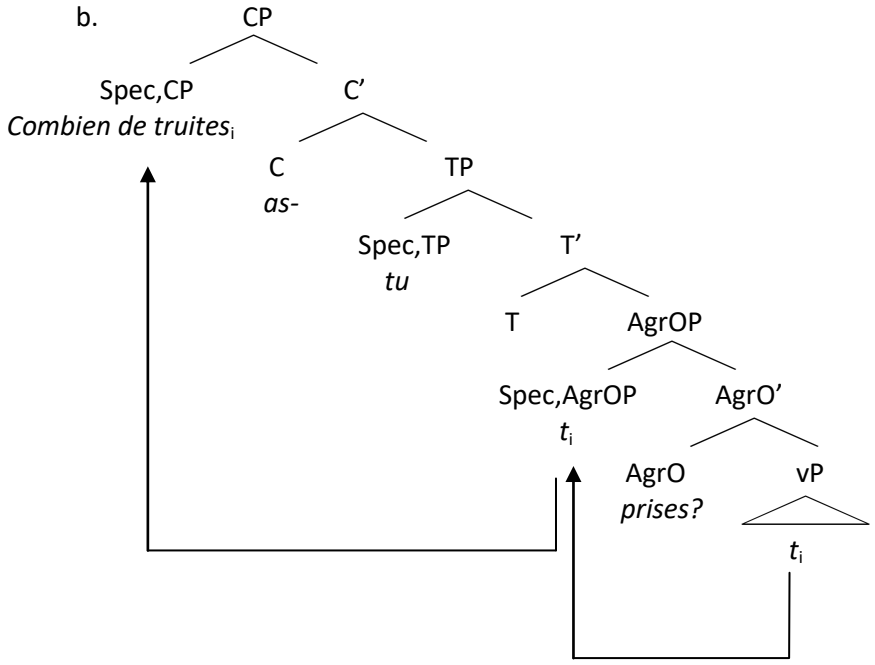
b. *Marie$_i$ a [e_i **repeinte** le bureau].
Marie have.3Sg repaint.PP.FSg the office
'Marie has repainted her office.' (Bouchard 1987:451)

Under the influence of Pollock's (1989) Split-IP hypothesis, Kayne (1989a) revises his previous account of PPA with the aim of preventing the generation of ungrammatical clauses as (1.24). He abandons the small clause analysis and assumes the existence of two parallel functional projections for agreement: a high projection, AgrS, for subject-verb agreement, and a relatively low one, AgrO, for object-verb agreement. Most of the subsequent accounts of PPA are, in fact, modifications of this basic idea (e.g. Sportiche 1996, Friedemann & Siloni 1997, Paoli 2006, Belletti 2006, Poletto 2014, etc.). In these accounts, agreement in AgrO follows the same mechanisms as subject-verb agreement. Morphological agreement succeeds under a local relation, i.e., if the DO

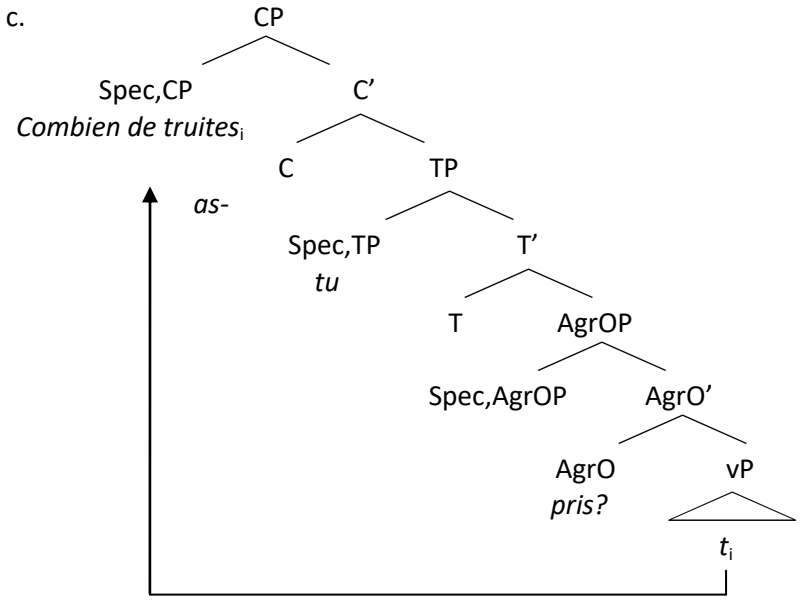
and the participle stay in a Spec-Head relation (see also Koopman & Sportiche 1991). Clitics and wh-elements trigger PPA if they are first moved to Spec,AgrOP on their way up the tree to their landing sites (1.25b)[8]. The participle has default agreement when the object remains in situ or moves to the landing site in one fell swoop, skipping thus Spec,AgrOP (1.25c).

(1.25) a. <u>Combien de truites</u> as- tu **pris(es)**?
how many trout.FPl have.2Sg you catch.PP.Def(FPl)
'How many trouts did you catch?'

b.



c.



[8] Implicitly, a big-DP analysis with movement of the clitics to IP is assumed. See also fn. 6 and chapter 2.3.1.

The positional restriction for PPA follows automatically from the preceding analysis: if movement to Spec,AgrOP is needed for agreement, only constructions that involve object movement are supposed to show PPA. Since full DPs generally stay in situ in Romance languages (but see my discussion in Chapter 2, especially in 2.3), cliticization, topicalization, wh-movement, passivization and movement to the subject position with unaccusative verbs are the clear candidates to make use of Spec,AgrOP. PPA thus tells us how the DO has raised to the pre-verbal position.

Apart from the questions of how and why diverging conditions have emerged in Italian and French (1st and 2nd person clitics vs. 3rd person clitics, wh-constituents, partitive clitics…), there is another issue that has attracted the attention of researchers, namely, the connection of AgrO with accusative case – a discussion already present in Lefebvre (1988), but see also Lois (1990), Cortés (1993) and Kempchinsky (2000), among others. However, if case assignment is located in the same projection responsible for PPA (i.e. agreement morphology is the externalization of case assignment), why is PPA not obligatory with post-verbal arguments as well? Or is case assignment optional in Romance languages? In Chapter 6 and 7.3, I will try to give an answer to some of these questions; in Part Three, I will discuss a possible analysis for the diachronic development of PPA that will have a new impact on the role of accusative case in the object syntax.

Optionality is another persistent challenge for approaches building on Kayne (1989a). An explanation for this runs the risk of being circular: what motivates the postulation of a new functional projection (AgrO) is the morphological effect on the past participle, whereby the explanation of PPA is notably reduced to the existence of that projection. If the DO moves to Spec,AgrOP agreement succeeds, but the evidence for this movement is morphological agreement – absence of PPA implies absence of object movement. However, there is still no clue why movement sometimes happens in different steps, whereas sometimes it occurs in one single step.

Muxí (1996) argues that, for the principle of economy of derivation, true optionality has no room in a generative framework, even less under a minimalist perspective (cf. Roberts & Roussou 2003, van Gelderen 2004 for discussion on the role of economy in grammar and language change)[9]. The source of variation is seen in sometimes subtle contributions to the utterance due to different feature configurations that give rise to different readings. The possibility of two variants that occur under exactly identical conditions is a priori excluded. Therefore, dealing with variation means identifying minimal differences (some semantic or formal content, a felicitousness

[9] A further discussion on economy in language change will be presented in chapter 6.

condition, etc.) among related structures in order to justify the necessity of such variants. In this context, Muxí (1996) tries to account for the optional use of participle agreement controlled by clitics following the division in two language types by Lois (1990). In Catalan, clitics optionally trigger PPA in their way up to a pre-verbal position where they are adjoined to their host, i.e. the finite verb. A closer look at the grammatical status of the clitic offers a contradictory view. As Fontana (1993) and Fischer (2002) suggest, clitics in Modern Romance have to be considered head elements (X°) rather than phrasal ones (XP)[10]. As such, clitics require head movement and cannot enter into a Spec-Head relation with the past participle, which would render PPA impossible. Furthermore, head movement cannot skip functional projections; hence, if a non-phrasal clitic can trigger agreement, this should be obligatory[11]. Muxí therefore claims that "an analysis that relies on head movement only is not adequate" (1996:133). She then tries to motivate the optionality of agreement by the dual nature of the movement, as A- and A'-movement. According to her, the clitic first moves as a phrase to the specifier position of AgrO, resulting in overt agreement. If it is adjoined to AgrOP (i.e. A'-moved), agreement is out. This solution, again, runs the risk of circularity – agreement patterns are cues for certain kinds of movement, which in turn are used to explain these agreement patterns.

[10] Recall that, when referring to clitics here and in the subsequent discussion, only syntactic/special clitics are meant and simple/phonological clitics are left out (see Zwicky 1977). Subject pronouns in Romance were probably simple clitics long before they have become special clitics (DP>D>φ).

[11] Within a diachronic perspective, clitics are assumed to have evolved from XP to X° (Fontana 1993). Old Catalan clitics are in a transition stage between XP and X°: they have some freedom of position and ordering, but have already lost interpolation of negation or other elements (see Fischer 2002 and Vega Vilanova et al. 2018). At the same time, as I will show in Part Three, obligatory PPA in Old Catalan is gradually lost. There seems to be a correlation between PPA and the grammatical status of the clitic which could support the analysis discussed in the text based on a Spec-Head relation in AgrOP: Phrasal clitics can occupy the specifier position and trigger obligatory agreement; if the clitic is only a head, PPA is excluded (cf. Franco 1994). Also, a defragmented account for the syntax of clitics (e.g. Bleam 1999, Marchis & Alexiadou 2013) could be used to account for (apparently) optional patterns of agreement, as has been discussed with relation to clitic doubling (cf. Anagnostopoulou [2005] for a comprehensive overview on this topic). For further details on the interaction between PPA and clitic doubling, see chapter 2.3.4 below.

1.2.5 More Recent Accounts from a Minimalist Perspective

The minimalist program, henceforth MP (Chosmky 1993 and ff.), has changed our understanding of several fundamental syntactic operations, the notions of case and formal features, and other properties of the syntactic computation (e.g. merging constituents, derivation by phases, etc.). In Chapter 5, I will discuss these innovations in some detail. For the moment, it will suffice to put stress on some new concepts that have inspired new approaches to PPA.

One of the leading ideas of MP is that the 'computational system for human language' (C_{HL}) is optimally designed to satisfy the interface conditions – i.e. the articulatory-perceptual (AP) and the conceptual-intentional (CI) interfaces, roughly equivalent to PF and LF – what is known as the 'Strong Minimalist Thesis' (SMT). Under this view, the necessity of elements without any effects at the CI-interface is questioned. Several proposals have thus been made to eliminate EPP-features (e.g. Alexiadou & Anagnostopoulou 1998, Grohmann et al. 2000) or vacuous agreement projections (e.g. Fuß 2005:64 and ff.) from syntactic descriptions. The motivation for EPP and Agr projections is syntax-internal: Since they are not required by interface conditions, they violate the SMT – the C_{HL} is not optimally designed because it contains superfluous elements.

In this framework, computability, learnability and processing efficiency are crucial notions. The consideration of the limitations of our working memory has led to the postulation of cyclical derivation, i.e. derivation by phases (Chomsky 2000, 2008, Citko 2014, and many others). As soon as one phase is completed, all material dominated by the head of the phase is sent to spell-out, and the derivation proceeds with the next higher phase. If an element cannot satisfy all syntactic requirements within the complement of the phase head, it has to be displaced to the edge of the phase, as an escape hatch. Otherwise, it would be sent to spell-out before it complies with the interface conditions and the derivation would crash. Only elements at the edge of a phase are still active and available to syntactic operations in the higher phase – cf. the Phase Impenetrability Condition in Chomsky (2000:108). Assuming that a phase is "the closest syntactic counterpart to a proposition" (Chomsky 2000:106), there is general consensus in identifying v, C and D as phase heads.

Although the interest in PPA seems to have decreased in the last two decades, several works have addressed PPA adopting such minimalist assumptions (e.g. Cortés 1993, Parodi 1995, D'alessandro & Roberts 2008 and Rocquet 2010). Since most of them take perdominantly standard French and normative Italian data into consideration, their main concern is the explanation of object placement as a prerequisite for agreement. As an illustration, I will briefly comment on two accounts: Parodi (1995) and D'Alessandro & Roberts (2008).

Parodi (1995) makes use of the distinction between strong and weak features (Chomsky 1993) to derive the different conditions for PPA in Old Spanish. Strong features, responsible for overt movement, bring the DO to an appropriate configuration that triggers morphological agreement on the past participle. Weak features, however, are preferable according to the principle of economy – covert movement and agreement in situ are less costly options. Therefore, strong features become weak, overt object movement and PPA disappear in language change. This account, in fact, translates older observations into a new framework. Feature strength is a way of parametrizing an observable difference between overt and covert morphology, or between overt and covert movement to Spec,AgrOP. In this sense, the function of feature strength is not substantially different to the function of EPP.

According to D'Alessandro & Roberts (2008), it is not necessary to have displaced objects in order to have PPA in Italian. This account does not have resource to Spec-Head relations and Agr projections, but rather to phase conditions, more specifically to the Phase Impenetrability Condition. They argue that agreement is not structurally constrained but computationally: Agreement succeeds when both agreeing constituents are sent to spell-out within the same phase. This leads to a reformulation of the locality condition as a morpho-phonological rule, derived directly from the Phase Impenetrability Condition:

(1.26) Given an Agree relation A between probe P and goal G, morphophonological agreement between P and G is realized iff P and G are contained in the complement of the minimal phase head H.

(D'Alessandro & Roberts 2008:482)

They then consider some different possible scenarios: 1) both the past participle and the DO are in the vP-phase, 2) both are in the CP-phase, 3) only the past participle is in the CP-phase and the DO remains in the vP, and 4) conversely, only the DO is moved to the CP whereas the participle stays in the vP-phase. In transitive clauses (1.27a) PPA is excluded because the participle raises to v, which is a phase head, but the DO is in the domain that is sent to spell-out. If the object is cliticized (1.27b), it is sent to spell-out in the next phase along with the participle in v, triggering thus agreement. Unaccusative clauses have a defective v° (i.e. there is no external argument and object case is unavailable), which does not qualify as phase head. Therefore, both the participle and the derived subject are part of the same phase (CP) and PPA succeeds (1.27c).

(1.27) a. Ho **mangiato**/ ***mangiata** <u>la mela</u>.
have.1Sg eat.PP.Def / eat.PP.FSg the apple.FSg
'I have eaten the apple.'

b. Le abbiamo **salutate**.
CL.Acc.3FPl have.1Pl greet.PP.FPl
'We have greeted them.'

c. Sono **arrivate** le ragazze.
be.3Pl arrive.PP.FPl the girl.FPl
'The girls have arrived.' (D'Alessandro & Roberts 2008:480, 483)

This account captures the Italian data very nicely. However, it hardly explains why preposed objects and subjects of unaccusatives in Spanish, Portuguese and Romanian never trigger agreement without additional stipulations. It is also problematic for Old Romance data, where the past participle and the DO always agree, even if they are not in the same spell-out domain (see Part Three).

Summing up, object placement cannot be the only explanation for PPA in Catalan and, more generally, in Romance. The heterogeneity of the previous accounts shows that PPA is constrained by multiple factors: differences (or changes) in the properties of the auxiliaries and in object placement are two central components in many accounts, but certain semantic or pragmatic features seem to have an effect on agreement as well. Hence, an approach that focuses on the properties of the features involved in syntactic agreement is to be preferred over a strictly structural account: Not only the structural position is important, but also what kind of features are placed there and what requirements must be fulfilled. Under such an approach, projections that are illegible to LF – e.g. Agr phrases – are dispensed with. A strictly feature-based approach to agreement, as will be discussed in Part Two and Part Three, could also be more adequate from a minimalist point of view. The question then is which features are involved in PPA and how they can account for the optionality without falling into circular explanations – i.e. postulating movement operations or syntactic positions that are exclusively motivated by the morphological effects they are supposed to explain. To this point, the nature of optionality is of great interest. Different explanations for optionality, its relation to language change and the possibility of true optionality (i.e. purely stylistic variation without any syntactic or semantic repercussion) are dispersed in the following chapters. Is optionality a symptom of language change? Or can optionality trigger new changes? Is morphological optionality linked to syntactic variation or can morphology be independent of syntactic structure and interpretation? How does optionality in general emerge? In my opinion, PPA is an ideal phenomenon to tackle these questions.

Chapter 2. Optionality and Language Change: PPA as an Interface Phenomenon

As I have shown in the preceding chapter, PPA can be addressed from very different perspectives: typological, morphological, semantic/pragmatic, or positional considerations are possible. Mostly for (normative) Italian and (Standard) French, it has been proposed that the grammaticalization of the auxiliary verb, the availability of alternating auxiliaries, recoverability, topicality or pre-verbal object position are the factors that explain the distribution of PPA. Each of these accounts seems to rely on correct intuitions. The question then arises whether all these conditions are inter-related in some way: are they consequence or manifestation of an underlying feature(s) or syntactic configuration? Or is PPA the output of a multi-factorial operation? In this case, all attempts to reduce PPA to one fundamental criterion are deemed to fail. PPA really seems to be sensitive to a disparity of conditions and is hard to delimit to a single linguistic domain.

The preceding approaches are thus able to account for different parts of the data but they are probably missing some important facts. Each perspective poses questions that cannot be solved without going beyond the limit of their respective domains. A semantic or pragmatic account, for instance, offers a flexible framework for variability. Special emphasis is put on the effects of marking 'less canonical' objects (displaced or carrying atypical object features such as givenness, topicality, animacy, etc.) through agreement. This explanation resembles some accounts proposed to explain differential object marking (DOM) or clitic doubling (CLD). DOM has been claimed to correlate with animacy and definiteness/specificity – concepts closely related to given-ness and discourse-linked topicality (see von Heusinger & Kaiser 2005 for an overview). CLD has sometimes been explained from this perspective as well (see Anagnostopoulou 2005). Is PPA another means of differentially marking DOs? Or are all these phenomena otherwise interrelated?

Structural approaches, in turn, often elude the problem of optionality and fall into circular explanations. In a theoretical framework where there is no room for optionality, morphological or syntactic variability can be correlated with different readings, or analyzed from the perspective of language change. Most diachronic studies on PPA in Romance languages have focused on the emergence of PPA from the former small clause in Latin embedded under a full verb of possession HABERE. Through reanalysis, the full verb becomes an auxiliary and the past participle is no longer interpreted as a constituent [PstPrt-DO] but as part of an analytical verb form [Aux-PstPrt]. Further details on the stages of the subsequent process until the complete loss of morphological

agreement have not attracted much attention. As I will show below, optionality is not completely randomly distributed. Hence, diachronic research is particularly meaningful to understand the general tendency of all Romance languages to give up PPA. The present discussion on optionality should lead to new insights on the mechanisms of language change and the relation between syntactic and morphological change.

In this chapter, I will discuss the data on PPA under two perspectives that try to capture optionality in different ways: competing grammars – optionality is a manifestation of ongoing language change, cf. Kroch (2000) – and the Interface Hypothesis – which ascribes optionality to the effects of computational complexity due to the combination of information at the interface between different linguistic (or cognitive) modules (cf. Platzack 2001, Sorace 2006 and related work; see also Fischer & Vega Vilanova 2018). In Chapter 2.1, I will compare these theories with respect to optionality. In Chapter 2.2, I will examine different possible interface effects with respect to PPA in Romance languages. Since specificity seems to play a central role for participle agreement, I will explore the interaction of PPA with other phenomena also depending on specificity – object shift, DOM and CLD – in Chapter 2.3. Finally, I will summarize the results in Chapter 2.4, to conclude that the analysis of PPA cannot be constrained to a syntactic or semantic point of view exclusively, but should contemplate PPA from the interface between both domains.

2.1 Optionality: Competing Grammars and Interface Effects

Following Chomsky's (1993 and ff.) idea that the C_{HL} is *optimally* designed to fulfill interface requirements (see Chapter 1.2.5 above), and the Strong Minimalist Thesis, which gives advantage to minimal computations, optionality is not expected in natural languages. Moreover, derivations with fewer operations are preferred over more costly ones (see e.g. Roberts & Roussou [2003] for an application of this principle to language change situations). If speakers feel a free choice between two 'equivalent' structures (equivalent in the sense that the distinctive reading has become opaque or ambiguous), the most economical variant will prevail whereas the other one will disappear. Consequently, optionality is only apparent: Subtle differences in interpretation and use justify the existence of parallel structures; whenever these differences bleach, one of the variants disappears.

Kroch (2000 and ff.) analyzes the growing ambiguity in the interpretation of two parallel variants as a transitory situation, which can trigger 'true' optionality. Even more, he understands this situation as a special case of 'bilingualism': Each variant forms part of a different grammar;

speakers have to decide which construction they will use from one of these competing grammar. In the case of PPA, French and Italian would have, at least, two competing grammars: in the first one, PPA is realized according to certain restrictions (e.g. 3rd person clitics, 1st and 2nd person clitics, partitive clitics, wh-constituents, etc.); in the other one, a more recently developed grammar, morphological agreement is not realized except for some obligatory contexts (e.g. 3rd person clitics in Italian).

Competing grammars make it possible to formulate explicit conditions for obligatory, optional or ungrammatical agreement. However, this hardly goes beyond the descriptive level, neither does it give a hint about the source for the emergence and further development of such conditions. Furthermore, the concept of 'competing grammars' is quite speculative and does not enable us to make any predictions. Why should languages always drift in the same direction? Why is it more probable for one option to prevail over the others diachronically?

Optionality may also arise in language contact situations. This means that an external motivation can alter through language acquisition mechanisms by multilingualism a change otherwise governed by language-internal factors. The introduction of an innovation from a contact language can compete with an already existing structure. Which elements (phonological, morphological, syntactic traits) can be borrowed and which elements enter the language through substratum interference has been amply debated (cf. Thomason & Kaufman 1988, Heine & Kuteva 2003, etc.). It is a fact that at a certain point different speakers (especially bilinguals) can have grammars with different properties. This allows gradually replacing older constructions by newer ones. Language dominance (e.g. size of the groups) and prestige are central criteria to analyze language contact situations and change. Under this view, the direction of language change can be clearly determined. Unfortunately, in doing so, the source of variation and optionality has been shifted to language-external determinants. What about language change in situations in which language contact is negligible? How can language-internal processes lead to the rise of seemingly equivalent constructions? In this respect, the Interface Hypothesis (IH) is quite appealing.

With the IH, Sorace (2006) building on Platzack (2001), challenges the traditional view on the modularity in language and examines the interactions among all subsystems of grammar (lexicon, morphology, phonology, syntax, etc.) in terms of complexity of computation. The basic observation by Platzack (2001) was that syntactic constructions that codify information structure pose more problems to the language acquirers than strictly syntactic phenomena. This is not only due to the fact that pragmatics is acquired rather late by L1-learners (the critical period could be as late as the beginning of puberty; cf. Meisel 2007), but also to the fact that these constructions

require integrating information processed in different linguistic modules (e.g. syntactic word order patterns must be matched with information structure and pragmatic meanings, such as focus or topic, old or new information). Summing up, the IH says that phenomena positioned at an interface are cognitively more complex than phenomena within one core module. As a consequence of their costly computation, interface phenomena are more vulnerable in language acquisition (L1 or L2). This, in turn, implies that these phenomena are more likely to undergo language change. Another visible consequence stemming from this is a higher degree of optionality. The IH thus helps predicting when optionality is expected, rare, unexpected or (almost) impossible.

The IH is still very present in the current research agenda (cf. Fischer & Gabriel 2016). Departing from the original hypothesis, two kinds of interfaces have been distinguished (e.g. White 2011, Rothman & Slabakova 2011, but see also Kupisch & Rothman 2016 for a critical view): 1) internal interfaces, i.e. interfaces among grammar-internal domains (syntax, morphology, semantics) and 2) external interfaces, i.e. interfaces that require the coordination of other cognitive domains, beyond core grammar. Since the latter operate at the conceptual-intentional module of interpretation or at the articulatory-perceptual module of externalization, they are supposed to be more demanding for the language learner than the former.

In the vein of this proposal, Fischer & Vega Vilanova (2018) suggest that the IH imposes a hierarchy of vulnerability to change in language contact settings, where bilingualism and second language acquisition is the norm. Phenomena that belong to narrow syntax (at the right edge of the hierarchy) are the least vulnerable ones to change over time; the more complex the affected interface is, the more vulnerable to change is the phenomenon.

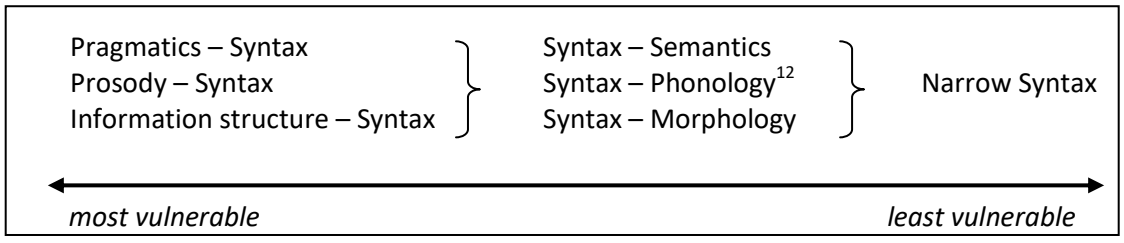


Figure 1.2. Hierarchy of vulnerability in language contact settings (Fischer & Vega Vilanova 2018).

[12] Although prosody is usually understood as a part of phonology, Figure 1.2 suggests that segmental phonology and suprasegmental phonology show different properties as for the IH. However, the discussion is trivial for our purposes: even if one considers syntax-phonology as an external interface, this would not have any repercussion on the effects of the IH on PPA.

There are good reasons to assume that this hierarchy should work for the explanation of diachronic data in general. The many works dealing with language change as a matter of language acquisition strongly support this idea. Either language change is ascribed to adults learning a second language (e.g. in different kinds of contact settings, as discussed above), or it is attributed to reanalysis in L1 acquisition (e.g. Lightfoot 1979 and ff.). According to the first approach, language change stems from innovations introduced by adult speakers, who then transmit new structures to the younger generations. According to the second approach, young speakers may sometimes produce an output that is not identical to the received input when they are confronted with ambiguous utterances. If the input does not provide enough evidence to unambiguously infer the underlying structure, the Transparency Principle (i.e. a limit for tolerated opacity in the input and for derivational complexity) is violated. According to Lightfoot, a "therapeutic" reanalysis takes place and catastrophic changes can be observed. The whole process is abrupt and lasts no longer than a few generations. Although Lightfoot's formulation of the Transparency Principle has been heavily criticized for its lack of precision and an ensuing difficulty to be falsified, the necessity of linking change and acquisition is indisputable. Therefore, the same effects of the IH are expected to be found in language change situations that are not primarily dependent on a language contact setting. The same asymmetry is thus presupposed: External interfaces are more vulnerable than internal ones, and in turn, these are more vulnerable than core syntax phenomena with respect to non contact-induced language change.

Furthermore, it has been observed that language change is regularly accompanied by a more or less extended period of coexistence of two or more variants, i.e. optionality. Since interface phenomena are particularly complex, it is not surprising that some confusion and ambiguity arises here (an increasing "opacity" in Lightfoot's terms; this concept will be used in the analysis of agreement as grammaticalization of formal features in Part Two and Part Three). In sum, the IH can shed light on variation and change of phenomena that show a high degree of optionality.

According to this, PPA could be considered more complex than assumed by most approaches. A summary comparison of PPA with subject-verb agreement suffices to find fundamental differences. In contrast to PPA, subject-verb agreement seems to be quite stable over time. Even if the morphological marking of [Person] and [Number] disappears (probably due to a simple phonological reduction), subject-prominent languages such as English still maintain a rigorous subject-verb agreement, which is visible for example in word-order effects. In a sentence such as 'The children played football', the subject DP has raised to Spec,TP, showing that the connection with the verb is still present. Although it has been claimed that the structure of object-verb agreement is parallel to subject-verb agreement, the outcome is much more variable and

agreement is even optional in many cases (as I have shown in the preceding chapter). The lack of agreement is not replaced by clear syntactic cues for a relation verb-object. Drijkoningen (1999) argues that PPA is not an instance of object agreement on a par with other well-known argument-verb agreement cases. PPA cannot be reduced to a positional criterion without further qualifications. Whereas subject placement with respect to the finite verb is enough to delimit different agreement patterns (i.e. full agreement with pre-verbal arguments and partial agreement with post-verbal ones) in certain languages (1.28)[13], the distribution of PPA in Romance is more complex: to explain PPA, it is necessary to take into account, in addition to object position, which kind of element controls agreement and which kind of movement it undergoes.

(1.28) a. L-bannat-u darab-na / *-at l-ʔawlaad-a. Standard Arabic
the-girl.Nom.FPl hit.PST.3FPl / *3FSg the-boys-ACC
'The girls hit the boys.' → full agreement ([Number], [Person] and [Gender]

b. Darab-at / *-na al-bannat-u Zayd-an.
hit.PST.3FSg / *3FPl the-girl.Nom.FPl Zayd-ACC
'The girls hit Zayd.' → agreement only in [Person] and [Gender]
(Harbert & Bahloul 2002, cited by Bjorkman & Zeijlstra 2014)

Postulating that PPA is an interface phenomenon seems to be a promising working hypothesis. It is not only a suitable tool to re-interpret the nature of the attested optionality[14], but it is also an incentive to look for a deeper motivation of the phenomenon. In Chapter 2.2, I will look at the

[13] The Modern French sentence in (i) show a similar pattern: If the subject of an unaccusative verb is postposed and associated to an expletive in subject position, default agreement in 3rd person singular is required. If the subject DP is placed pre-verbally, full agreement succeds (ii). The English counterparts, however, show full agreement with the expletive, which can be seen in the glosses. These agreement effects could be due to different properties of the expletive – whether the φ-features of the associate are transmitted to the expletive or not. Also, whereas Old French allows for the subject to trigger subject-verb agreement while placed in situ, subject-verb agreement in Modern French is exclusively with the pre-verbal position (cf. Salvesen & Bech 2014).

(i) Il est arrivé trois filles.
EXPL be.3Sg arrive.PP.Def three girl.FPl
'There have arrived three girls.'

(ii) Trois filles sont arrives.
three girl.FPl be.3Pl arrive.PP.FPl
'Three girls have arrived.'

[14] However, acknowledging interface effects does not exclude the influence of possible language contact scenarios. A cursory revision of the data across Romance shows that the role of contact in the loss of PPA is not essential, though: all Romance languages develop in the same direction, even Romanian, which remained quite isolated from the other languages for a long period of time (Dragomirescu 2014).

interactions between syntax and external linguistic domains (semantics, pragmatics and information structure) with respect to PPA. I will suggest that specificity should be considered one of the most important factors to explain PPA as an interface phenomenon. In Chapter 2.3, I will analyze how PPA is related to other object phenomena that are conditioned by specificity as well (DOM, CLD and object shift). The analysis that I will develop for Catalan PPA in Part Three builds on these data. I will then evaluate to what extent the higher instability of participle agreement morphology is attributable to the IH or to language-internal processes (involving ambiguity and opacity as a trigger for grammaticalization).

2.2 Interface Conditions on PPA

As other argumental DPs, the DO is endowed with different sets of features. For example, its φ-features (i.e. [Person], [Gender] and [Number]) are associated with the referential value of the DP, thus identifying the event participant. The DO also carries case features (accusative or partitive, see e.g. Belletti 1988) which are in some way related to thematic roles. Theta-role assignment depends on a number of additional properties, such as agentivity or affectedness. A categorical link of the DO to the prototypical role THEME or PATIENT does not hold in Romance languages. Grammatical relations and semantic roles are thus two separate layers. Moreover, the DO still has other semantic inherent features ([Animacy], [Humanness], etc.) and it acquires features that convey information structure after the syntactic derivation (e.g. topical or focal readings, new or old information, etc.). All these features are potentially relevant factors that can give rise to interface effects in the explanation of PPA.

2.2.1 Information Structure-Syntax Interface

In Chapter 1.2.3, I have argued that syntactic approaches are insufficient to explain PPA entirely. Some other accounts (e.g. Le Bellec 2009, following Lazard 1994) emphasize that agreement morphology may mark information structure, more specifically, topical elements. Under this view, 'atypical' objects are preferably marked: commonly, topics coincide with sentential subjects rather than with objects, which usually present new or focal information. Le Bellec (2009) bases her implicational hierarchies in topicality (see Figure 1.1). However, grammatical relations override topicality, and morphological properties of the verb have effects on the possibility of

having agreement as well. The resulting set of hierarchies, in fact, reflects interface conditions for PPA.

Her account, however, encounters several problems. First, her concept of topicality is quite heterogeneous. For her, any element that can be considered a topic according to any definition of topicality is a topic. Topics can be common ground (i.e. information shared by speaker and hearer), known information, or old information already present in the discourse. Differences between French and Italian are regarded as a response to different definitions of topic in these languages. But this claim has some empirical shortcomings. For example, although it might be true that all DOs that trigger PPA can be interpreted as topical (in a broader sense), not all topical DOs trigger agreement. Objects in situ, i.e. in post-verbal position, can be associated with the same topical reading, although PPA is out (1.29). If PPA only depended on grammatical relations, verb type and topicality, then the absence of agreement in these examples would be unexpected.

(1.29) A. Chi ha letto i libri?
who have.3Sg read.PP.Def the book.MPl
B. MARIA ha **letto** [$_{TOP}$ i libri].
MARIA have.3Sg read.PP.Def the book.MPl
'Who has read the books? MARIA has read the books.'

In contrast, word order alone is not a solid argument either. According to Rizzi (1997), the CP-domain is split into several functional projections dedicated to different pragmatic, discourse or information structure features. For this reason, constituents marked for special information structure are often attracted to the pre-verbal field. However, there is a heated debate about the nature of wh-movement: Is it long-distance movement (i.e. without any stops on its way up to the CP) or cyclical movement (i.e. stepwise)? Could topicality be a predictor for different types of wh-movement? The stopover in Spec,AgrO cannot be conditioned by information structure directly, though: The relevant features are not placed there. Information structure is probably a previous condition, but the immediate motivation for movement (either long-distance or stepwise) must be elsewhere. This additional factor could be also responsible for participle agreement. Additionally, it is not clear how topicality could affect verbal morphology from the CP through its agreement relation with the DO: The verb is not even involved in this agreement chain.

In sum, although PPA is probably subsidiary of the DO being topical, agreement can hardly be directly triggered by this feature. PPA is rather related to properties or requirements of object movement lower than the CP. In Part Three, I will claim that φ-features play a crucial role in object placement and that interpretive effects (and even morphological agreement) can be ascribed to operations after spell-out. Thus, the link between information structure and PPA

cannot be maintained for both empirical (post-verbal objects, diachronic data, optionality...) and theoretical reasons (definition of topicality, delimitation of the structure that makes agreement possible...). Topicality makes agreement possible by stimulating object movement, but it does not constrain movement itself. The immediate trigger of agreement must then be found in other features shared by the verb and the DO.

2.2.2 Semantics/Pragmatics-Syntax Interface

Instead of looking at features located outside the verbal domain, it seems reasonable to focus on the verbal domain itself. In this context, definiteness and specificity are two essential features. Due to their far-reaching effects on the semantic interpretation and syntactic make-up of the clause, a great deal of literature is devoted to them. The relation between definiteness/specificity and agreement, however, has so far not been addressed very often.

Consider the following examples of Spanish. In (1.30a) the temporal adjunct 'en una hora' denoting a telic event, is not felicitous if the object is a bare noun (hence, indefinite and/or non-specific). Adverbial modifications such as 'toda la tarde' denoting an atelic activity are fully acceptable. However, when the DO is introduced by the definite article ('la madera') (1.30b), the opposite pattern follows: only telic temporal adjuncts are felicitous[15]. The same effect is found in Catalan (1.31).

(1.30) a. Pedro cortó madera toda la tarde / # en una hora.
Pedro cut.PST.3Sg wood all the afternoon / in one hour
'Pedro cut wood the whole afternoon/# in one hour.'

b. Pedro cortó la madera # toda la tarde / en una hora.
Pedro cut.PST.3Sg the wood all the afternoon / in one hour
'Pedro cut wood # the whole afternoon/in one hour.'

(1.31) a. En Pere va tallar fusta tota la tarda / # en una hora.
the Pere cut.PST.3Sg wood all the afternoon / in one hour
'Pere cut wood the whole afternoon/# in one hour.'

b. En Pere va tallar la fusta # tota la tarda / en una hora.
Pedro cut.PST.3Sg the wood all the afternoon / in one hour
'Pedro cut wood # the whole afternoon/in one hour.'

[15] Provided that one has an appropriate context, a telic interpretation can be forced in (1.30a)/(1.31a) and an atelic one in (1.30b)/(1.31b). The context of the two examples above is neutral.

Such contrasts are found in many genetically unrelated languages. In Slavic languages, for instance, the case of the DO (partitive or accusative) interacts with the aspectual verbal root (perfective or imperfective) giving rise to different readings of the object DP (1.32) (cf. Krifka 1989, Leiss 2000, Ritter & Rosen 2001, Fischer 2005). In these sentences, aspect morphology seems to convey the same information as the (in)definite articles in Romance languages, as can be seen in the glosses. Finnish shows similar effects (1.33) (Kiparsky 1998): case alternation may modify the aspectual interpretation of the clause, or the referential value of the object. All these examples show a direct link between nominal referentiality and verbal aspect, which stresses why definiteness and/or specificity should be taken into consideration when trying to explain the variation of PPA: these features could provide a motivation for the necessary stopover of the displaced (topical) object.

(1.32) a. On kolol drova.
he cut.IMPF.PST.3Sg wood
'He cut/was cutting wood.'

b. On raskolol drova.
he cut.PRF.PST.3Sg wood
'He cut/was cutting the wood.'

(1.33) a. Ammu-i-n karhu-a / karhu-j-a
shoot-PST-1Sg bear-Part / beat-Pl-Part
'I shot at the (a) bear / at (the) bears.'

b. Ammu-i-n karhu-n / karhu-t
shoot-PST-1Sg bear-Acc / beat-Pl.Acc
'I shot the (a) bear / the bears.'

The distinction between definiteness and specificity is not easy to define, since there are many unclear uses of these terms and overlaps. Definiteness has been defined in two ways: as familiarity (or identifiability) with the referent or as uniqueness (or inclusiveness) of the referent (Heim 1982, Ward & Birner 1995, Abbott 1999, Lyons 1999, etc.). According to the first view, using the definite article in (1.34) implies that the reference of *the car* is more or less clear to the hearer and the speaker. Situation, general knowledge of the world, anaphoric reference, bridging cross-reference, associative use, etc. can justify interpreting a DP as familiar. This definition, however, does not account for all uses of the definite article in English. For example in (1.35), the condition for the use of the definite article rather seems to be uniqueness – i.e. reference to a unique individual. There is no consensus on which definition is more adequate to account for the distribution of the definite article in English, whether the first or the second one, or even a combination of both (see Lyons 1999).

(1.34) I bought **the car** this morning.

(1.35) [Nurse entering operating theatre]
I wonder who **the anaesthetist** is today.

Specificity refers to the "referential anchoring" of a DP in the discourse, the "referential intention" of the speaker (von Heusinger 2011:1025 and ff.). This notion is quite vague and gives rise to varied definitions (sometimes colliding to a certain degree with the uniqueness theory as well as the familiarity theory of definiteness). The concept of specificity was originally proposed to account for the ambiguity of indefinite DPs in opaque contexts. Essentially, it is assumed that indefinites have a referential (specific) or an existential (non-specific) interpretation (cf. Fodor & Sag 1982). Subsequently, the same distinction has been carried over to definite DPs (cf. Ihsane & Puskás 2001). Specificity has then been defined as discourse-linking, wide scope, partitivity, presuppositionality, topicality, referential persistence, noteworthiness, etc. (see references in von Heusinger 2011:1027). Some of these definitions, however, look like diagnostics for specificity that can be applied to some sentences (and not to others). Scopal specificity, for example, allows identifying specific DPs when more than one quantifier concurs in the same clause, but is useless in other cases. Epistemic specificity, which refers to the speaker's knowledge of the DP referent (1.36), relies on a semantic interpretation for which it is not easy to find clear evidence.

(1.36) **A student in Syntax I** cheated in the exam.
A: I know him: It is Jim Miller. → Specific reading
B: But I do not know who it is. → Non-specific reading

In this respect, Sorrenti (2015) considers the possibility of distinguishing between a 'morphological' feature – i.e. definiteness, marked by certain definite determiners – and a 'semantic' feature – i.e. specificity. This seems to work quite well in Romance, although it might be conceptually flawed. As Karimi (1990) suggests, it is unusual for a language to have morphological markers for both, definiteness and specificity, which can be freely combined. English, French, German, etc. have definite articles, but no overt marking of specificity, whereas Persian, Turkish, Albanian, etc. mark specificity overtly but lack articles. Karimi thus concludes that "universal grammar has a single category of specific/definite (=presumed known)" (Karimi 1990:142). This would explain the strong tendency to associate definite DPs to specific readings (and to a certain degree indefinite DPs to non-specific ones). In this sense and for the sake of simplicity, I will often use both terms indistinctly in the discussion.

Most definitions of definiteness or specificity make reference to discourse properties. At the same time, definiteness/specificity seems to correlate with morpho-syntactic properties of the clause

(e.g. aspect and accusative case). Therefore, several phenomena concerning the object syntax could be reconsidered under the light of the IH.

The effects of specificity can be found in a variety of constructions. Obenauer (1992), followed by Déprez (1998), Belletti (2006) and, from a slightly different perspective, Doroga (2014), observed that PPA in French can be correlated with different interpretations. He argues that the DO of sentences like (1.37) has a specific/discourse-linked interpretation if the past participle agrees with the DP – e.g. there is an already known set of possible mistakes, as in a multiple-choice test – whereas it has a non-specific/non-discourse-linked interpretation if the participle bears default agreement – e.g. the question may refer to any thinkable mistake without an explicit limitation of the denotation, for instance in an essay.

(1.37) Combien de fautes$_i$ a-t-elle **fait** / **faites** *ec*$_i$?
how many of mistake.FPl have.3Sg-*t*-she make.PP.Def / .FPl
'How many mistakes did she make?' (Belletti 2006: 508)

Following Kayne (1989b), Obenauer first defines the empty category (*ec*) or trace in object position as pronominal in nature. Accordingly, pronominal resumption forces a discourse-linked interpretation – "interprétation «reliée au discourse»", (Obenauer 1992:175). Evidence for this interpretation is given in (1.38) and (1.39). He argues that the first example can only receive a [+specific] interpretation because of the resumptive clitic *les*. The sentence in (1.39), with an empty category in the most embedded clause, is ambiguous: either the *ec* has the same function as the resumptive clitic and the DP *combien de disques* is discourse-linked, or it is non-pronominal and allows for a cardinality (i.e. non-specific) interpretation.

(1.38) Combien de disques$_i$ va-t-il acheter *ec*$_i$ uniquement parce qu' on
how many disc.MPl go.3Sg-*t*-he buy only because one
les$_i$ lui a recommandés?
CL.Acc.Pl CL.Dat.Sg have.3Sg recommend.PP.MPl
'How many discs do you think he is going to buy because somebody recommended them to him?'

(1.39) Combien de disques$_i$ crois-tu qu' il va finir
how many disc.MPl believe.2Sg-you that he go.3Sg finish
par acheter *ec*$_i$?
by buy
'How many discs do you think he is going to buy at the end?' (Obenauer 1992 :175)

Obenauer then concludes that PPA is only possible when there is a pronominal *ec* in object position. The DO then conveys a specific or D-linked reading and the participle agrees with it. To

prove his hypothesis, he applies several tests. For instance, PPA is felt inacceptable if the DO is unambiguously interpreted as a cardinality expression. In (1.40), the expressions *jusqu'à* 'until' and *en moins* 'less' impose a non-specific interpretation on the DO and PPA is out. Distributive readings are also associated with a [-spec] feature (1.41): Without PPA, the sentence is a question about the number of mistakes each one of the participants has made, thus evoking a cardinality reading; with PPA, the sentence asks which mistakes every participant has made[16]. In the same sense, the interrogative *quels* is polysemic: It means either 'which kind of' ([-spec]) or 'which ones ([+spec]). The absence of agreement obligatorily gives rise to the first interpretation (1.42).

(1.40) a. Jusqu'à combien de fautes ont-ils **fait** /*-**es**?
until how many of mistake.FPl have.3Pl-they do.PP.Def / .FPl
'How many mistakes did your students make?'

b. Combien de fautes en moins a-t-il **fait** /*-**es**?
how many of mistake.FPl less have.3Pl-they do.PP.Def / .FPl
'How many fewer mistakes did they make this time?' (Obenauer 1992 :176)

(1.41) Je voudrais savoir combien de fautes chacun a **fait** / -**es**.
I like.COND.1Sg know how many of mistake.FPl each have.3Sg do.PP.Def/ .FPl
'I'd like to know how many mistakes each one made.' (Obenauer 1992 :176)

(1.42) a. Quelles maisons a-t-il **construit**?
Which house.FPl have.3Sg-*t*-he build.PP.Def
'Which kind of houses have they built?'

b. Quelles maisons a-t-il **construites** ?
Which house.FPl have.3Sg-*t*-he build.PP.FPl
'Which houses have they built?' (Obenauer 1992 :177)

In a nutshell, Obenauer's account takes the specific reading of certain constructions with PPA as evidence for the presence of a resumptive empty category. His analysis is mainly syntactic when he argues that the *ec* in object position has a pronominal value. However, the cues that are available for the speaker (or language learner) are semantic/pragmatic: identical surface strings are due to different underlying structures, which involve different readings. Morphology is a reaction to different syntactic conditions in which the feature of specificity seems to be involved. According to this, PPA is an interface phenomenon that requires integrating information of different linguistic modules. Many of the examples shown by Obenauer indeed still show optionality and their interpretation is rather opaque. Participle agreement is generally

[16] Note that this distinction can also be captured by an approach of specificity as wide scope.

disappearing in French, which is consistent with the scheme in Figure 1.2: Interface phenomena are more unstable both from a synchronic and a diachronic point of view.

Beyond case assignment and PPA, other phenomena have been proposed to depend on definiteness/specificity. One of the most influential works on this issue is Diesing (1992). She departs from the assumption that the clause is semantically divided into two domains: the restrictive clause and the nuclear scope. She then formulates the so-called Mapping Hypothesis which makes the correspondence between syntax and semantic explicit:

(1.43) *Mapping Hypothesis*
Material from VP is mapped into the nuclear scope.
Material from IP is mapped into a restrictive clause.

(Diesing 1992:10)

The most direct consequence of this idea is that different semantic interpretations of the DO are obtained in different syntactic positions. Indefinites that have quantificational force (which also form operator-variable structures and undergo quantification rise) need to raise out of the nuclear scope, where they would be subject to existential closure) into the restrictive clause. Non-specific indefinites (with a cardinality interpretation) may remain in situ. Diesing finds evidence for this in different word order effects and quantification rise. In German, for instance, particles such as 'ja doch' may signal the VP-boundary. Hence, the derived subject 'zwei Cellisten' in (1.44a) has left the VP and is interpreted as [+specific] (quantificational reading). The second sentence, however, has a VP-internal non-specific subject (cardinality reading). In sum, it is suggested that specificity is responsible for object placement (object movement or object shift).

(1.44) a. Weil zwei Cellisten ja doch in diesem Hotel abgestiegen sind.
since two cellists PRTC in this hotel lodge.PP be.3Pl

b. Weil ja doch zwei Cellisten in diesem Hotel abgestiegen sind.
since PRTC two cellists in this hotel lodge.PP be.3Pl
'Since two cellists lodged in this hotel.' (Diesing 1992:78)

In the same vein, Déprez (1998) distinguishes between two possible object positions, linked to the [+/-specific] dichotomy: if the DO is adjoined (i.e. merged) to the VP, it receives a non-specific interpretation. For the DO to receive a [+specific] feature, it has to be adjoined to Agr/v, i.e. it has to be moved out of the VP. In the new position, the DO may trigger participle agreement.

Definiteness/specificity seems to be a core feature for a number of syntactic constructions concerning the object. An analysis of the object syntax from the perspective of the IH seems thus justified.

2.3 Object Phenomena Related to Specificity

2.3.1 Object Movement, CLD and DOM

In this chapter, I am going to describe some properties of object movement, CLD and DOM, and how they can be related to definiteness/specificity.

It is commonly accepted that object placement is constrained to a certain degree by information structure. Basically, there are two kinds of object movement: object shift and scrambling. In Scandinavian languages object shift is restricted to DOs in clauses in which the finite verb has moved out of the VP. Scrambling in Germanic, on the contrary, seems to be unrestricted: non-finite verb forms allow scrambling, and any element, not only the DO, can undergo this process (cf. Thráinsson 2001 and Vikner 2005 for further references). For the present purposes, I will ignore these distributional differences.

The conditions for object movement have been discussed extensively in the literature. Scandinavian object shift, for instance, is obligatory with personal pronouns, optional with definite DOs and ungrammatical with indefinite DPs (Vikner 2005:421 and ff.). Diesing (1992) shows that specificity plays an important role in Germanic scrambling. Thus, definiteness and specificity (two discourse-related features) are crucial notions to account for object placement and different kinds of object movement in different languages (see e.g. Alexiadou & Anagnostopoulou 1997).

In Modern Romance, there is no clear evidence for object movement. The finite verb is placed quite high in the structure, both in the main clause and in embedded clauses. This makes it hard to detect evidence for object movement based on word order. However, Sportiche (1996) puts clitic doubling (CLD) on a par with object shift. CLD is a construction in which a full DP object co-occurs in the same clause with a clitic pronoun which shares the same case and the same theta-role with the full DP (1.45) (see Anagnostopoulou [2005] for an extensive overview on the phenomenon). Sportiche suggests that the presence of the clitic in TP has a similar function and distribution as overt movement of the object out of the VP.

(1.45)	Le	dieron	el libro	a Juan.	Spanish
	CL.Dat.3Sg	give.PST.3Pl	the book	to Juan	
	'They gave Juan the book.'				

CLD is a very variable phenomenon both within a language and across languages. The conditions for CLD are heterogeneous, since many semantic, morphological or syntactic features seem to be involved in the realization of CLD: case (dative vs. accusative), thematic role (possessor and experiencer vs. theme and recipient), animacy (+/- animate, +/-human), specificity, topicality and DP structure (full pronoun or other full DPs) are some of the features that have been proposed to explain CLD.

On the basis of Old Spanish and Old and Modern Catalan data from their own corpus as well as data from different Spanish varieties taken from Zdrojewski & Sánchez (2014), Fischer et al. (2019) argue that CLD is conditioned both by the grammaticalization of the clitic pronoun itself (see Fontana 1993, Bleam 1999, Fischer & Rinke 2013) and the choices within the verb movement parameter hierarchy. These two factors are necessary but independent from each other. In their account, verb movement limits the positions available to which the object moves in order to express information structure. Object placement is freer in Old Romance than in Modern Romance (cf. Martins 1994, Fischer 2010). At the same time, the position of the verb gets lower and lower over time. CLD is a means to restore the former flexibility of word order.

Previously to Sportiche's account, CLD had been discussed in terms of case assignment. It has been observed that in some languages (especially in Romanian) CLD requires the object to be marked by a preposition-like element, i.e. it must be differentially case-marked (which is known as "Kayne's generalization", Jaeggli [1982:20]). Due to the presence of the clitic, which 'absorbs' accusative case of the verb, a new case assigner must be inserted so that the full DP object receives case and the case filter is satisfied. This correlation – CLD + DOM – has turned to be far less consistent than initially assumed. Several non-doubled DPs require DOM, and CLD without DOM is also possible in some cases. Suñer (1988) proposes discarding the movement analysis for the clitic in CLD constructions: the clitic does not receive case from the verb, but is rather an agreement marker that matches the specificity feature of the DO (see also Strozer 1976, Rivas 1977, Jaeggli 1982, etc.). In this context, Sportiche (1996) tries to reconcile both views. He assumes the existence of dedicated clitic projections, ClVoice 'clitic voices', responsible for case assignment, hence A-positions[17]. The clitic may indeed move as a head out of the VP and thus show mixed properties (as a head and as a phrase). Furthermore, he assumes that the clitic and the associate XP are endowed with a certain feature [F], which has to be satisfied in a Spec-Head

[17] Also Di Tullio, Saab & Zdrojewski (forthcoming) claim that CLD is an A-dependency, but triggered by the feature [Person] instead.

relation – what he calls the Clitic Criterion (Sportiche 1996:236). The Clitic Criterion can be fulfilled in the following ways:

(1.46) *Clitic construction parameters*

(i) Movement of XP* to XP^ [i.e. from the base generated position to the specifier of ClVoice] occurs overtly or covertly
(ii) H [the head of ClVoice, i.e. the clitic] is overt or covert
(iii) XP* [the associate of the clitic generated in object position] is overt or covert

(Sportiche 1996:237)

By combining these three parameters, different construction types are predicted (1.47), the only restriction being the "Doubly Filled Voice Filter" (1.48), a condition inspired in the Doubly Filled COMP Filter (Bayer 1984).

(1.47) i. Undoubled clitic constructions: covert XP*/XP^ with overt H.
ii. CLD: overt XP* moves covertly to XP^ with overt H.
iii. Scrambling: overt XP* moves overtly with covert H.

(Anagnostopoulou 2005:550)

(1.48) *Doubly Filled Voice Filter*

* [$_{HP}$ XP [H …]]
where H is a functional head licensing some property P,
and both XP and H overtly encode P.

(Anagnostopoulou 2005:551)

For our purposes, the most interesting issue of Sportiche's account is the connection established between CLD and scrambling. The conditions for both phenomena are practically the same. Pragmatics, information structure and definiteness/specificity, crucial features in the analysis of scrambling, seem to have an influence on CLD (cf. Sánchez 2010, Gabriel & Rinke 2010, Vázquez Rozas & García Salido 2012, Sánchez & Zdrojewski 2013). Definiteness/Specificity is assumed to be involved in DOM as well (Aissen 2003, Leonetti 2004, von Heusinger & Kaiser 2005), although other features are probably also at stake (see García García 2014, Torrego 1999…).

In sum, all these phenomena seem to be interrelated in the sense that they are affected by the same features (e.g. definiteness/specificity). The relation between object movement and CLD, and between DOM and CLD, has just been discussed. In the next sections, I will examine the relationship of these constructions (object movement, DOM and CLD) with PPA.

2.3.2 PPA and Object Movement

The principal condition for PPA in (Modern) Romance has been claimed to be movement of the object to a pre-verbal position. Cliticization and non-argumental movement (i.e. wh-movement and relativization) are the most relevant contexts for PPA. Derived subjects too trigger agreement, albeit only if the auxiliary is BE, i.e. in passives in all Romance languages and unaccusatives only in the languages that have auxiliary alternation.

This is consistent with López's (2012) idea according to which DOs in Spanish (and probably in other Romance languages) undergo only short scrambling. In this 'intermediate' position, the object stays outside the case-assigning chain, hence DOM must be inserted, but it is still not the appropriate configuration for PPA, which is probably higher. Other operations that force the object to raise further in the tree are needed to reach the position in which PPA occurs[18]. Wh-movement to the CP or cliticization are two such operations. In unaccusative clauses, the object moves to the subject position for case assignment (cf. Perlmutter 1978, Burzio 1981, 1986).

At first sight, PPA and object movement do not seem to be a single phenomenon, but object movement rather is a pre-condition for PPA to occur. Not all instances of movement trigger agreement, and the behavior of PPA differs from one language to the other. Recall example (1.37) shown by Obenauer (1992), in which agreement gives rise to an interpretation contrast. Perhaps this fact provides a clue about the nature of the position in which PPA takes place. If this is the case, it can be claimed that PPA is not triggered by position, but rather by an intervening feature (contra Poletto 2014): Cliticization and A'-movement alone cannot account for the systematic differences in the interpretation. Some questions arise out of these facts: Are PPA and DOM two different ways of overtly marking the same movement operation? Do they satisfy the same requirements? Changes in the conditions for PPA and DOM in diachronic stages of the Romance languages add complexity to this picture: In Old Catalan, for instance, object movement does not seem to play any role in PPA, so that all DOs, definite and indefinite, pre- and post-verbal, agree with the past participle (cf. Part Three). In any case, movement or, more specifically, the motivation for movement, seems to be a prerequisite for several complex constructions such as DOM and PPA.

[18] Recall the discussion about the movement analysis of clitics and the possible correlation of PPA with the grammaticalization status of the clitic pronoun in fn. 11.

(1.37) Combien de fautes$_i$ a-t-elle **fait** / **faites** *ec*$_i$?
how many of mistake.FPl have.3Sg-t-she make.PP.Def / .FPl
'How many mistakes did she make?' (Belletti 2006: 508)

2.3.3 PPA and DOM

It is commonly assumed that DOM is closely linked to case assignment. The preposition-like element (*a* in Spanish/Catalan and *pe* in Romanian) assigns case whenever the DO fails to receive it (e.g. because of short scrambling, López 2012). Melis & Flores (2009), Zdrojewski (2013) and Company Company (2014) claim that DOM assigns dative. If accusative case is responsible for PPA, it is expected that DOM and PPA exclude each other: either because the DP already has a case assigner (the preposition-like element) and is thus inaccessible for the participle, or because the object bears dative, in which case agreement cannot take place. Assuming that DOM blocks PPA, a complementary distribution of languages with the one construction or the other is predicted. As a matter of fact, normative Italian and Standard French have PPA but show DOM only sporadically, whereas Spanish and Romanian make systematic use of DOM but lack PPA. However, other cases do not fit so clearly in these categories. For instance, although Portuguese is not typically considered a DOM language (but see Schwenter 2014), it lacks PPA. Catalan requires DOM with personal pronouns, some quantifiers and certain other ambiguous expressions, but still retains PPA. As far as I know, the relation between DOM and PPA, as well as their dependence on object movement, has practically not been investigated[19].

There is still another interesting correlation. Stark (2007) suggests that languages that still encode partitivity in their morphology do not have DOM. Both French and Italian have a partitive clitic pronoun (*en*/*ne*) and partitive articles (*de*/*del*) and disallow DOM. The same correlation seems to be valid for PPA: only languages with morphological partitivity allow PPA (French and Italian). Spanish and Romanian lack partitive expressions and PPA, but have a more or less extended use of DOM. Portuguese has neither PPA, DOM nor partitive morphology. Therefore, the implication is unidirectional: even if a language has already lost (or has never had) morphological partitives, it does not inevitably develop DOM. The morphological expression of partitivity in Catalan is weaker: the partitive article is practically lost, but Catalan still preserves the clitic *en*. Catalan is thus expected to have PPA but no DOM. This claim is mainly correct. Whether this is coincidental or not, the link between partitivity and PPA in Romance seems to be confirmed.

[19] However, see Rocquet (2013) for a nanosyntactic approach to DOM, where PPA is analyzed as a form of DOM.

2.3.4 PPA and CLD

The connection between PPA and CLD has been explored occasionally. Franco (1994), for instance, formalizes the correlation between CLD and PPA in Romance as an AgrO-Parameter. One crucial component of his analysis is the grammatical status of the clitic pronoun. Recall that clitics undergo a grammaticalization change from Old Romance to the Modern Romance languages: they originally have a DP structure and end up being heads or even agreement morphemes (Fontana 1993, Bleam 1999, etc.). Clitics that are analyzed as DPs move to or are merged in specifier positions. Clitics already reduced to heads undergo head-to-head movement (i.e. they are incorporated into their host). Assuming that agreement is subject to strict locality conditions, i.e. it succeeds only under a Spec-Head relation, an X°-clitic cannot agree with the verb it adjoins to, since it is not in the adequate configuration for agreement. It is rather the case that the clitic and the past participle compete to check the same feature in a particular functional projection above the VP (e.g. AgrO).

In the same vein, Sportiche (1996) establishes PPA as a diagnostic for the movement analysis of clitics in Romance languages. With the help of the three clitic construction parameters in (1.46), he derives possible construction types – simple clitics, CLD and scrambling. However, nothing else is said about how PPA applies. It is assumed that PPA is prevented if the clitic or wh-object either move covertly or skip Spec,AgrOP. But optionality remains, in this way, unexplained and this account leads to circularity: agreement is optional because movement is optional, but we know that movement is optional because agreement is not obligatory. Although one of the pros of Sportiche's account is that it unifies the explanation of several constructions that at first sight seemed unrelated, it still fails to capture the interplay between PPA and CLD.

This is precisely the aim of Tsakali's (2006) work. Departing from the observation that there are either languages with CLD or language with PPA, but both constructions are not usually found in the same language (Table 1.1), she develops a 'clitic doubling parameter' to account for the alternation of PPA and CLD in Romance.

	CLD	*PPA*
Greek	√	X
Argentinean Spanish	√	X
Catalan	X	√
Romanian	√	X
Albanian	√	X
Bulgarian	√	X
French	X	√
Italian	X	√
Serbo-Croatian	X	X
Taqbaylit	√	X
Tarifit	X	√

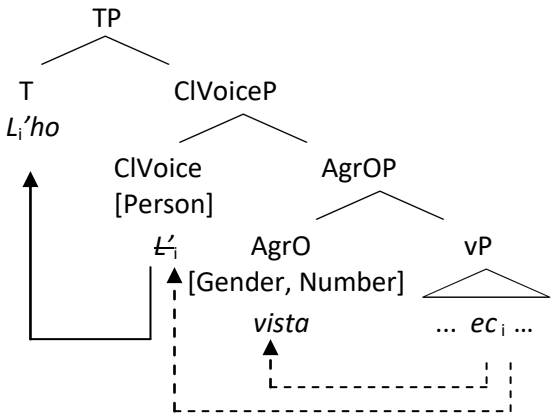
Table 1.1. Complementarity between CLD and PPA (Tsakali 2006:109).

Tsakali explains clitic doubling (and doubling in general) as a chain forming operation in an analysis that is highly indebted with Sportiche (1996). Following Brody (1995), she claims that only the root position of the chain is theta-related (i.e. assigns or receives a thematic role) and the head of the chain is in a case position. The clitic is thus treated as an expletive forming a chain with a theta-marked associate in object position (a full DP in CLD constructions, an empty element otherwise). According to her, structural mechanisms such as skipping or procrastinating (i.e. covert movement) do not really explain optionality, let alone provide a motivation for the split shown in Table 1.1. With the 'clitic doubling parameter', further developed in Tsakali & Anagnostopoulou (2008), she proposes two distinct ways of checking object features. The main assumption is the existence of two separate functional projections, taken from Sportiche (1996): AgrO and ClVoice. Two scenarios can be distinguished:

1) *Split-checking* / *Languages with PPA*. The DO in the root position of the clitic chain checks the features in AgrO and ClVoice cyclically. The DO enters into two subsequent checking operations, the first one for the features [Gender] and [Number] in AgrO and the other one for the feature [Person] in the ClVoice (1.49)[20]. The clitic is the head of ClVoiceP, the participle is in AgrO. CLD is banned by a restriction on overt XPs to enter into cyclical agreement relations – only empty categories are able to do so (cf. Tsakali & Anagnostopoulou 2008:343-44, Merchant 2001). A separation of different φ-features (person vs. number and gender) is also found in D'Alessandro (2016), who explains different phenomena of southern Italian dialects (e.g. auxiliary selection, DOM and 'omnivorous participial agreement') on the basis of how these features are distributed between vP and TP.

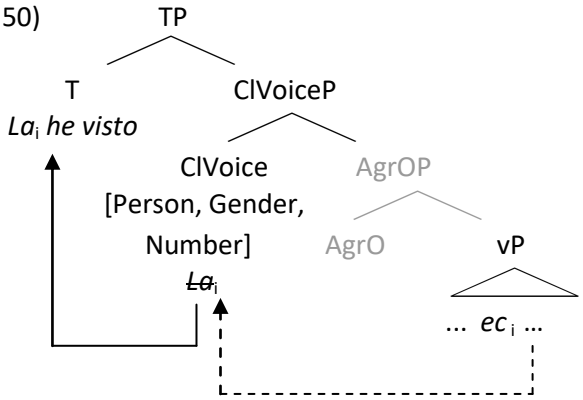
[20] In this and the following examples, arrows with solid lines mark movement and arrows with dashed lines mark agreement relations.

(1.49)



2) *Bundle-checking* / *Languages (eventually) with CLD*. All object features are checked at once in a single projection (AgrO/ClVoice) (1.50). Since the associate DP is not engaged in cyclical checking, it may be realized as a full DP under the appropriate conditions, giving rise to CLD configurations. Tsakali makes not explicit what the exact configuration of bundle-checking is. I assume that, AgrO being inactive, the past participle is incorporated to the auxiliary of the compound tense form.

(1.50)



This account is very appealing since it makes clear and powerful predictions to be tested. For example, as discussed in Tsakali (2014), it has obvious consequences for first language acquisition. Since bundle-checking is a more simple operation and demands a less costly derivation, it is expected that L1-learners will first try to adapt their input to bundle-checking, unless they have enough evidence that two separate functional projections are needed – CLD should be easier to acquire than PPA. In the same sense, it is expected that the diachronic path is the other way round: languages with PPA (with a costly split-checking strategy) will turn into languages with CLD (bundle-checking). However, the claims made by Tsakali (2006) and Tsakali & Anagnostopoulou (2008) with respect to the typological distribution of PPA and CLD are too strong. Although most Romance languages fit into their scheme, there are still some problematic languages: Catalan, for example, has both CLD and PPA. Their classification only works if one considers the most conservative varieties of Catalan, in which it is possible to find personal pronouns which are not doubled by a clitic and PPA is supposed to be the most extended variant. But even in these

conservative dialects, accusative CLD is optional (mainly in the same context in which CLD occurs in Spanish). Therefore, mixed languages do exist, even if they do not seem to be very frequent. As I will show in Chapter 3.3.2, CLD and PPA are in complementary distribution at the clausal level in Catalan, but both structures are available to the language. This can be interpreted as an alternation caused by an ongoing change. PPA is gradually substituted by CLD. Since PPA and CLD can be considered interface phenomena, this does not come as a surprise.

Other problematic issues in Tsakali's proposal are theoretical. For instance, the split of functional projections does not seem to be properly motivated. This account promotes a proliferation of syntactic structure, while current minimalist assumptions require its reduction, especially concerning Agr-projections (which do not have any counterpart at the conceptual-intentional interface). The analysis of different agreement contexts (especially PPA with wh-constituents) and the motivation for chain formation as a necessary condition for agreement is not articulated enough. Finally, their current approach is not directly applicable to language change without additional assumptions. For this reasons, I will try to improve the theoretical and empirical adequacy of this proposal in Part Two and Part Three by introducing some necessary modifications. I will then show that the amended theory successfully describes and explains the diachronic Catalan data on PPA and CLD presented in Chapter 8 and Chapter 9.

2.4 Interim Summary

In this chapter, I have addressed the problem of optionality and variation of PPA across Romance. As it became evident in Chapter 1, purely semantic or syntactic accounts are not adequate to explain the entire phenomenon. Rather, PPA is a multi-factorial phenomenon that involves the integration of morpho-syntactic and semantic-pragmatic properties. The Interface Hypothesis (Sorace 2006, among others) roughly predicts the kind of data we find: interface phenomena show a higher degree of variability/optionality and are more prone to be affected by language contact situations (cf. Fischer & Vega Vilanova 2018) due to their greater computational complexity. Beyond object movement to certain pre-verbal positions – i.e. the standard account for PPA – topicality and especially definiteness/specificity have turned out to play an important role in the description of participle agreement.

These features have also been supposed to be involved in other object constructions, namely object movement (object shift or scrambling), DOM and CLD. For this reason, I have reviewed the basic properties of these phenomena and their relation to each other and to PPA (Chapter 2.3). I

have concluded that object placement is a prerequisite for agreement, but the actual motivation for it must be found in other independently motivated feature(s). In fact, wh-movement can hardly affect PPA directly since it does not fulfill requirements of the verb, but the CP. Is PPA a side effect of movement? What is then the role of definiteness/specificity in the morphological realization of agreement?

In Chapter 2.3.4, I have discussed Tsakali's (2006) approach, which explicitly aims at unifying the derivation of PPA and CLD. This account has the advantage of offering clear predictions for language acquisition and language change, compatible with the Interface Hypothesis. However, it shows some empirical and theoretical inconsistencies. The modifications of this approach, and how it can be applied to the synchronic and diachronic explanation of PPA in Catalan, will be the central topic of Chapter 5 and following.

Chapter 3. Past Participle Agreement in Catalan

Although Catalan is repeatedly mentioned in the literature on PPA in Romance, the empirical basis is, with a few exceptions, deficient. Since agreement is generally optional in Catalan, it is not quite clear how it should fit in the different classifications that have been proposed (see Chapter 1.1, and 2.3.4). The diachronic perspective (not only for Catalan) has often been neglected. These questions are still unsolved: How does optionality emerge? What is the trigger for the loss of PPA? Some papers put emphasis on the grammaticalization process of the auxiliary in the compound tenses from Latin until the Modern Romance languages (e.g. Macpherson 1967). One can find valuable data there to understand changes with respect to the verbal paradigm, properties of the auxiliaries, subcategorization frames, etc. but they lack a compelling reason for the loss of PPA. This tendency is confirmed in many Romance varieties: Spanish, Romanian and Portuguese completely lack PPA, in French and Italian the distribution of PPA is being gradually reduced. What are then the mechanisms which inevitably lead to the los of PPA?

The situation of Catalan is particularly interesting (cf. Muxí 1996) because: i) the process of loss begins relatively late so that, in contrast to Spanish, Portuguese and Romanian, there are enough written documents to carry out a corpus search which allows a detailed description of the change; and ii) the current use of PPA in Catalan is never obligatory, as opposed to Italian, but still alive in many varieties, which can be understood as the symptom of an ongoing language change. Since the normative grammar of Catalan is more permissive than e.g. the French one, the effects of change (mainly the optional realization of agreement) are not obscured by external pressures, which often go against the natural development of language.

In this chapter, I will discuss Catalan data found in the literature, showing that it is insufficient to understand the whole behavior of PPA. In 3.1, I will summarize the main contexts in which PPA is accepted in Standard Catalan, going through the same contexts as discussed in Belletti (2006) for Italian and French. In the second section, I will illustrate how the same correlations exposed in 2.3, which have the feature [Specificity] in common, apply to Catalan as well.

3.1 Peculiarities of PPA in Catalan

At first sight, Catalan patterns mostly like French. The auxiliary BE always triggers PPA, both in passive sentences – though limited to the lexical verb (1.51a) (cf. Cortés 1993) – and in unaccusative sentences (1.51b). It must be noted that auxiliary alternation has almost disappeared in Catalan and the auxiliary BE for unaccusative verbs is restricted to certain archaic constructions and some contact varieties – e.g. the Catalan spoken in the South of France (see Veny 1982). The verb *néixer* 'to be born', for instance, is still used with the auxiliary BE in some traditional songs (1.52a), whereby HAVE is used in the same song for the same verb a couple of lines later (1.52b).

(1.51) a. Aquestes sabates han **estat** **fabricades** al Japó.
this shoe.FPl have.3Sg be.PP.Def manufacture.PP.FPL at-the Japan
'These shoes have been made in Japan.'

b. Elles són **vengudes** de França.
they.FPl be.3Pl come.PP.FPl from France
'They came from France.'

(1.52) a. [El nen Jesús] és **nat** en una establia
[the child Jesus] be.3Sg born.MSg in a stable
'Jesus child was born in a stable'

b. ha **nascut** un minyonet, ros i blanquet
have.3Sg born.MSg a baby.Dim blond and white.Dim
'a baby is born, blond and pale'

With 3rd person clitic pronouns, PPA is optional in Catalan, either in CLLD or simple object cliticization. However, as Fabra (1919) already noticed, agreement is much preferred with feminine singular than with the other pronouns (1.53, the non-preferred form is between brackets). With 1st and 2nd person pronouns, PPA is not usual, although in some dialects (e.g. Balearic Catalan) it is still quite common (1.54) (cf. Rosselló 2002).

(1.53) a. No l' he **vista** (**vist**).
not CL.Acc.3FSg have.1Sg see.PP.FSg (see.PP.Def)
'I haven't seen her.'

b. No els he **vist** (**vists**).
not CL.Acc.3MPl have.1Sg see.PP.Def (see.PP.MPl)
'I haven't seen them.'

(1.54) ? No m' ha **vista**.
not CL.1Sg have.3Sg see.PP.FSg
'(S)he haven't seen me.'

Agreement with preposed wh-elements in relative or interrogative clauses is only marginally accepted in Catalan, in contrast to French. In some varieties (Balearic and varieties in contact with French), however, it is optionally accepted and used.

(1.55) a. Aquesta és la pel·lícula que he **vist** / ***vista**.
this.FSg be.3Sg the film.FSg REL have.1Sg see.PP.Def / .PP.FSg
'This is the film I've seen.'

b. Quina pel·lícula has **vist** / ***vista**?
which film.FSg have.2Sg see.PP.Def / .PP.FSg
'Which film have you seen?'

Since Catalan has practically no auxiliary alternation and lacks expletive pronouns, many of the other contexts for PPA discussed e.g. in Kayne (1985) and Le Bellec (2009) are not relevant for Catalan (impersonal sentences, reflexive or reciprocal pronouns, etc.). However, with respect to partitive clitics, as well as control and causative verbs, the distribution of Catalan PPA patterns with Italian rather than French. With partitive clitics, although still optional, PPA is fully acceptable (recall that spoken French shows the same behavior):

(1.56) N' he **vist** / **vistes** algunes
CL.Part have.1Sg see.PP.Def / see.PP.FPl some.FPl
'I have seen some of them.'

Agreement in control structures is a bit more complex. Standard Catalan has mainly the same rule as French. Agreement on the past participle of *verba dicendi*, such as *dir* 'to say', or *demanar* 'to ask, to order', depends on the grammatical relation of the controller (usually a clitic that climbs to the main clause) in the embedded clause (i.e. the infinitival clause): If it is the subject, PPA is preferred (1.57a); if it is the object, PPA is banned (1.57b). Causative verbs may show object agreement in any case (1.58) (cf. Bastardas i Parera 2003). These restrictions, however, seem to have been imposed rather artificially by a normative grammar that is clearly oriented to the French models (see Vega Vilanova 2019 for an extensive discussion on Catalan normative grammars and PPA). Spontaneous speech is, in fact, more tolerant toward these cases, in the same way spoken French differs from the formal variety (cf. MacKenzie 2013, Berta 2015, Stark 2017, etc.).

(1.57) a. (Les noies) Les han **sentit** / **sentides** cantar una cançó.
the girl.FPl CL.Acc.3FPl have.3Pl hear.PP.Def/ .PP.FPl sing a song
'They have heard them sing a song.'

b. (La cançó) L' han **sentit** / ***sentida** cantar a les noies.
the song.FSg CL.Acc.3FSg have.3Pl hear.PP.Def/ .PP.FSg sing to the girls
'They have heard the girls sing it.

(1.58) a. Les ha **fet** / **fetes** treballar durament.
CL.Acc.3FPl have.3Sg make.PP.Def / .PP.FPl work hard
'He made them work hard.'

b. Les ha **fet** / **fetes** escurçar.
CL.Acc.3FPl have.3Sg make.PP.Def / .PP.FPl shorten
'He let (somebody) shorten them.'

3.2 PPA in Catalan: a Phenomenon at the Interfaces?

Some of the approaches discussed in Chapter 1.2 make allusions to Catalan. For example, Carmack (1996) and Berta (2015) correlate the loss of PPA with the grammaticalization of the auxiliary and the reinterpretation of the small clause. For Lois (1990) and Muxi (1996), the loss of PPA correlates with the availability of auxiliary alternation. Since Catalan does not have CLD, Tsakali & Anagnostopoulou (2008) propose split-checking as syntactic analysis for the PPA construction. From another perspective, Cortés (1993) justifies the variability of agreement patterns in different morphological rules guided by auxiliary verbs. Data on Standard Catalan (often guided by normative considerations), as generally used in these accounts, fit quite well in the approaches discussed above, but their conclusions are often less tenable if one looks at more fine-grained spontaneous data.

In this section, I will show that PPA in Catalan is as complex as in other Romance languages (French and Italian) and that the same interactions with specificity, DOM and CLD can be found. In other words, morphological rules or positional criteria cannot capture all peculiarities of the PPA construction. Instead, considering Catalan PPA an interface phenomenon – which combines morphological, syntactic, semantic, pragmatic information – seems to be a promising approach for the multi-factorial nature of participle agreement, its variability and its optionality.

3.2.1 The Role of Specificity in Catalan PPA

As in Italian and French, only pre-verbal objects – cliticized, left-dislocated or promoted to subject position in passive or unaccusative clauses – trigger agreement, and as in these languages, a

positional rule does not seem to be sufficient to account for the semantic/pragmatic distinctions of certain constructions (see discussion in Chapter 2.2.2). Obenauer (1992) shows that participle agreement is associated with a D-linked reading of the wh-words *quel* 'which' and *combien* 'how much/how many'. But agreement with the equivalent elements in Catalan (*quin* and *quants*) is only marginal – as it is disallowed with wh-constituents in general. Is there parallel evidence in other structures? Are Obenauer's observations replicable in Catalan? There are at least two pieces of evidence supporting the hypothesis of specificity effects linked to PPA in Catalan.

The first piece of evidence comes from Majorcan Catalan. Salvà i Puig (2017) shows that in this variety some post-verbal objects are still able to trigger PPA[21]:

(1.59) Jo no t' he **tocada** /**tocat** sa mel.
I not CL.2Sg have.1Sg touch.PP.Fsg / .PP.Def the honey.FSg
'I didn't touch the honey.' (Salvà i Puig 2017:55)

Although this case of PPA is optional, there are some contexts in which agreement is impossible:

(1.60) a. Na Maria sempre ha **temut** / ***temudes** ses bubotes.
the Maria always have.3Sg fear.PP.Def / .PP.FPl the ghosts.FPl
'Maria has been always afraid of ghosts.'

b. Es poal de fems ha **fet** / ***feta** pudor durant tot es sopar.
the wastebin have.3Sg make.PP.Def / .PP.FSg stink.FSg during all the dinner
'The wastebin was stinking during the whole dinner.' (Salvà i Puig 2017:56-7)

The contexts in which agreement is out comprise cases of stative situations, i.e. activities or atelic dynamic events. Salvà i Puig thus concludes that PPA with post-verbal objects in Majorcan Catalan is conditioned by the inner aspect of the verb. This is a division which strongly resembles the distribution of accusative and partitive case in Finnish described in Kiparsky (1998). Aspect, specificity, differential object marking and PPA are thus closely related. The different readings of (1.61), according to Salvà i Puig (2017:67), are almost the same as Obenauer (1992) shows for French.

(1.61) a. Aquest curs he **tengudes** unes estudiants brillants.
this school year have.1Sg have.PP.FPl some student brilliant.FPl
'This year I have had some brilliant students.'
(→ all my female students were brilliant)

[21] Since the beginning of the 20th century, however, this property has been rapidly decreasing. Nowadays, only older speakers optionally use PPA with post-verbal objects. This structure is not isolated, though: Occitan and some Italian dialects (Manzini & Savoia 2005) also show cases of agreement with post-verbal objects.

b. Aquest curs he **tengut** unes estudiants brillants.
this school year have.1Sg have.PP.Def some student brilliant.FPl
'This year I have had some brilliant students.'
(→ only some of my female students were brillant)

Salvà i Puig, following Travis (2000) and MacDonald (2008), identifies the position of the aspectual projection between vP and VP. This projection "instantiates the so-called *object-to-event mapping* through an *Agree* relation" (Salvà i Puig 2017:68). For telic events, this projection is endowed with an unvalued feature of quantization [q] and φ-features of the direct object [uφ]. The direct object provides the value for [q]: specific objects assign it a positive value; bare nouns assign a negative one. On the contrary, for the expression of atelic events, this projection is not needed at all, so PPA is excluded from the outset. However, it is not quite clear why only positive values for [q] can trigger PPA, since [-q] on the aspectual head would also carry the same object φ-features (unless φ-features are ancillary of [+q], which seems to be an ad hoc postulation). Interestingly, the apparent association of positive aspectual features and φ-feature agreement is also found in some stages of Old Catalan, as I will show in Chapter 9 and especially in Chapter 9.3.

Additionally, Salvà i Puig assumes with Belletti (2004) that topical objects must agree with a higher head – the Low Topic Phrase – responsible for givenness (1.62). On its way to Spec,LowTopicP, the object may have a stopover in Spec,AspP and trigger PPA – though optionally. Therefore, objects that do not agree with LowTopic° cannot trigger PPA. Post-verbal objects in Majorcan Catalan are analyzed as right-dislocated and form a chain with a resumptive *pro* probably in this position (Spec,LowTopP) (Salvà i Puig 2017:61). Unfortunately, also this is rather speculative. It is true that DOs that cannot be dislocated, i.e. that cannot be interpreted as low topics, such as negative polarity items (cf. Cinque 1990), do not trigger agreement (1.63), but not all objects that trigger PPA seem to be interpretable this way.

(1.62) [LowTopicP [v*P [AspP [VP… DO …]]]]

(1.63) No havia **pres** / ***presa** cap rabiada mai.
not have.PST.3Sg take.PP.Def / .PP.FSg no irritation never
'He had never had a fit.' (Salvà i Puig 2017:71)

For the second piece of evidence for (residual) specificity effects in Catalan PPA, I will take into consideration constraints on different verb classes. There are several verb classes that are incompatible with agreement. First, psych verbs generally disallow PPA (1.64). The same applies to the existential verb *haver-hi*. A cursory search in the Corpus de Català Contemporani de la Universitat de Barcelona (CCCUB, http://www.ub.edu/cccub/) and the Corpus Textual Informatitzat de la Llengua Catalana (CTILC, http://ctilc.iec.cat) shows that not even when the

internal argument is preposed (e.g. through cliticization) PPA is common with the existential verb (1.65). However, it is possible to find some instances of PPA with the existential verb in texts until the end of the 19th century, as well as sporadic occurrences during the 20th century (1.66). Neither psych verbs nor existential verbs designate telic events. Hence, the same interaction between aspect – i.e. inner aspect – and PPA is attested.

(1.64) *A mi, la literatura castellana, mai no m' ha **agradada**.
to me the literature Castilian never not CL.1Sg have.3Sg like.PP.FSg
'I've never liked the Castilian literature.'

(1.65) sempre ny'[22] ha rivalidats de lloc com
always CL.Part have.3Sg rivalry.FPl of place as
ha ny' **hagut** sempre, no?
have.FSg CL.Part have.PP.Def always not
'There are always territorial rivalries, as there have always been, isn't it?'
(http://hdl.handle.net/2445/15807, row 78; 15.12.2017)

(1.66) [visites] n' hi havia **hagudes** tantes
[visit.FPl] CL.Part CL.LOC have.PST.3Sg have.PP.FPl so-many.FPl
'there had been so many (visits)'
(Miquel Àngel Riera, "Panorama amb dona", 1983; http://ctilc.iec.cat; 15.12.2017)

Another domain in which the connection between participial aspect and properties of the object DP is visible is found in the definiteness restrictions of absolute small clauses, which are discussed in Vega Vilanova (2016).

3.2.2 Correlations among Object Phenomena

In accordance with the previous discussion, it is expected that there are similar interactions of PPA with object placement, CLD and DOM in Catalan, as those found in French and Italian. There is no clear evidence for object movement in Modern Catalan, but the data on CLD and DOM seem to confirm this prediction.

Compared to Spanish, CLD is quite restricted in Catalan. Even with full pronouns, some speakers consider CLD to be optional (1.67a). CLD with dative arguments is, for speakers with a lower degree of Castilian influence (or a higher degree of Catalan language dominance), not acceptable (1.67b). Only doubling of Experiencer, Possessor or Benefective datives is obligatory (1.67c). The

[22] Strictly speaking, the form *ny'* /ɲ/ must be seen as the fusion of the partitive and the locative clitic.

extension of CLD (and the change from being optional to being obligatory) is a relatively recent innovation (cf. Vega Vilanova et al. [2018] for some more data).

(1.67) a. A la festa només (el) vaig veure a ell.
at the party only CL.Acc.3MSg see.PST.1Sg to him
'I only saw him at the party.'

b. A la inauguració (#li) van donar flors a l'Ada Colau.
at the inauguration CL.Dat.3Sg give.PST.3Pl flowers to the Ada Colau
'At the inauguration, they gave flowers to Ada Colau.'

c. A la noia *(li) agrada la xocolata.
to the girl CL.Dat.3Sg like.3Sg the chocolate
'The girl likes chocolate.'

Remember that Tsakali & Anagnostopoulou (2008) claim that there is a split between languages with CLD and languages with PPA. In Catalan, both phenomena are present. However, whereas PPA is restricted to a small set of constructions in which it is always optional, CLD seems to be extending to new contexts and becoming obligatory. In other words, CLD and PPA are in inverse relation: the progressive loss of PPA goes on a par with the rise of CLD. This can be seen as a typical language change situation, in which the old structure (PPA) is gradually replaced by a newer one (CLD), allowing more or less extended periods of coexistence and optionality. In this sense, a diachronic approach can be more useful than a synchronic perspective to identify which features are the most relevant ones to analyze optionality, and how it emerges and further develops.

DOM too is quite restricted in Catalan. Basically, only personal pronouns are usually differentially marked (cf. Escandell Vidal 2009, and references therein). DOM with full DPs is rare, although there are some generally accepted exceptions (which are irrelevant for the discussion at issue). Rocquet (2013) suggests that PPA is a type of differential marking. According to this, PPA and DOM should exclude each other. Related to this idea, I would like to draw attention on some data that have remained unnoticed so far. Sentence (1.68a), with CLD and DOM, is perfectly acceptable[23] (in consonance with Kayne's generalization). (1.68b), however, is ungrammatical or at least only marginally acceptable: a sentence with CLD/DOM and PPA at the same time is rejected (syntactic doubling is possible, but not 'tripling'). In order to repair this sentence, the

[23] The judgments were provided by Catalan speakers from Southern Catalonia. Other varieties might rate the sentences in (1.68) differently. However, this would not substantially change the fact that, at least for some speakers, the relation between PPA and DOM is evident.

past participle must bear default agreement, as in (1.68a), or the DO must be dislocated, as in (1.68c), which is fine again.

(1.68)	a.	Avui	les	he	**vist**	a elles.	→ √ CLD / DOM
		today	CL.Acc.3FPl	have.1Sg	see.PP.Def	to them.FPl	
	b. *	Avui	les	he	**vistes**	a elles.	→ * CLD/DOM + PPA
	c.	Avui	les	he	**vistes**,	a elles.	→ √ CLRD + PPA
		today	CL.Acc.3FPl	have.1Sg	see.PP.FPl	to them.FPl	
		'I have seen them today.'					

In sum, some effects of definiteness, specificity and/or aspect on PPA, although quite tenuous and scattered around a set of heterogeneous constructions in different varieties, have been attested in Modern Catalan. This provides support to the idea that an explanation of PPA based exclusively on a position rule of the DO with respect to the verb is insufficient: in fact, PPA in Catalan behaves like an interface phenomenon. A diachronic view seems to be more promising when trying to understand why agreement is optional in Catalan (and spoken French) and why there is such a strong tendency across Romance to abolish PPA – giving rise instead to CLD, but a thorough scrutiny of the development from Old to Modern Catalan is still missing (see, however, Gavarró & Massanell 2013). In Part Three, I will present a diachronic study in which I will pay special attention to the role of specificity in the development of participle agreement. I will then argue that this feature and the interface effects attested for PPA are a consequence of syntactic movement and agreement conditions of the DO, and that the loss of agreement is due to grammaticalization and syntactic change, rather than morphological change.

Chapter 4. Recapitulating and Some Prospects

In the first part of my dissertation, I have presented data for the properties of past participle agreement (PPA) in the Romance languages and have discussed former approaches that have tried to explain these data. After presenting the most relevant structures that require agreement in (Standard) French and (Normative) Italian, I have suggested that all different conditions for PPA boil down to a single common constraint: the movement of the DO to a pre-verbal position. Hence, the most common assumption is that agreement emerges if the DO reaches a certain position to the left of the participle. However, it has been shown that a more detailed look reveals that PPA is a multi-factorial phenomenon. The implicational hierarchies by Smith (1995) and Le Bellec (2009) combine various features in a structured way: certain criteria are subordinate to others – the syntactic category of the agreement controller, for instance, is subordinate to the grammatical relation of the argument, and number and gender of the clitic are subordinate to person, which, in turn, is subordinate to the "identity of the DO preceding the verb". Implicational scales, however, are essentially descriptive rather than explicative: they do not provide any reason for the attested dependence of some factors on the others.

Synchronic approaches to PPA have treated the phenomenon as pertaining to different linguistic domains: morphology, syntax, semantics, pragmatics, stylistic… The most influential accounts, however, put emphasis on its structural conditions. Kayne (1985) aspires to unify the syntax of subject-verb agreement and object-verb agreement. His main assumption is that φ-agreement of the verb with core arguments (as well as structural case assignment) is strictly symmetrical and suggests that the participle and the DO are contained in a small clause in which they are involved in a secondary prediction similar to the main predication between subject and finite verb. Building on the split-IP hypothesis by Pollock (1989), Kayne (1989a) refines this idea and postulates dedicated functional projections (AgrS and AgrO) responsible for φ-feature agreement. Agreement is defined as a rigorous Spec-Head relation. As Drijkoningen (1999:41) puts it, "French participle agreement presents one of the clearest examples of the link between visible morphology and overt movement". But, as I have argued above, such approaches run the risk of becoming circular: PPA exists because there is a certain structural position – a specifier higher than the VP – in which the DO agrees with the participle, but the evidence for the existence of this position is precisely the agreement visible on the participle.

I have then addressed the problem of variability and optionality (Chapter 2). These can be characterized within different frameworks: PPA is either an instance of ongoing language change with competing grammars (one with agreement and another one without it) in the line of Kroch (2000), or of an interface phenomenon according to Sorace's (2006) Interface Hypothesis (i.e. a construction that combines information coming from different language modules). Fischer & Vega Vilanova (2018) argue that the Interface Hypothesis predicts more vulnerability of interface phenomena in language contact settings. I have then suggested that interface phenomena are also more vulnerable in language change situations. From either perspective, reference to the diachronic development of PPA seems unavoidable to explain optionality.

In Chapter 2 and 3.2, I have discussed several studies that implicitly treat PPA as an interface phenomenon. Obenauer (1992) and Déprez (1998) argue that PPA correlates with different discourse readings – D-linked with agreement, and non-D-linked without it. Belletti (2008) suggests that the functional material relevant to the object syntax is related to verbal aspect. Also Salvà i Puig (2017) claims that verbal aspect (i.e. telicity or inner aspect) has a direct effect on the realization of agreement in some Balearic varieties of Catalan. Interestingly, similar correlations with specificity and aspect can be found in the analysis of other object constructions, such as object shift/scrambling, DOM and CLD. Therefore, a unified account for all these constructions is desirable, and specificity/definiteness seems to be a perfect candidate. How can this feature be incorporated into the explanation of PPA in Catalan? How are interfaces involved in the analysis?

In spite of the crucial role of language change for an explanation of the optionality of PPA, diachronic research is rare. Traditional accounts center around the grammaticalization process of the auxiliary verb *habere* 'have' from Latin to the modern Romance languages, and the subsequent reanalysis of the small clause in complement position. Detailed empirical data are often unavailable, though. PPA in Old Italian, according to Poletto (2014), already had the same distribution as in Modern Italian (i.e. agreement was governed by object position); Spanish, Portuguese and Romanian had already lost PPA in the first historical documents available. The use of PPA decreases in each Romance language at a different rate, but it can be expected that it will also disappear from the languages that still have it. The Interface Hypothesis explains where variation and change is to be expected, and under which conditions optionality is possibly found. The IH, however, cannot predict how and why the structure changes in the way it does. In fact, the IH does not alter laws of language change, but it makes possible for them to apply. The question remains unanswered: Which are the mechanisms of language change that lead to the loss of PPA?

As I have shown in Chapter 3, Catalan data are consistent with the general picture of French and Italian. Albeit marginally, aspect and definiteness seem to be related to the presence of φ-agreement in the past participle. The case of Majorcan Catalan is especially striking since it is not the positional rule that triggers agreement, but rather the aspectual properties of the verb (Salvà i Puig 2017). The interaction of PPA with CLD and DOM is also an argument in favor of treating PPA in Catalan as an interface phenomenon.

In a nutshell, a diachronic perspective is useful in Catalan too, because

i) purely structural approaches (i.e. relying exclusively on positional criteria) neglect part of the data, which can only be properly understood if one takes into consideration features that perhaps used to play an important role but are reduced to having a minimal impact now (i.e. specificity). A look at former stages, when the effects of this feature in PPA were more evident, may help identify the current function, position and properties of this feature w.r.t. PPA;

ii) PPA behaves as an interface phenomenon and, as such, is especially prone to variation and change. A synchronic analysis would be unable to capture important generalizations about the nature and development of variability; and

iii) the loss of PPA is connected to the rise of DOM and CLD, so that a better understanding of the change concercing participle agreement can help us better understand the development of these other phenomena.

The interplay between general mechanisms of language change and properties of the features involved in object-verb agreement should be the heart of any explanation for PPA in Romance. The question is not trivial: Our assumptions on how language change works (e.g. the possibility and the place of syntactic change, parameter resetting, grammaticalization, etc.) is influenced by the conceptualization of formal features and the morpho-syntactic components of grammar, and vice versa. If grammar, under the premises of the Minimalist Program, is optimally designed to satisfy the interface conditions (Chomsky 1993 and ff.), how can language change be motivated? Givón (1976) already suggested that change begins with pragmatics. According to the new developments on syntactic theory, it is necessary to redefine how pragmatics enters the syntax. Is morphological change a previous step? Or rather the other way round? A wide-spread view is that morphological erosion leads to new syntactic constructions (cf. Roberts 1997, Lightfoot 2002). The loss of morphological case in full DPs, for example, often means the development of fixed word order patterns. In a sense, the Rich Agreement Hypothesis also leans on this idea: Only rich

agreement paradigms on the verb trigger V-to-T movement, whereas the loss of morphological distinctions goes hand in hand with restrictions on verb movement (cf. Koeneman & Zeijlstra 2014 and references therein). Consequently, different agreement patterns (PPA vs. default) must correspond to different syntactic representations. True optionality is unwelcome in MP. But is it not possible that the opposite takes place, i.e. that syntactic changes cause the reorganization of morphological exponents? Indeed, this is the opinion defended in Fischer (2002), building on a much older view by Humboldt (1972 [1822]), Givón (1971:413) ("today's morphology is yesterday's syntax") and Cole et al. (1980), among others. Overt morphology can be a residue of a former syntactic operation that does no longer apply. If the language system fails to find a new meaning or function for a bleached morphological exponent, optionality not linked to differences in interpretation may appear (cf. Fuß [2012] for some cases in which information structure related changes are followed by reanalysis and/or loss of some morpho-syntactic patterns). Accordingly, overt morphology is sometimes an 'embellishment' at PF, a stylistic matter.

Taking all this into consideration, it is now possible to make the objectives of this dissertation more concrete. The analysis of participle agreement (i.e. the description of which feature(s) are involved in PPA) and optionality, a reconsideration of the mechanisms of language change under minimalist assumptions and the relation between syntactic and morphological change were identified as the central concerns of this dissertation in the Introduction. After discussing the role of specificity and aspect w.r.t. PPA in Italian, French and Catalan, it seems that an explanation based on these features would have clear advantages: no vacuous projections are needed and the connection between different object constructions is made explicit if PPA is regarded as an interface phenomenon. These ideas lead to the formulation of the following three sets of hypotheses:

(1.69) *Hypothesis 1: PPA as an interface phenomenon*

a. PPA is not governed by object position, but rather by a semantic/pragmatic feature (definiteness/specificity/aspect). This allows us to analyze PPA as an interface phenomenon, with all the consequences this has (instability, vulnerability to language change, optionality, etc.).

b. The effects of definiteness/specificity can be observed in all diachronic stages of Catalan, but their properties are in constant change. The distinctions expressed by these features may become so opaque that 'true optionality' arises.

(1.70) *Hypothesis 2: different processes of language change that interact in PPA*

a. The pressure of economy principles promotes the change from complex structures (PPA) to simpler ones (default agreement, possibly CLD). This process is unavoidable and irreversible and results in cyclic change.

b. Syntactic change interacts with the grammaticalization of the formal features involved in PPA (aspect, case, definiteness/specificity, φ…), and vice versa. Formal features can thus be relocated in the structure, grammaticalized (i.e. detached from their semantic meaning) or even deleted.

c. Change is cyclical – i.e. if specificity is no longer expressed by PPA, other constructions may adopt this function (e.g. CLD and DOM emerge).

(1.71) *Hypothesis 3: prevalence of syntactic over morphological change*

a. The feature configurations encoded in the lexical items are the first ones to be affected by change. This means that change begins with grammaticalization, (re-)parametrization or syntactic change due to economy principles and the first effects of language change are syntactic (e.g. word order).

b. Morphology can be considered a reflex of syntactic change. In some cases, morphology may remain 'fossilized', thereby giving rise to true morphological optionality as a transitory state after syntactic change has taken place. True optionality (without semantic correlates) is possible, but subject to further change (e.g. deletion of the morphological exponents).

Keeping these hypotheses in mind, in the next chapters I will expose the required theoretical background information and technical tools. I will show that a theory of change that builds on current minimalist assumptions about clause structure and syntactic operations can successfully capture how new parameter settings may emerge in a language. This will be illustrated by the diachronic analysis of subject-verb agreement, with crucial consequences on the null-subject parameter. In Part Three, I will replicate this analysis to object-verb agreement, more specifically, to the development of PPA in Catalan.

PART TWO

Theoretical Background:
Universal Grammar and Language Change

As I have shown in Part One, variability and optionality characterize past participle agreement (PPA) in Romance. Most approaches to explain the distribution of PPA mainly in French and Italian, however, avoid discussing these data. It is commonly assumed that movement to certain pre-verbal positions, secondary to wh-movement or cliticization, is the trigger of PPA, but this can hardly be the whole story. First, these accounts lead to circularity: optional morphology is explained as optional movement to a specifier position over the past participle. Furthermore, subtle interactions of agreement with semantic readings of the clause (i.e. definiteness and specificity), aspectual properties of the verb and other phenomena concerning object syntax such as DOM/CLD and object movement have been attested. For these reasons, I have suggested that a diachronic analysis can shed more light not only on how PPA works and how optionality should be understood, but also on the other related phenomena, especially CLD and DOM. The Interface Hypothesis (Platzack 1999, Sorace 2006, Fischer & Gabriel 2016, and others) offers a framework that tries to put apparent optionality in place: Since phenomena that involve properties located in more than one linguistic module (syntax, morphology, semantics, pragmatics, phonology) are more difficult to process than phenomena belonging to a single domain, these are more instable in first and second language acquisition. Consequently, interface phenomena are more vulnerable in language contact situations (cf. Fischer & Vega Vilanova 2018) and probably in language change too. The diversification of the contexts that trigger PPA in the different Romance languages and the relatively high amount of optionality found within each language, thus, are predicted by the IH.

In Chapter 2 and Chapter 3, I have shown some effects of aspect and specificity on PPA. In the following chapters, I will try to account for these facts and argue that the grammaticalization of formal features (case and φ) has a direct effect on syntactic agreement and movement, but that specificity itself is not coded in the syntax. Rather, specific readings emerge as the conceptual-intentional interface interprets the syntactic output. The mapping of specificity to particular syntactic structures and morphological exponents requires the integration of information at

several linguistic modules and at several interfaces, but this process takes place in any utterance and any kind of construction, hence the greater instability of certain phenomena should not be explained by the integration of information stemming from different linguistic modules, but rather by the complexity of the structures that are mapped to interface representations. In this context, one could wonder where language change resides: Does the trigger of language change – in this case, the loss of PPA – reside in narrow syntax, or rather in a readjustment of the mapping between semantic and morpho-syntactic features? In my proposal, language change is initiated in syntactic constructions constrained by pragmatic requirements that lead to doubling structures. Syntactic agreement and the grammaticalization of formal features, the first stage of certain type of language change, are repair mechanisms for complex structures. Under these assumptions, I will reconsider the status of optionality: It is driven, or at least constrained, by internal forces of language change. Occasional cases of 'true optionality' can be considered secondary effects of a grammaticalization process. The loss of PPA will illustrate this approach.

Some theoretical tools are needed before testing the hypotheses with respect to optionality of PPA, the mechanisms of language change and the relation between syntactic and morphological change formulated in Chapter 4. In Chapter 5, I will discuss current debates on the nature of syntax and the place of variation in syntactic theory, directly derived from new conceptions on universal grammar (UG) and parametrization. I will also pay special attention to the properties of formal features and the syntactic operations they trigger, especially *Agree*. Chapter 6 is devoted to grammaticalization as one of the most prominent processes of language change. The goal of this chapter is not to offer an exhaustive overview of the research in this field, but rather to pinpoint some of the elements needed for the analysis of PPA and, more generally, to scrutinize the interaction between the different processes of language change (grammaticalization, parametrization and economy-driven syntactic change), which is still not fully understood. Advances in this field may help to improve our understanding of syntactic mechanisms and the lexicon. I will suggest redefining the notion of grammaticalization at the level of formal features (cf. van Gelderen 2011). In Chapter 7, I will apply the proposals developed so far to the anaylsis of subject-verb agreement, both from a synchronic and a diachronic perspective.

Chapter 5. On Clausal Structure and Universal Grammar

The advent of generative linguistics has supposed a paradigm shift. One of its central claims was the rejection of the behaviorist view on language acquisition, dominant at that time. Observations on first language acquisition led to the formulation of the so-called 'Plato's problem' or poverty of stimulus, namely, "the problem of explaining how we can know so much" about language with limited experience (Chomsky 1986:xxv). The most natural answer to this was the postulation of a 'universal grammar' (UG), common to all human beings, which contains certain invariable information, called principles, and their respective variables, called parameters, i.e. a space for language-specific choices among a probably pre-determined set of properties.

The basic idea of a UG organized as a universal set of principles and parameters was extremely well accepted and inspired a bulk of papers trying to identify which (universal) principles and, especially, which parameters should be considered part of UG. This led to a proliferation of the number of postulated parameters. Very soon, the need for a simplification or reduction of the computational burden ascribed to UG arose. The original model was then subject to successive modifications, which have ultimately crystallized in the 'Minimalist Program' (Chomsky 1993, and subsequent works). The changes range from the syntactic elements and operations that are assumed in grammar, to the very nature of the syntactic computation and syntactic representations. In this chapter, I will take a brief look at the motivation for these changes and how syntactic structure, parametrization and variation, formal features, syntactic dependencies and syntactic operations are conceptualized.

5.1 Universal Grammar and the Clausal Spine

The standard Principles and Parameters approach has often been compared to a switch box (Chomsky 1986). The principles stored in UG are open to different parametric values that are fixed during first language acquisition. Among the best-known examples are the Extended Projection Principle (EPP) and the null-subject-parameter. According to the EPP, Spec,IP, i.e. the subject position, must be obligatorily filled in all languages, i.e. EPP is a universally valid principle of UG. Now, the EPP is associated with the null-subject parameter: the language learner has the choice between filling Spec,IP overtly at all times, either by using a full subject DP or an expletive

constituent as is the case in French and English, or allowing empty categories (*pro* or *PRO*) to occupy this position as in the case of null-subject languages such as Spanish and Japanese (for further discussion see Chomsky 1981, Rizzi 1982 and D'Alessandro 2015, among many others). Under this view, language acquisition consists of fixing parameters to the values deduced from the linguistic input – a task that resembles a situation in which the learner stands in front of a switch box. Every switch in the box corresponds to a different parameter. Initially, all switches point to a 'default' or 'unmarked' position. If the linguistic input provides positive evidence incompatible with the default value, the learner can turn the switch on or off, respectively. The acquisition process is completed when all the switches have been turned to the right position according to the input of the target language.

This view had evident advantages. With the help of this model, it was possible to make clear and falsifiable predictions for language acquisition and define the uppermost limits for the variation of human language (i.e. the limits of UG). However, it is also the case that, lacking rigorous criteria for the formulation of parameters, their number may increase to the point that they are not distinguishable from construction-specific rules (Newmeyer 2004). An even more serious drawback of the proliferation of parameters is the fact that they end up contradicting the main purpose of the parametric theory, namely, shaping a representation of UG tenable from a cognitive and evolutionary perspective (e.g. Boeckx 2011, Fodor & Sakas 2016, and references therein). It is therefore necessary to constrain the content of UG to only a few indispensable elements.

Operations that had been considered part of UG are now ascribed to general cognitive processes not specific to language. Language variation is conceived as an "emergent property of the three factors of language design" (Holmberg & Roberts 2014:61), which, according to Chomsky (2005:6), are:

(2.1) *Three factors of language design*

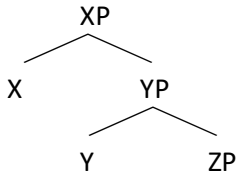
F1: the genetic endowment, UG.
F2: the environment: Primary Linguistic Data (PLD) for language acquisition.
F3: General principles of computation and cognition (e.g. Feature Economy and Input Generalization)

(taken from Holmberg & Roberts 2014 and Biberauer & Roberts 2015)

In addition to a reformulation of the notion of parametrization (which I will address in Chapter 5.2), minimalist ideas brought a drastical reduction of syntactic mechanisms and levels of representation (see e.g. Hornstein & Nunes 2008, Hornstein 2009, among many others). More

specifically, it is assumed that the only language-specific operation is *Merge*, i.e. the creation of new syntactic objects (SO) by assembling smaller constituents, and that UG can be reduced to this operation (cf. Chomsky 1995 and ff.). Merge is supposed to apply in an unrestricted way, with the sole limitation of the binary branching condition. Any lexical item (LI) chosen from the lexicon and inserted into the *numeration* (X, Y…) can be combined with other LIs or already built SOs (YP, ZP…) to build a new SO (2.2) through Merge. This operation is recursive until all the LIs in the numeration have been used. To avoid overgeneration, it is assumed (Boeckx 2014, Zeijlstra 2016, Müller 2017, etc.) that LIs are endowed with an ordered set of structure-building (or selectional) features, reminiscent of the older notion of subcategorization. Thus, the motivation for Merge is found in the requirement of the formal features carried by the LIs. A transitive verb V, for instance, is equipped with a [D] feature that must be satisfied by a nominal LI (or syntactic object, SO) merged with this verb.

(2.2)



Syntactic movement is understood as a special case of Merge, namely *internal Merge*, which replaces the operation *Move*, as it was formulated earlier. The mechanisms are roughly the same. The requirements of a feature (i.e. a selectional or formal feature, loosely linked to a semantic content) are complied by merging an element in the appropriate syntactic configuration. This element can be directly introduced from the lexicon through the numeration (i.e. externally merged, *eMerge*) or it can be 're-merged' within the derivation (i.e. moved or internally merged, *iMerge*). In sum, the notion of feature is crucial in current syntactic theories (cf. Adger & Svenonius 2011)[24].

A logical consequence of these assumptions is that the clausal spine does not form part of UG any more (contra e.g. Cinque 1999). The system described here is derivational rather than representational. Merged elements do not fill a gap in a pre-existing syntactic structure, but syntactic structure grows as the derivation continues. The view that the whole collection of functional projections is contained in our innate language knowledge (with the cartographic

[24] More recently, Chomsky (2013, 2015) has introduced a further development of another well-formedness condition on merged SOs, *Labeling*. The labeling algorithm could be responsible for certain types of language change (cf. van Gelderen 2015). However, it does not seem to be relevant for the diachronic analysis of PPA. A detailed discussion of Labeling is thus outside the scope of this paper.

approach as an extreme implementation of this idea) and that these projections are activated or deactivated during language acquistion has been dismissed. Functional material is stored in the lexicon in the form of formal features, probably not even innate, which give rise to different arrays of functional projections, occasionally with different orderings from one language to the other. In sum, the syntactic hierarchy emerges in the course of the syntactic derivation, but is not pre-stored.

Phasehood (see also Chapter 1.2.5 and references therein) can be considered to emerge in a similar fashion. A derivation by phases reduces the cognitive load needed to build a clause, since only sub-arrays of the numeration are computed at once. A phase is what defines spell-out domains (i.e. the sister node of a phase head) and is thus directly related to a language-external module (externalization). Therefore, phasehood does not belong, strictly speaking, to the genetic endowment, but is rather a consequence of cognitive limitations.

Neither formal features, functional projections nor the ordering of Merge are pre-established in UG. Instead, all these properties are encoded in the LIs, which have to be learnt on the basis of positive evidence. The effects of these properties can be manifested in narrow syntax or at the conceptual-intentional and articulatory-perceptual interfaces. Language learners need such visible cues in the input to infer the existence of formal features or functional material in their language. Word order effects, overt morphology or semantic-pragmatic readings can serve as appropriate cues. In Chapter 10, I will argue that some functional projections or formal features concerning the DO can also be absent in some languages. In the absence of unambiguous cues, certain features may disappear (i.e. they are not encoded in the LIs any longer), which has direct consequences in language change – e.g. the loss of participle agreement.

5.2 Parameters and Variation

A further consequence of a conception of UG and the syntactic derivation guided by feature-driven Merge is that syntactic structures allow for a high degree of variation from one language to the other – and even within the same language. If LIs contain ordered sequences of selectional and formal features, the syntactic output must already be determined in the lexicon. Hence, the properties of the syntactic features are not pre-established in UG, but rather acquired during the acquisition of lexical entries (which does not necessarily mean that a language without formal features can exist).

In contrast to the attested superficial variation, the invariance of syntax has been a desideratum of generative syntax. Kayne's (1994) Linear Correspondence Axiom, according to which complements are obligatorily right-adjoined and specifiers left-adjoined, is but one example. Variation is thus a problem of linearization, i.e. PF (e.g. Chomsky 2007). Under this view, Merge has no directionality. A merged SO has no information about whether the head is placed before or after the complement. An additional rule must generate the final string.

Variation in core syntax is also banned by the Chomsky-Borer Conjecture, which Baker (2008) formulates as follows:

(2.3) All parameters of variation are attributable to differences in features of particular items (e.g. the functional heads) in the lexicon.

(Baker 2008:353)

Inflectional elements, in particular, are responsible for cross-linguistic variation. A functional head H may be endowed with the feature F in one language but not in the other. In turn, F may have different values in different languages, which come along with different requirements. These requirements are ultimately mirrored in morphology, word order and, more generally, in properties at the externalization component. In this sense, when I use the term 'syntactic change', I refer to changes in the output representations, which are generated by syntactic mechanisms – Merge, Move, Agree – that are themselves invariable.

Under these premises, a reformulation of the notion of parameter and parameter setting has been proposed (e.g. Roberts 2012, Holmberg & Roberts 2014, Biberauer & Roberts 2015; see also Newmeyer 2004, and Gallego 2011, and references therein for a critical examination). Parameters are set in the lexicon, more concretely in the functional elements of the lexicon, since they are encoded in the features contained in the lexical entries. This was certainly an appropriate move toward a simplification of the grammar, since it led to a drastic reduction of the number of possible parameters: not every conceivable language-specific rule qualifies as a parameter, but only the properties of a restricted set of features of functional categories. Under this view, parameters are themselves not part of UG, but they rather 'emerge' from the interaction of the three factors of language design (2.1). Parameters are then organized in hierarchies that depend on third-factor strategies that serve as a guide for the learning process. Biberauer & Roberts (2015), for example, identify two such third-factor strategies: Input Generalization and Feature Economy (2.4).

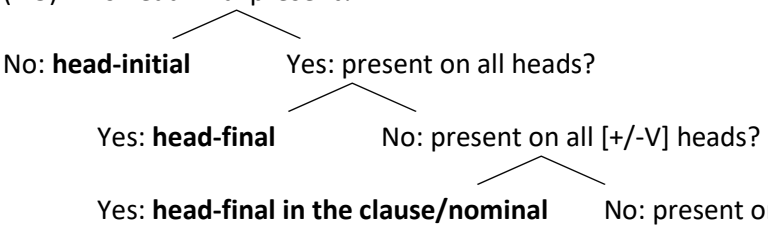
(2.4) (i) Feature Economy: postulate as few formal features as possible to account for the input

(ii) Input Generalization: if a functional head F sets parameter P_j to value v_i then there is a preference for all functional heads to set P_j to value v_i.

(Biberauer & Roberts 2015:300)

Through the combined application of these two principles, they develop parameter hierarchies like the one in (2.5).

(2.5) Is head-final present?



(Biberauer & Roberts 2015:301)

Basically, there are two ways of how formal features can modify output representations and generate variation:

1) Formal features can enter the numeration either one by one, or as feature bundles linked to a single morphological chunk (but see Boeckx 2014 for criticism on the possibility of complex LIs; for him, feature bundles presuppose a 'pre-syntactic' assemblage, which is built according to the same principles and restrictions as SOs). Feature bundles engage in syntactic operations as a unit. Hence, some languages show a consistently cartographic disposition correlating with a rather analytic morphology, whereas other languages have the tendency to combine features and make extensive use of fusional/synthetic morphological exponents.

2) Formal features have relative freedom to be attached to different LIs, thus giving rise to different syntactic derivations. Assuming that LIs are endowed with sequences of selectional and formal features which determine the order in which their requirements must be satisfied, there can be variation concerning the features encoded in a certain LI and regarding the moment when these features become relevant for the derivation.

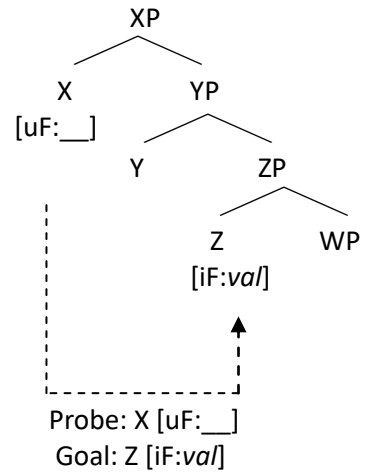
All these factors will be reflected in the surface variation of the clausal structure. In sum, formal features in current syntactic theory are more prominent than in previous frameworks: many syntactic operations depend on the requirements of formal features. Formal features also provide an explanation for variation and parametrization.

5.3 Formal Features and Agree

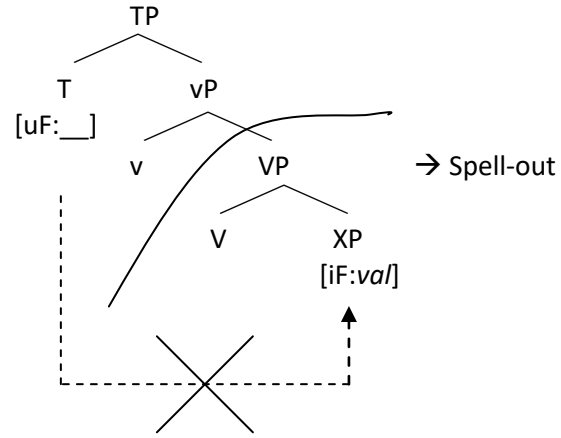
Agree is possibly the most basic syntactic operation after Merge. It can be simply defined as a matching operation between two or more syntactic elements[25]. In a feature-driven account for Merge, Agree is needed from the very first step of the derivation: in a successfully merged SO, the complement must satisfy (i.e. match) the selectional features of the head. Syntactic (or formal) features are features manipulated by narrow syntax – unlike semantic and phonological features, which are directly interpreted by the interfaces (Zeijlstra 2012). Though, there is no consent about the configurations in which feature matching is possible for Agree. In one of the most popular approaches (Chomsky 1995, 2000, 2001), it is assumed that formal features are divided into interpretable and uninterpretable features. This distinction roughly correlates with their semantic equivalents. Interpretable features are endowed with a value ([iF:*val*]) which is transmitted to the valueless uninterpretable features ([uF:__]) in a valuation/interpretability biconditional correspondence (cf. Chomsky's 2001:5). It is further assumed that at spell-out all features contained in the derivation must be legible by the interfaces (LF and PF), as formulated in the Full Interpretation Principle in Chomsky (1995). Uninterpretable features are not legible at the interface and are, therefore, deleted after valuation. In this sense, uninterpretable features are the driving force behind syntactic derivation – more technically, they have been characterized as probes searching for an appropriate goal in their c-command domain (2.6). In contrast, interpretable features are syntactically inert: they do not contain any requirement that has to be fulfilled. This leads to difficulties if the goal is in a lower phase than the probe, e.g. v (2.7): it is accessible to the probe only if it 'escapes' spell-out moving to the phase edge (i.e. Spec,vP), but what can the motivation be to move there?

[25] Of course, this concerns only syntactic agreement ("Agree-Link") and not necessarily morphological agreement ("Agree-Copy"), which can be rather understood as a post-syntactic operation (cf. Bobaljik 2008, Himmelreich 2017). The relation between syntax and morphology, however, is a very controversial issue. Some aspect of this will be discussed in Chapter 6.

(2.6)



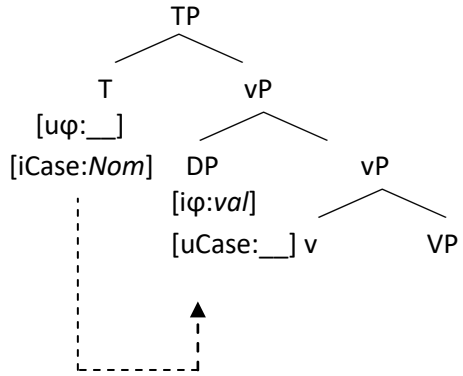
(2.7)



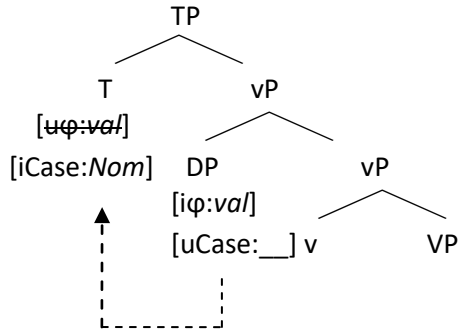
In order to keep the goal active – thus accessible – for the probe, it must have some other uninterpretable feature that has to be checked and deleted. This has been formulated as the Activity Condition (Chomsky 2001, but see Nevins 2005 and Zeijlstra 2012 for critical revisions), which is reminiscent of the principle *Greed* in Chomsky (1993): Syntactic operations affect only elements that still have unsatisfied requirements (i.e. an [uF]).

Subject-verb agreement is a good illustration of such a case (2.8). T° has an interpretable (and valued) case feature [iCase:Nom] and uninterpretable φ-features [uφ]. Because of these uninterpretable features, T° acts as a probe. The external argument carries interpretable φ-features [iφ] but needs a value for the uninterpretable case [uCase:__] (2.8a). Due to its uninterpretable case, the external argument is syntactically active and qualifies as a proper goal for the probe in T°. Once the φ-features of T° are valued and, consequently, deleted, the uninterpretable case of the DP is valuated in return, and deleted as well (2.8b-c) (i.e. 'reverse agreement'). Since no uninterpretable features are left, the derivation may proceed. Overt movement to Spec,TP is explained by the strength of the feature in T° (e.g. Chomsky 1993), the presence of an additional EPP feature, or similar devices.

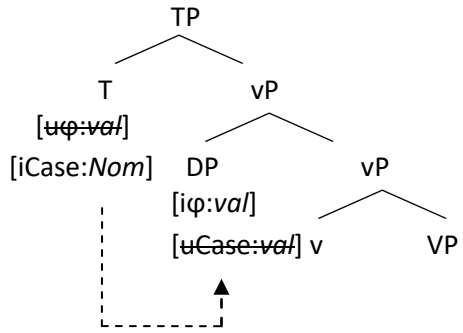
(2.8) a. 1st step: the probe in T° [uφ] searches a goal



b. 2nd step: (upward) valuation and deletion of [uφ] in T°, and 'reverse agree' for case



c. 3rd step: (downward) valuation and deletion of [uCase] in the DP (external argument)



In sum, movement (i.e. iMerge) is mainly motivated by agreement restrictions: unchecked [uFs] must be displaced at least as far as to the edge of the phase in order to avoid being sent to spell-out before their requirements are satisfied – which would make the derivation crash. Further movement must then be motivated by different features (EPP, edge features, or others).

This model, however, has several shortcomings, as Zeijlstra (2012) points out. Reverse agree, multiple agree and concord do not fit in very well with this account. Also, intermediate steps by successive cyclic movement and the EPP-feature itself remain unmotivated.

To begin with, the strict correspondence of interpretability and valuation has been challenged (cf. Pesetsky & Torrego 2004, 2007, Bošković 2011). Interpretability and valuation are two independent properties that give rise to four conceivable combinations of formal features (2.9).

(2.9) iF:*val* (interpretable valued feature)
iF:___ (interpretable unvalued feature)
uF:*val* (uninterpretable valued feature)
uF:___ (uninterpretable unvalued feature)

According to this, there is a shift in the definition of Agree: The decisive property of it is not checking and deleting, but rather valuation, a process that forms agreement chains through feature sharing. In this way, Agree can connect more than two constituents simultaneously. There are of course some restrictions: All members of the chain must have occurrences of the same feature and only one occurrence can be interpretable – the semantic meaning linked to the feature will be interpreted at this position after spell-out (cf. Brody 1997). Once the chain is formed, all members will share the same value. A positive outcome of this approach is that the deletion of uninterpretable features through valuation (a process that lacked theoretical motivation in former approaches) is no longer problematic: All uninterpretable occurrences of the feature are members of a single chain sent to the interfaces as a unit. It is the whole chain that is interpretable or not, and there is no need to 'deleting' unwanted members.

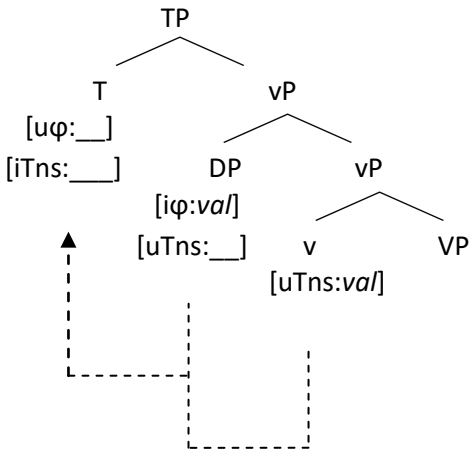
According to these assumptions, Pesetsky and Torrego propose a revision of the analysis of subject-verb agreement in which they make use of three of these four categories. Their first observation is that only tensed clauses can assign nominative case to the external argument. The subject of infinitival clauses in English, for instance, is assigned accusative case from the main verb (2.10).

(2.10) John believes [**him** to have won].

From this they conclude that nominative case is not just an additional feature adjoined to T: Tense and nominative are manifestations of a single feature Tense [Tns]. In verbal elements, it is interpreted as a temporal specification; in nominal elements, it is externalized as case. This feature is interpreted under T°, but the feature itself is unvalued – [iTns:__]. The verb in v, however, has a value for [Tns] (since it carries differential temporal morphology), although this feature is not interpretable in that position – [uTns:*val*]. Finally, the subject DP must check nominative case, which by definition is an unvalued uninterpretable feature – [uTns:__]. The resulting chain is shown in (2.11). In chapter 7, I will adapt this proposal to the diachronic data on subject-

verb agreement. In turn, this analysis will set up the basis for the explanation of the development of PPA in Catalan in subsequent chapters.

(2.11) *Upwards valuation (feature sharing)*



Another controversial question is the identification of the structural conditions for Agree, i.e. which configurations make Agree possible: either [uF] probes downwards into its c-command domain (Chomsky 2001, Epstein & Seely 2006, Preminger 2013, Preminger & Polinsky 2015, etc.), or the other way round (Zeijlstra 2012, Bjorkman & Zeijlstra 2014), or both (Baker 2008, Carstens 2016, Schütze 2016). For the sake of simplicity I will assume upwards probing/downward valuation, although nothing suggests the opposite position is untenable.

According to Zeijlstra (2012:113), although semantic features are naturally associated with interpretable formal features [iF], formal features are strictly syntactic artifacts. They contribute to syntactic cohesion and can thus only show up in pairs (or chains) combining [iF] and [uF]. Agree is primarily a checking operation: Feature-checking ensures the syntactic well-formedness of the derivation, whereas valuation may occur independently of checking, even post-syntactically (controlled by their checker, by other features in the right configuration, or acquiring a default value when the proper controller is missing).

Chapter 6. On Grammaticalization and Language Change

6.1 Basic Notions on Grammaticalization

One frequently discussed process of language change is grammaticalization. Ever since Meillet (1965 [1912]) coined the term, grammaticalization has often been defined as the process of lexical material becoming functional, or functional material becoming even more functional (Kuryłowicz 1965, Roberts & Roussou 2003, Roberts 2007, etc.). In other words, grammaticalization leads to the creation of functional morphemes out of already existing morphological material. Generative approaches to grammaticalization have interpreted this as a change in the structural position where certain features or lexical items are inserted. This has led to principles such as 'Merge-over-Move' (e.g. Roberts & Roussou 2003, van Gelderen 2004): Lexical pieces are inserted as high as possible in the structure in order to avoid 'costly' syntactic operations (e.g. Move). Under this view, grammaticalization is motivated by the preference for more economical derivations (see also Fischer 2002, 2007, Fuß 2017, etc.).

Interestingly, grammaticalization has also been connected to the properties of functional categories. The strength of functional features, for instance, can be modified as a consequence of a grammaticalization process. This means that overt vs. covert movement is a visible effect of grammaticalization. However, assuming that formal features are the locus of parametric variation, these effects are far of being harmless (recall Chapter 5.2). The relation between grammaticalization and parametrization thus has to be more profound. Understanding this relation could shed light not only on how grammaticalization works under the recent developments within the Minimalist Program, but also on how the lexicon is composed.

As Roberts (2007) claims, grammaticalization can be subsumed under the concept of reanalysis and parametric change. If grammaticalization (an operation that creates or modifies functional material) operates at the feature level as well – an idea that will be extensively discussed in the next section, and will be central in the analysis of the diachronic development of PPA – then the relation with parametrization follows automatically: Parameters emerge from the value specification and properties of the formal features stored in the LIs, especially in functional heads, which are precisely the targets of grammaticalization. Thus, a manipulation of the formal features in the lexicon through grammaticalization may lead to new parameter settings.

As a consequence of the shift from a lexical item to functional material, a redistribution of the formal, semantic and phonological features contained in the LIs is often involved. The semantic content of a verb or a noun, for example, can take on a more abstract meaning to the point that it is 'reanalyzed' as the expression of a formal feature engaged in agreement relations between clausal constituents. This becomes especially obvious in the case of verbs of movement ('go', 'come'), which are frequently bleached of their original meaning and reinterpreted as tense markers (for the future and past, respectively). As full verbs, they are merged within VP and keep their full meaning and argumental properties. After grammaticalization occurs, they are placed higher in the structure (e.g. TP) and select a main verb as complement. The grammaticalization might not stop there. If it continues, the newly formed function word (i.e. the auxiliary verb expressing tense relations) may cliticize and attach to a host (generally, the main verb). If, in addition, it loses its phonological autonomy, it may end up as a verbal affix. This is exactly the kind of change found in the formation of Romance synthetic future tenses. The full verb of possession HABEO in Latin undergoes a grammaticalization process and is reanalyzed as an auxiliary (see Macpherson [1967] and the discussion in Chapter 1.2.1; see also Roberts [1993]). In addition to the aspectual value of the auxiliary *haver* in Old Romance, it had a modal deontic use, which further grammaticalized into a temporal future value (*I have to sing* > *I will sing*). The new form then cliticizes to the main verb (allowing temporarily for mesocliticization) and eventually becomes a verbal affix, fully integrated in the verbal morphological paradigm, in the end (2.12).

(2.12) CANTARE HABEO > cantar he > cantar-he > cantaré
'I will sing'

On a more abstract level, this kind of change has been captured in a 'grammaticalization cline' (e.g. Hopper & Traugott 2003, Eckardt 2012), applicable to a disparity of grammaticalization phenomena:

(2.13) content word > function word > clitic > affix > Ø

In a sense, grammaticalization is handled as a primarily descriptive tool. It describes patterns of semantic, syntactic, morphological and phonological changes of LIs. Structuralist approaches to grammaticalization abound (Lehmann 1995, Traugott & Heine 1991, Campbell & Janda 2001, Hopper & Traugott 2003, among many others). Lehmann (1995), for instance, develops a sophisticated model to determine how grammaticalized an element is. He defines three parameters – weight, cohesion and variability – which, applied to the paradigmatic and the syntagmatic dimensions, result in six independent criteria (Table 2.1). According to the number of criteria an element fulfills, it is possible to localize different items along a grammaticalization

scale: Grammaticalized elements have less weight and variability but more cohesion. So, for example, the auxiliary verb *haver* expressing future tense in Old Spanish is less grammaticalized than the corresponding verbal ending *-é*: the former has a greater positional freedom and phonological autonomy (i.e. more weight and variability, but less cohesion) than the verbal suffix, which is more grammaticalized.

	Paradigmatic	***Syntagmatic***
Weight	Integrity	Structural scope
Cohesion	Paradigmaticity	Bondedness
Variability	Paradigmatic variability	Syntagmatic variability

Table 2.1. Lehmann's (1995) criteria for grammaticalization

Lehmann's paradigm has proved to be a useful tool for analyzing typical cases of grammaticalization, and is generally considered one of the most influential approaches. It sums up the main properties of grammaticalization identified in the literature – i.e. semantic bleaching, morphological reduction, phonetic erosion and obligatorification – in a very systematic way (see also Heine & Kuteva [2005] for a consideration of the influence of language contact in grammaticalization, and Traugott [2010] for a current overview).

6.2 Grammaticalization Clines: From Semantic to Formal Features

Unidirectionality is another important property of grammaticalization (e.g. Givón 1975:96; Langacker 1977:103f; Vincent 1980:56-60, cited by Lehmann 1995). Certainly, the observed tendencies are very strong. Although the possibility to find true cases of 'degrammaticalization' has been the center of much debate (cf. Norde 2009), the mainstream view considers grammaticalization an irreversible unidirectional process. This assumption has given rise to a cyclical conception of grammaticalization (once an element has been fully grammaticalized, the vacant place can now be filled by a new element) reproduced in grammaticalization clines as the one mentioned above (2.13). Fuß (2005 and 2017:479), for example, adapts and expands this cline to the diachronic analysis of agreement markers (affixes) which develop from certain content words (personal pronouns) (2.14). On the one hand, he integrates the classification of pronouns introduced by Cardinaletti & Starke (1999); on the other hand, this cline reflects Sapir's (1970 [1921]) cycle of morphological language types from isolating to agglutinating and flectional

languages. Hence, grammaticalization provides a fruitful and flexible frame for addressing diachronic data.

(2.14) independent pronoun > weak pronoun > clitic pronoun > affixal (agglutinative) agreement marker > fused agreement marker > Ø

Syntactic constituents too (not only 'words') can be placed along a grammaticalization cline (2.15). Givón (1976) observes that clausal topics can be reinterpreted as occupying the subject position (i.e. Spec,TP) at the same time as resumptive pronouns are phonologically reduced and cliticized to the verb as agreement markers – i.e. as inflectional affixes in the verbal paradigm. Emphatic full pronouns can thus undergo the whole process in (2.15). This approach highlights the structural (syntactic) aspects of the process, but is still consistent with the general pattern of (2.13).

(2.15) emphatic full pronoun (topic/focus) > grammatical subject > agreement marker

The development of object clitics in Romance (see Fontana 1993, Bleam 1999, Marchis & Alexiadou 2013, Fischer & Rinke 2013, Anagnostopoulou 2016, etc.) can also be captured by a grammaticalization cline (2.16). Roughly, these accounts link syntactic structure (DP/D/φ) to feature composition (i.e. the number of features the clitic is able to encode) throughout the grammaticalization path. As a consequence of grammaticalization, the complexity of the clitic steadily decreases. This can be seen, for example, in the 3rd person dative clitics, both in Spanish and in Catalan. Sentence (2.17a), with a number mismatch between the clitic and the co-referring DP, is acceptable for many Spanish speakers. The equivalent Catalan sentence in (2.17b), one of the distractors in the questionnaire that will be presented in the Chapter 8, was accepted by all but one of the participants. These data suggest that dative clitics do not encode (or they only optionally encode) [Number] in Modern Spanish and Catalan, which has been taken as evidence for the claim that dative clitics are more advanced on the grammaticalization scale than accusative clitics.

(2.16) DP clitic > D° clitic > φ-feature bundle > Ø

(2.17) a. Le$_i$ di los libros a los niños$_i$.
CL.Dat.3Sg give.PST.1Sg the books to the child.MPl
'I gave the books to the children.'

b. Jo li$_i$ regalaré llibres a totes dues$_i$.
I CL.Dat.3Sg gift.FUT.1Sg books to all two.FPl
'I will give books to both of them.'

The previous examples show that grammaticalization can be applied to different levels, from lexical words to constituents, as well as from a morphological or a syntactic viewpoint. If LIs are understood as feature bundles associated with morphological exponents, a similar cline should be conceivable at the feature level – a type of grammaticalization which possibly underlies the other types described above. This option was already suggested in the characterization of the development of object clitics in (2.16) and has been made explicit by van Gelderen (2011). The process of "lexical material becoming functional" is thus redefined as in (2.18):

(2.18) semantic features > interpretable formal features > uninterpretable formal features

However, this proposal faces two problems. Firstly, it is a matter of fact that LIs lose features (or their values) in the course of time. According to this, the last step of the grammaticalization cline should be the complete loss of the feature at issue. Modern Romance languages, for instance, practically lack dual number, and gender distinctions disappeared in English to a great extent. The loss of formal features is also expected under the assumption of unidirectionality: Formal features are not accumulated but rather replaced by new ones, which come from grammaticalized semantic features stemming from lexical material. Secondly, the distribution of semantic, interpretable and uninterpretable features is at odds with the separation of semantic, formal and phonological features, as proposed in Zeijlstra (2012), which I adopt in my argumentation (see Chapter 5.3). Since semantic and formal features belong to two different layers, they apply to different modules – narrow syntax or LF. This is an important issue that must be taken into consideration for the discussion of the attested interface effects and the role of specificity on the development of PPA. Due to their radical different nature, semantic features cannot be simply 'degraded' to interpretable, or even to uninterpretable features, being deleted from the derivation in this way. This would change the semantic interpretation of the LIs themselves. Late insertion (i.e. post-syntactic insertion) of missing semantic features under certain pragmatic configurations (e.g. Harbour 2003, Brandt & Fuß 2013) should be taken with caution: If late insertion were a common mechanism, interpretation would be fully independent of the output of narrow syntax and its morpho-phonological exponents, in other words, it would be arbitrary. Leonetti (2004) and (2007) makes DOM dependent on definiteness, whereas the specificity effect associated with DOM is obtained inferentially. Hence, late-inserted features seem to depend on the existence of other features already present in the derivation, and are probably limited to a few properly motivated cases. In constrast, formal features, only needed in narrow syntax, can be deleted diachronically without further consequences.

To illustrate this, let us have a look at the number feature. It is uncontroversial that number is a formal feature usually involved in subject-verb agreement. In certain configurations, however, the verb does not agree with 'syntactic' number, but rather with the semantic feature for number. A noun such as *el jurado* 'the jury' in Spanish is formally singular, but designates a collective, so that it is semantically plural (as the English nouns 'police', 'committee', etc.). If *el jurado* is placed in subject position as in (2.19a), agreement depends exclusively on the formal number feature of the DP (i.e singular). If the DP is dislocated (2.19b), the co-referential resumptive *pro* in subject position can agree with it in singular (i.e. according to its formal features) or in plural (i.e. according to its semantic features) (see Sheehan 2006:88). A similar competition between formal gender and semantic gender features has been shown for relative pronouns in German (Wurmbrand 2017).

(2.19) a. El jurado *estaban / estaba presionado.
the jury be.PST.3Pl / be.PST.3Sg pressured
'The jury was pressured.'

b. El jurado, María nos aseguró que estaban presionados.
the jury María us assure.PST.3Sg that be.PST.3Pl pressured
'As for the jury, Mary assured us that the jury was pressured.' (Sheehan 2006:88)

These examples show that semantic features and formal features may, in fact, co-exist. The loss of formal features, thus, does not affect the presence of semantic features at the appropriate place. Since there is no necessity to identify interpretable and semantic features, it is difficult to justify how a semantic feature 'converts' into a formal one, or vice versa.

Also, since the task of formal features is syntactic cohesion, e.g. by triggering syntactic operations such as Merge and Agree, they can only exist in pairs (or sets) with an interpretable and an uninterpretable counterpart. For this reason, isolated interpretable features cannot exist. For (2.18) to meet this requirement, it would be necessary that the corresponding uninterpretable feature is available elsewhere in the lexicon. In this case, grammaticalization of a LI would be dependent on properties found in the entire language system (i.e. the previous existence of a formal feature), but not on the properties of the LI itself. This does not seem to be always the case; otherwise would formal feature always be available, even if not instantiated in the language.

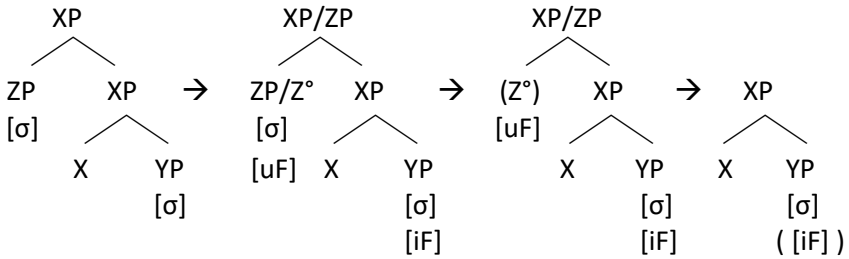
However, the grammaticalization cline of formal features has to make possible to explain the natural link between semantic and formal features. Most formal features still maintain a rather direct relation to the meaning of the semantic features.

In addition to the syntactic function of formal features (i.e. clausal cohesion), formal features emerge as a repair strategy for constructions violating the economy principle. More specifically, I claim that the trigger for the grammaticalization of (new) formal features is the existence of doubling constructions, which contain redundant elements which must be removed by virtue of the economy principle. Therefore, the goal of grammaticalization is the disintegration of the semantic features in one of the doubled constituents. The agreement chain between the formal features replicates the two sets of semantic features in the syntax. The chain can now be sent as a unit to the interfaces, which means that only one member of the chain is needed to interpretation, whereas the other can be deleted.

According to this proposal, the grammaticalization cline is modified as shown in (2.20). The different stages of grammaticalization are represented in (2.21). The emergence of formal features boosts semantic bleaching, phonological reduction and/or structural simplification of one of the members in the doubling structure ([σ] stands in this example for semantic feature). Once the 'anti-economical' construction is removed, formal features themselves dissolve, their mission has been fulfilled. The element with the [uF], phonologically eroded and morphologically reduced, is accordingly eliminated.

(2.20) doubled semantic features [σ] > (simple) [σ] + [iF]/[uF] > simple [σ]+ Ø

(2.21)

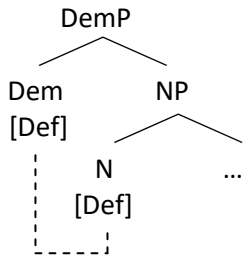


This account reflects the intuition in (2.18) that semantic features are replaced by formal features, but tries to provide a motivation for this. It is still consistent with the principle of "Feature Economy" stated in van Gelderen (2011:17): "Minimize the semantic and interpretable features in the derivation". However, this principle is understood here as two complementary changes – the reduction of semantic features in doubling constructions and the avoidance of formal features once they have accomplished their task.

Doubling constructions are the starting point for a possible language change. Two co-indexed lexical morphemes are redefined as a lexical and a grammatical (functional) morpheme (LEX + LEX → GR + LEX) by grammaticalization. This idea is not new. Givón (1976) already proposed that agreement markers come from resumptive pronouns linked to dislocated constituents. The

emergence of object clitic doubling has also been related to resumption with a dislocated constituent (cf. Gabriel & Rinke 2010). Jespersen's Negation Cycle (Jespersen 1966 [1917]) is probably another case of grammaticalization triggered by doubling structures. The emergence of definite articles from demonstrative pronouns (in Romance and in Germanic languages) can also be understood as a doubling construction followed by grammaticalization. The demonstrative had the same referential features as the DP/NP. In order to avoid redundancy, a formal feature (e.g. definiteness) is paired with the semantic definiteness conveyed by the demonstrative and the noun (2.22). As a consequence, definite articles are grammaticalized. The grammaticalization of auxiliary verbs and clitics could also be due to such configurations.

(2.22)



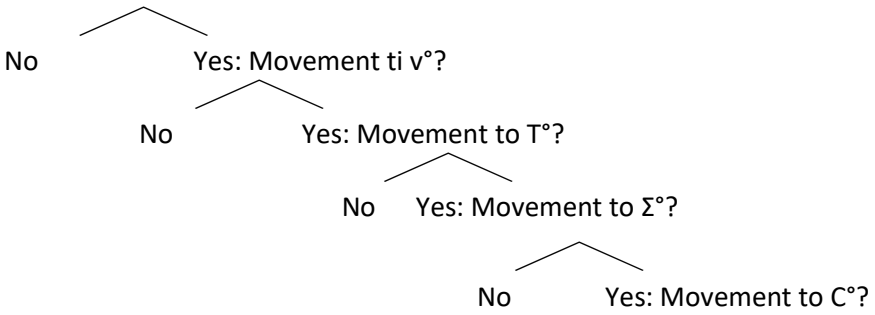
Emphasis or expressivity, or more generally information structure/pragmatics, can be seen as probable sources for the doubling of semantic features. If this is on the right track, grammaticalization cannot be fully understood without taking into consideration language use. If the expressivity of a construction such as CLLD, or the deictic meaning of a demonstrative pronoun bleaches – i.e. if the original use of the construction becomes ambiguous or opaque – a grammaticalization process may start. In this way, pragmatics 'enters' the syntax.

The result of grammaticalization may add new features to the feature repertoire of a language. Clitic doubling, for instance, introduces doubled object φ-features into the derivation. When the clitic grammaticalizes from a DP/D° to an agreement marker, the formerly semantic φ-features may give rise to the introduction of formal φ-features for the object, which trigger object-verb agreement in the syntax. In other cases, already existing features may be associated with a different kind of LI. This would be the case if aspect distinctions, usually encoded in verbal morphology, shift to the nominal domain (i.e. in case alternation). In any case, grammaticalization seems to affect the organization of the features in the mental lexicon.

Assuming that the formal features encoded in LIs are the locus of parameter variation, new parameter choices are expected to emerge from grammaticalization, i.e. the emergence, dissolution or relocation of a formal feature may have effects on (re-)parametrization. This prediction seems to be confirmed (cf. Fischer 2002, 2010, Roberts & Roussou 2003, and Biberauer

& Roberts 2012). Navarro et al. (2017) show that changes on verb movement can be represented in a parameter hierarchy as in (2.23), which means that the position of the verb is constrained by the presence of formal features in certain structural positions, i.e. the feature specification for the different functional heads. As I will show in the next chapter, when the features responsible for subject-verb agreement grammaticalize, a new parameter value for the null-subject parameter may arise.

(2.23) Is there verb movement?



(adapted from Navarro et al. 2017:123)

Additionally, syntactic changes motivated by economy may have an effect on grammaticalization and parameter setting. As will be discussed in Part Three, object-verb agreement in Romance provides a good example of this.

6.3 Morphological Change

It is uncontroversial that grammaticalization goes along with a reduction at all levels (phonological and morphological erosion, feature loss, syntactic simplification, etc.). Examples of free words becoming clitics and affixes are possibly found in any language of the world. If the phonological reduction continues, affixes may end up as zero morphemes. Since the phonological realization (i.e. externalization) is a matter of the articulatory-perceptual interface, the possibility of zero exponents for certain features or LIs is always available. Thus, the absence of morphology does not provide evidence for the loss of a feature, but only for the overt expression of that feature (cf. Koch 1995)[26]. The grammaticalization paths shown in Chapter 6.2, however, leave open the question of whether the loss of formal features is dependent on morpho-phonological erosion or

[26] I do not refer to the cases of null morphology within paradigms. It is extremely common that the unmarked value of a feature does not have overt morphology (e.g. masculine, nominative, present tense…). This null exponent, however, stands in opposition to overt morphology in other forms of the paradigm (e.g. feminine, dependent case, past tense…).

not, i.e. whether morphological change is previous to syntactic change. Several scenarios are imaginable: 1) syntactic change may occur without morphological change; 2) morphological change is possible without syntactic change; 3) syntactic change and morphological change are interdependent; or 4) they are completely independent processes.

Most commonly, it is assumed that the presence of a certain morpheme (categorically) indicates that a syntactic operation has applied, whereas its absence does not say anything about this effect (see discussion in Poletto 2014, and references therein). Syntactic change thus follows morphological change (i.e. phonological reduction) but never precedes it.

There is, however, evidence that suggests that syntactic change is possible independently of morphology (cf. Fischer 2010). Cole et al. (1980), for example, discuss the properties of Experiencer arguments of psych verbs in different languages and conclude that in most cases syntactic subject properties are acquired before subject morphology (basically, nominative case and verb agreement).

Not all kind of features, however, are equally likely to undergo syntactic change. Whereas selectional features, responsible for Merge, are compulsory in the derivation, syntactic/formal features are dispensable. Their main role is syntactic cohesion, and making structural dependencies and hierarchical relations explicit. Since they are to a certain degree accessory (i.e. they are not part of our genetic endowment or UG), they need clear cues so that they can be postulated in language acquisition and maintained diachronically. In this respect, the input must be unambiguous and abundant enough for the learner to parse the relevant features, which are not automatically postulated to be present in a language. The syntactic effects of agreement (e.g. word order and movement) are consistent cues for a successful transmission of formal features. Morphology, however, does not always provide reliable cues due to the possibility of matching the expression of formal features with zero morphemes. But can overt morphology be considered robust evidence for the presence of a formal feature? I think that this is a non-trivial question. Since the link between semantic and formal features is so close, it is difficult to determine whether the morphological exponent responds to the semantic or to the syntactic feature. To answer this question, it would be necessary to find instances of formal features not associated with semantic ones, i.e. features that are only active in the syntax but have no effect on the interpretation at LF.

Assuming a configuration in which syntax has no interpretive effects at LF, if variation in overt morphology does not correlate with a semantic meaning, the use of two or more alternative morphological exponents can be defined as a stylistic choice. It seems to be the case that an

optional variant disappears if the syntactic configuration with which it was previously associated has changed, and it cannot be reinterpreted as reflex of a semantic feature. If this is correct, 'true optionality' would be a transition period before the complete loss of a morpheme. The selection of appropriate morphological exponents (at PF) is usually related to the output of narrow syntax, but it is not necessarily constrained by it all the time (in the same way semantic and formal features usually overlap, although they are conceptually autonomous from each other). In sum, morphology seems to react to syntax rather than guiding it. It seems thus plausible to believe that morphological change may occur after syntax has changed.

To illustrate this point, I will consider the number feature. Dual number is an especially salient notion in our conceptualization of the world and is also a formal feature in several languages (i.e. a possible value for the number feature). In Spanish, as in most modern European languages, there are several expressions for semantic duality (*ambos* 'both', *pareja* 'couple'...). However, there is no morpho-syntactic repercussion of duality (e.g. in the form of agreeing morphology associated with syntactic φ-agreement, as in Old Greek and Old English, for instance). The use of dual markers (*ambas manos* 'both hands' vs. *las manos* 'the hands') does not give rise to any special readings or semantic effects either. It is clear that nowadays [Dual] is a semantic feature in these languages but not a formal one, since there is no overt cue (syntactic or morphological) to acquire (or activate) this feature. Nevertheless, some marginal expressions of duality have been maintained. In sum, the morphological component can keep material of a feature (probably still associated with the semantic value of this feature) after losing the category that supported it.

6.4 Economy and Cyclicity

A concept that has been more or less implicitly present in the preceding exposition is the economy principle. Economy is a recurring topic in language change studies. The reduction of computational complexity lies at the heart of many linguistic changes. Generative definitions of grammaticalization as a strategy to reduce syntactic operations (e.g. merge-over-move) in order to avoid 'costly' derivations are directly derived from the economy principle (cf. Roberts & Roussou 2003, van Gelderen 2004). As van Gelderen (2011) extensively shows, economy is also the trigger for cyclic change[27].

[27] The idea of cyclic changes is, however, older than that. Von der Gabelentz (1891 [1972]), Jespersen (1966 [1917]) and Sapir (1970 [1921]) too have claimed that language change is a cyclical process.

As for the grammaticalization cline proposed in (2.20), economy is responsible for the movement toward simpler structures. Grammaticalization starts with a complex construction due to the doubling of semantic features which depend on pragmatic requirements (e.g. focalization or expressivity). Bleaching the doubled constituent, reducing the number of elements in the numeration, avoiding redundancy, and limiting the amount of syntactic structure (i.e. the need for fewer projections, the formation of a lower number of chains, etc.) are some of the manifestations of the economy principle in the context of grammaticalization. The emergence of formal features, however, does not contribute to a greater simplicity of the structure (cf. van Gelderen 2011 and Biberauer & Roberts 2015 for different formulations of the Feature Economy principle). On the contrary, they introduce an additional operation Agree in narrow syntax. However, this complexity is still preferable to pragmatically marked structures with doubled semantic features, which are supposed to be cognitively more demanding. In fact, such structures often show interface effects (Chapter 2) and thus have a certain amount of ambiguity. If the language learner is not able to identify the original semantic or pragmatic motivation, other parsing strategies will be applied (cf. Fuß 2008, 2012). Hence, formal features are necessary as 'last resort' mechanisms to minimize the complexity or costs of such a construction, or to 'mimic' the input that has become opaque. After this, formal features are eliminated as well.

As soon as the doubled semantic features are simplified and incorporated into narrow syntax as an agreement chain, other elements may reintroduce co-indexed semantic features, arguably for similar reasons as before (information structure, expressivity, etc.). In this way, grammaticalization as a formalization of syntactic features can end up as a cyclical process. The economy principle thus prompts both cyclicity and grammaticalization clines, although other factors (i.e. opacity and parsing failure) must be involved as well. Assuming that the economy principle should be rather understood as a general cognitive strategy that is not language-specific, which is why it is included in what Chomsky (2005) calls the "3rd factor of language design", it is clear that cycliticy and grammaticalization must be conceived as epiphenomena emerging from the interaction of the three factors of language design, instead of being part of UG itself, or primitives of language.

6.5 Summarizing

In this chapter, I have argued that the classical concept of grammaticalization can be perfectly adapted to the current developments on syntactic theorizing exposed in Chapter 5. I have

assumed that formal features, strictly distinct from semantic and phonological features (cf. Zeijlstra 2012), are responsible for the syntactic operations Merge and Agree, and that variation and parametrization are encoded in their properties. In this context, language change processes should be redefined as to apply to the feature level. This makes it possible to identify interrelations between grammaticalization, parametrization and syntactic change in a broader sense.

First, I have focused on the grammaticalization of formal features. After suggesting several conceptual modifications to the proposal in van Gelderen (2011), represented in (2.20) and (2.21), I have argued that the source of grammaticalization is the existence of doubling structures, with duplicated semantic features. Since emphasis, expressivity and, more generally, information structure and pragmatics are the triggers for the introduction of a doubled semantic feature, it can be assumed that syntactic change begins with pragmatics (cf. Givón 1976). This view is also compatible with the IH: phenomena at the (external) interfaces are more vulnerable to language change (cf. Sorace 2006, White 2011, etc.). The creation of a pair (or set) of formal features should be understood as a 'repair strategy' when the meaning of the doubling construction becomes opaque or ambiguous. Once the construction has been 'improved' by eliminating the semantic features of one element, the formal features too undergo grammaticalization and are deleted. I have then discussed the role of (overt) morphology in language change. Formal features undergo the last step of the grammaticalization cline – i.e. deletion – only if there is no robust evidence in the input for their conservation. Word order and movement are solid cues for the existence of formal features in the syntax; morphology, on the contrary, is less reliable: it allows zero exponents (cf. Koch 1995) and it seems that morphology can survive syntactic change (cf. Cole et al. 1980, Fischer 2010, etc.). Finally, I have commented some properties of grammaticalization derived from 3rd factor cognitive strategies (e.g. unidirectionality, cyclicity, etc.). I am convinced that the view on grammaticalization presented here achieves descriptive and explanatory adequacy in compliance with current assumptions in linguistic theory.

In the next chapter, I will illustrate how the grammaticalization cline for formal features can be used to explain the development of subject-verb agreement. I will first adapt the analysis on subject agreement by Pesetsky & Torrego (2004, 2007) and then discuss how variation in the feature composition of LIs (i.e. which features are instantiated in a specific language and how they are bundled and linked to LIs) may interact with economy, mediated by grammaticalization and parametrization processes. This cursory analysis, however, will serve as reference point for the more exhaustive analysis of object agreement (more specifically of PPA) in Part Three.

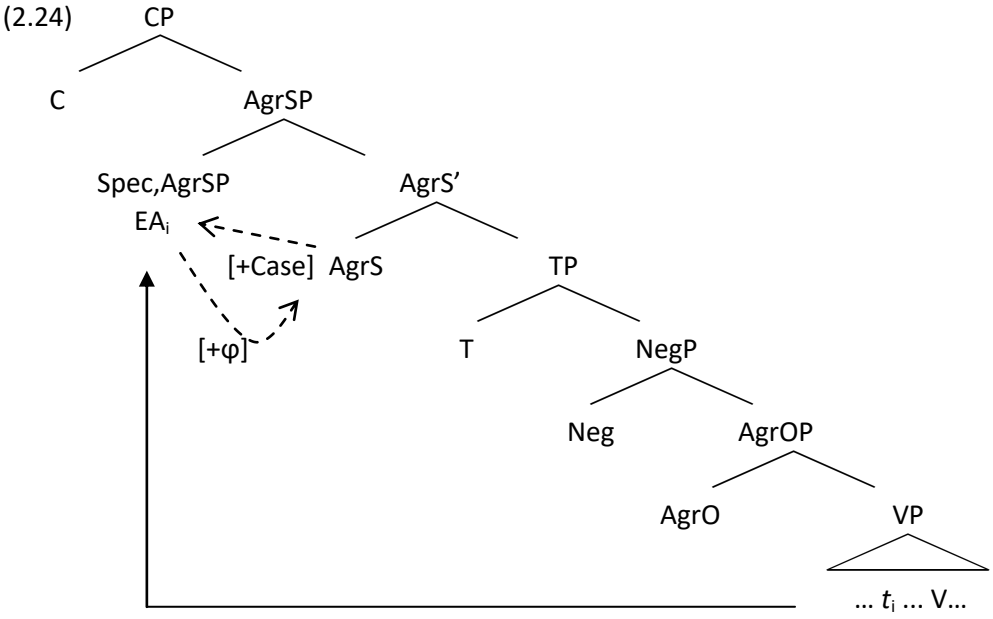
Chapter 7. A New View on Subject-Verb Agreement

7.1 Previous Considerations

Kayne (1985) suggests that any instance of argument-verb agreement should be accounted for by relying on similar mechanisms, namely Spec-Head relations. If PPA, an instance of object agreement, is similar to subject-verb agreement in some relevant way, it will be useful to look into subject agreement in some more detail before turning to object agreement.

It is uncontroversial that the position in which the subject ends up after being overtly moved is a specifier position placed relatively high within TP. This is why a dedicated position – Spec,AgrS – located above Tense has been proposed. Pollock's (1989) split-IP hypothesis justified the distinction between structural and inherent cases: Structural cases were assigned by Agr-heads; inherent case was assigned by a semantically non-empty head to its complement. The subject DP (EA=external argument) then needed to rise to Spec,AgrSP in order to receive nominative case from Agr°. In turn, the nominal φ-features of the subject were transmitted to the verb (2.24).

(2.24)



(2.25) a. [$_{AgrSP}$ La catifa$_i$ [$_{AgrS}$ aterra$_j$ [... [$_{VP}$ t_i t_j a l'aeroport del Prat]]]].
the carpet.FSg land.3Sg at the airport of El Prat

b. [$_{AgrSP}$ Les catifes$_i$ [$_{AgrS}$ aterren$_j$ [... [$_{VP}$ t_i t_j a l'aeroport del Prat]]]].
the carpet.FPl land.3Pl at the airport of El Prat
'The carpet/s lands/land at the airport El Prat.

Many languages, among them most Romance languages, do not show overt movement to the subject position, either because there is no overt subject at all or because it remains in its base-generated position within VP, where it gets a thematic role from the verb. Since Chomsky (1981), however, it has been assumed that the subject position must be obligatorily projected in the structure, which is known as the Extended Projection Principle (EPP). According to this, the (higher) specifier of IP cannot remain empty. For null-subject languages, different empty categories (*pro*/*PRO*) have been postulated to satisfy EPP. The availability of these categories is language-specific, i.e. parametrizable. The null-subject property is thus the result of a parameter that allows or bans the possibility of having an empty category check the EPP (see Rizzi 1982, D'Alessandro 2015, and many others). However, the very existence of *pro* has been amply debated. On the one hand, *pro* has been argued to have the same distributional properties as "weak pronouns" (Cardinaletti & Starke 1999). This means that empty categories can be inserted to delete uninterpretable features (e.g. verbal φ-features) before spell-out (cf. Sheehan 2006, Roberts 2010). On the other hand, many scholars have tried to eliminate null elements from syntactic analyses (Barbosa 1995, Manzini & Savoia 2005, etc.). Alexiadou & Anagnostopoulou (1998) observe that there is a cluster of properties that distinguishes languages of the Germanic type from languages of the Greek and Romance type (2.26).

(2.26)

Germanic languages	**Romance languages / Greek**
SV(O)/Expletive-VS(O) alternation	Free word order (VSO/VOS)
A-status of subjects	A'-status of subjects
Non pro-drop	Pro-drop
Definiteness restrictions (DR) in unaccusatives	No DR with unaccusatives

They propose that all these properties are due to how the EPP feature is satisfied/checked wihin TP: through Move/Merge of either XP or X°. In the latter case, the verbal agreement morphology has "the categorial status of a pronominal element" (Alexiadou & Anagnostopoulou 1998:494) and, as such, it is able to check (and delete) the uninterpretable EPP feature, which is commonly seen as an uninterpretable nominal feature D (cf. Chomsky 1995, Holmberg 2005; recall Chapter 1.2.4: φ-agreement on passive morphology too absorbs theta-role and case, hence it is considered to be argumental). According to Alexiadou & Anagnostopoulou (1998:516), the φ-features of the verbal morphology are interpretable, possibly deriving from their origin as free pronouns. In some cases (e.g. Trentino/Florentino, French), subject clitics may fulfill the same function (i.e. checking EPP as X°), which is not unexpected under the assumption that clitics undergo a grammaticalization process from XP to X° to φ-feature bundles (see Chapter 2).

Summing up, the value for EPP checking admits two parameter settings, which can be diachronically related through the grammaticalization of subject pronouns/subject clitics: 'Move/Merge of XP' and 'Move/Merge of X°'. But what is exactly the effect of grammaticalization on the formal features contained in the different elements involved in subject-verb agreement (free pronouns, clitics, verbal inflection…)? How can different feature configurations be linked to language change and the null-subject parameter?

7.2 Diachronic Stages in Subject-Verb Agreement

At first sight, Romance languages (excepted French and Brazilian Portuguese) show little variation with respect to their subject properties. The constituent order is still relatively free, and null subjects are the norm. However, an increase in the restrictions has been attested in Catalan, Spanish and (European) Portuguese (cf. Martins 1994, Fischer 2002, 2010, Vega Vilanova et al. 2018). In some Spanish varieties, for instance, the canonical SVO order has been extended to contexts where Peninsular Spanish would require VOS due to information structure requirements (cf. Gabriel 2010). Catalan (cf. Vallduví 1994) tends to resort to dislocation strategies in order to organize information structure outside the clause. Presumably, these changes w.r.t. word order are connected to the verb movement parameter (Fischer et al. 2019): Increasing restrictions on the verb position in the syntactic tree come with a reduction of possible A'-positions for the DO within the clause. Does the verb movement parameter also have an effect on subject properties?

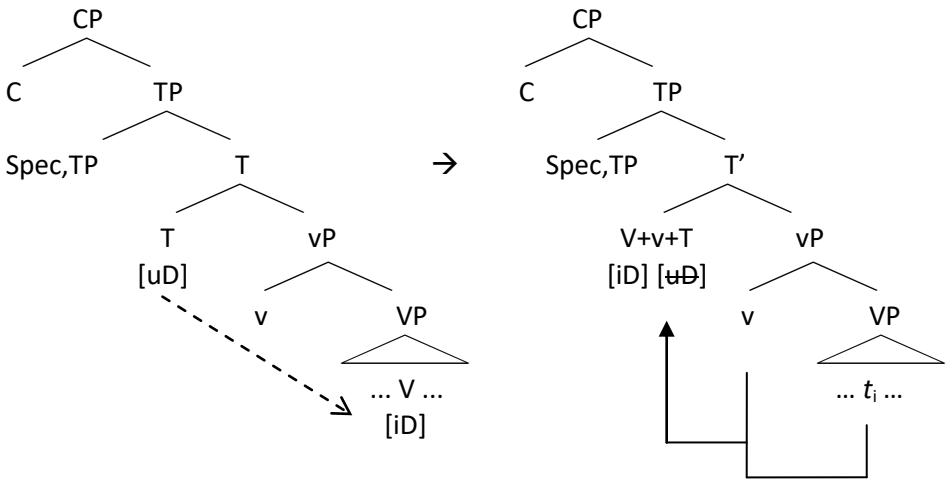
Unlike European Portuguese, Spanish and Catalan, Brazilian Portuguese (BP) and French are not considered pro-drop languages any more. Along with obligatory subjects, a reduction of the morphological richness of the verbal paradigms has been attested, as shown in (2.27): BP has only three different forms (*canto*, *canta*, *cantam*), whereas French has only one distinctive form for 2nd person plural (*chantez*) with the rest of the paradigm being (phonologically) identical ([ʃãt]).

(2.27)

French verbal morphology	**BP verbal morphology**
je chant-e [ʃãt]	(eu) cant-o
tu chant-es [ʃãt]	(você) cant-a
il/elle chant-e [ʃãt]	(el/a) cant-a
on chant-e (chant-ons) [ʃãt]	(a gente) cant-a
vous chant-ez [ʃã.'te]	(vocês) cant-am
ils/elles chant-ent [ʃãt]	(eles/as) cant-am

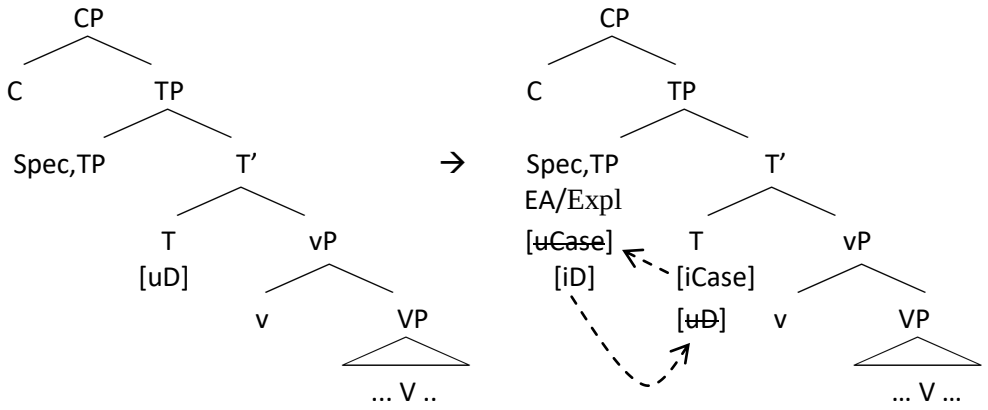
Different types of verb movement have often been ascribed to the morphological properties of the verb, i.e. whether the verb has rich or poor morphology. This is known as the Rich Agreement Hypothesis (cf. Koenemann & Zeijlstra 2014 and references therein). This idea could be integrated to Alexiadou & Anagnostopoulou's (1998) proposal as follows: Since the verb in T° is not accompanied by an overt XP in Spec,TP, verb movement to this position can be interpreted as a solid cue to postulate an interpretable nominal feature [iD] in the verbal flexion; rich agreement thus fulfills a pronominal function and checks/deletes by itself the EPP feature in T° (i.e. an uninterpretable nominal feature [uD], which must be c-commanded by [iD]) (2.28a)[28]. Once the verbal endings lose their pronominal (i.e. referential) property (for reasons that will be explained below), verb movement cannot be motivated any more, and another phrasal constituent has to take the checking of the EPP, be it a subject DP, a personal pronoun, or an expletive. In the latter case, the subject DP needs an additional uninterpretable feature to remain active, thus accessible to T°, namely [uCase]. The subject then raises to Spec,TP to c-command [uD] (2.28b). The main difference with (2.28a) is the landing site of movement: V moves to the head (and checks EPP adjoint to the head position), whereas a subject DP moves to the specifier. Expletives, being inserted directly in Spec,TP, would agree in case by 'reverse Agree' (2.28b).

(2.28) a.



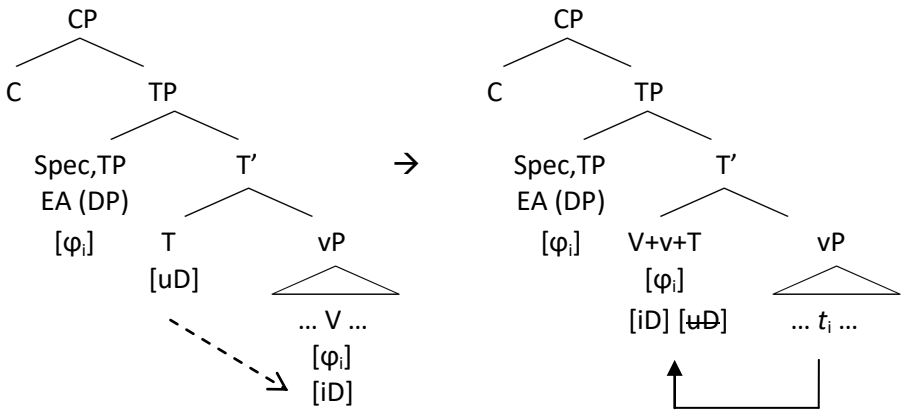
[28] In this and the following examples, I will distinguish between semantic and formal/syntactic features through different coding conventions: semantic features are directly marked by square brackets (e.g. [φ]), whereas formal features are specified for their interpretability (e.g. [iφ] and [uφ]). Solid arrows show movement operations, dashed arrows show the direction of valuation by Agree.

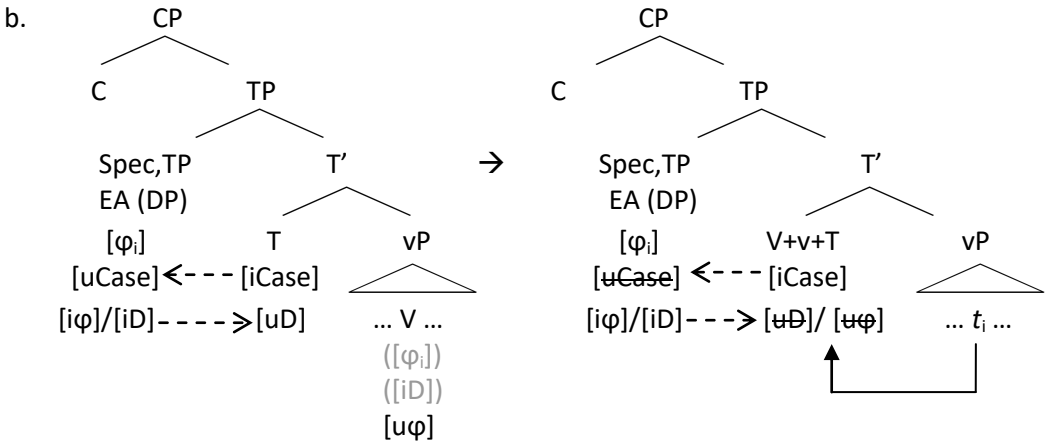
b.



Besides [iD], I assume that the verbal ending with pronominal (referential) nature carries semantic φ-features, which for the sake of simplicity have not been represented in the examples above. An additional overt subject in the structure in (2.28a) must thus be in a non-argumental position, which results in a sort of 'doubling construction'. This DP in A'-position (i.e. Spec,TP is considered to be a non-argumental position) carries semantic φ-features which are co-referent with the semantic φ-features of the verbal ending under T°, as represented in (2.29a). The external argument and the verb are not part of the same agreement chain but are simply co-indexed. The verb raises to T° and checks the EPP feature on its own. If the conditions described in the preceding chapters apply (i.e. opacity of the function of the doubling constituent, high frequency, etc.), the co-referent sets of semantic features can be re-interpreted as a single syntactic chain (2.29b). Since only one occurrence in the chain can be interpretable, the φ-features of the verbal morphology in T° must be modified, the semantic [φ] on the verb can be dispensed with. Consequently, from this moment on verbal endings are non-pronominal (i.e. non-referential): they constitute φ-feature bundles with a function as agreement markers. As exposed above, the verbal morphology cannot longer check the EPP due to its new non-pronominal status and the insertion of other elements c-commanding [uD] is required. Spec,TP is now an A-position where structural case is assigned.

(2.29) a.





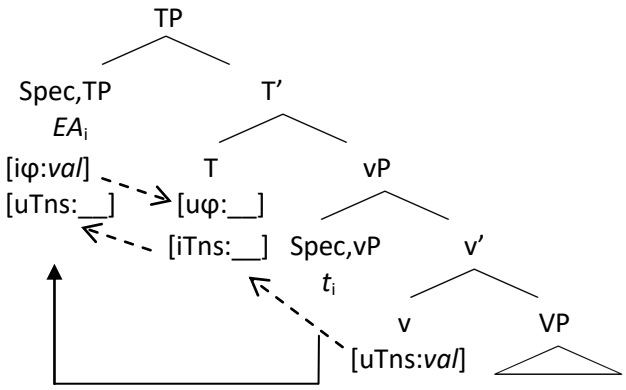
The EPP has a visible effect on linearization, but it is not directly legible for the conceptual-intentional interface. Under these considerations, is it possible to account for the data without making reference to the EPP? Let us assume that syntactic movement is motivated by the need for formal features to agree in the proper configuration – i.e. [uF] is c-commanded by [iF]. The EPP as conceptualized by Holmberg (2005) would then no longer be necessary if we find an [uF] that must be properly dominated and triggers movement.

Recall that nominative case is a manifestation of uninterpretable tense features on the noun (Chapter 5.3). Following Pesetsky & Torrego (2004, 2007), the subject is assigned case via the agreement chain built on [Tense]. As shown above, Pesetsky and Torrego characterize Agree as a valuation operation within 'agreement chains'. Basically, chain formation is subject to two constraints: on the one hand, only one member of the feature chain can be interpretable; on the other hand, the feature value cannot be contradictory among the different occurrences of the feature[29]. Assuming that interpretable features must c-command their uninterpretable counterparts (i.e. upward agree) and that [Tense] is interpretable under T°, the subject DP receives nominative case in situ through value sharing within the agreement chain. The canonical word order, however, must depend on other factors. Verb position is possibly determined by it own restictions (cf. Koeneman & Zeijlstra 2014, and Bobaljik 2008, Zwart 2017, etc. for arguments supporting post-syntactic verb movement). Movement of the subject DP is probably triggered by uninterpretable φ-features on T° rather than case, as commonly assumed. In non-pro-drop languages (such as French, German or English), the verbal morphology is non-pronominal. This means that the verbal φ-features are not semantic but rather (uninterpretable) formal features. For this reason, the subject DP raises to Spec,TP in order to c-command [uφ] there (2.30). In the

[29] Provided that there is no value in the chain for a certain feature, the interface module may reconstruct a default value after spell-out (see Chapter 5.3).

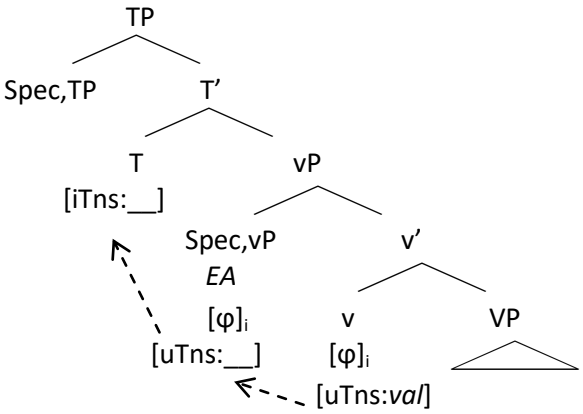
absence of an appropriate DP, another nominal element can be inserted (in some cases with default values) to fill this position and satisfy feature checking before spell-out. From this follows that the obligatory presence of overt subjects must be somehow linked to the status of verbal morphology.

(2.30)



On the contrary, if verbal morphology is pronominal (as in pro-drop languages such as Spanish or Catalan), its φ-features are not necessarily formalized, but still semantic. As a pronominal element, they are able to mark the referent on its own. The presence of an overt subject (generated in a specifier position within VP or elsewhere) introduces a doubled set of semantic features co-referential with those carried by the verb itself (marked with indexes in (2.31)), which are not engaged in syntactic Agree, though. Since [iTns] dominates all uninterpretable instances of [Tns], Agree properly applies and the value in v is shared in the entire agreement chain. Verb placement does not seem to be directly related with verbal morphology in null-subject languages, since it is found as high as C°/T° in some languages (see references in Navarro et al. 2017) but within VP in others, e.g. Chinese (see Huang 1994 among others).

(2.31)



Just like Latin, Old Romance languages used to be null-subject languages. They thus followed the agreement pattern in (2.31).

Overt subjects introduced an additional set of semantic φ-features; hence they gave rise to a doubling construction. This structure has proved to be quite stable, though. As observed by Alexiadou & Anagnostopoulou (1998), the subject position in these languages has A' properties. This could be due to the fact that the subject DP is understood as clause-external (e.g. topicalized) to a certain degree, and does not form a syntactic chain for φ-agreement.

If, for unrelated reasons, the information structural or pragmatic function of the subject DP bleaches – possibly due to the ambiguity between topicality and subjecthood (cf. Li & Thompson 1976) – a grammaticalization process may begin, as described in (2.20). First, the two sets of co-indexed semantic features are integrated in one series. In order to link the two elements, verbal morphology and the subject DP, it is necessary to postulate the existence of formal features that enter an Agree relation with each other – [uφ] is assigned to V and [iφ] to the DP, since the interpretation of these φ-features is nominal reference at LF. Lastly, the semantic features of the (pronominal) verbal morphology may completely disappear due to economy requirements. At the same time, (morpho-)phonological erosion and syntactic simplification of the verbal ending may optionally take place. At this point, the subject DP becomes compulsory and subject-verb agreement responds to the structure in (2.30). The subject should be analyzed as being consistently clause-internal within VP/TP.

The proposed analysis of subject-verb agreement tries to reduce the number of different devices and mechanisms necessary to explain how agreement works and how it has changed over time. I have shown that there is no need to postulate empty categories or an EPP feature, but rather the properties of the features attached to LIs and the conditions of Agree on their own are sufficient to shape the cross-linguistic patterns of subject agreement. Grammaticalization 'improves' doubling constructions that are not readily parsed by reinterpreting them as syntactic Agree. The duplicated semantic features (φ on T° and on the DP) are reanalyzed as a pair of formal features forming a chain for agreement. Semantic features that are irrelevant at LF are deleted. This corresponds to the first step of the grammaticalization cline for formal features.

7.3 Grammaticalization and Change

From the discussion so far, it follows that parametric and diachronic variation can be modelled on the basis of grammaticalization processes of formal features of the verb or the noun. If my analysis is on the right track, φ-features are responsible for subject placement and, indirectly, for the availability of null subject, rather than case (i.e. [uTns]), which remains unaltered. This

account, though, challenges the common assumption that argumental movement to the subject position is due to the Case Filter.

As Zeijlstra (2012) and Bjorkman & Zeijlstra (2014) extensively discuss, Case and φ are inter-dependent. In traditional generative accounts that assume downward probing/upward valuation, the uninterpretable φ-features on T° probe down for a goal within its c-command domain – the interpretable φ on the subject DP. This results in 'reverse agreement' for case: [uCase] in the noun is checked (and valued) against a higher goal in T°. Even if upward agree (i.e. the opposite directionality), as adopted in my approach, allows to eliminate reverse Agree and motivates syntactic movement, the case feature seems to be a conceptual necessity for agreement to take place. The existence of case features renders the goal active for φ-agreement. Without [uCase], the subject DP would not be eligible, not even accessible, for [uφ] on T°. Furthermore, the properties of φ in the verb are the only means by which subject placement can be explained, unless artifacts such as feature strength, diacritics or EPP are assumed.

However, the obligatoriness of nominal case too (licensing the DP to bear argumental function) has been challenged. Diercks (2012), van der Wal (2015) and Sheehan & van der Wal (2016), for example, suggest that Bantu languages lack abstract case. In these languages, it is possible to find double nominative constructions (with the nominative being the unmarked case, i.e. absence of case). The arguments in the clause are arranged according to the animacy hierarchy – a semantic feature inferred from our general knowledge of the world. If the distribution of theta-roles among the arguments does not conform to the animacy hierarchy – i.e. if the subject/agent is not the most animate participant – special verbal morphology is used. Another peculiarity of these languages is the productive use of applicative morphology to mark thematic relations and thus minimize the role of case (cf. Pylkkänen 2002 among many others).

As other formal features, [Tns] is also subject to grammaticalization processes, which means that, under certain circumstances, this feature may gradually disappear. The weakening of case opens the way for the development of new case markers from prepositions with more or less identifiable semantic meanings – a process which is very similar to the emergence of DOM to mark atypical objects. The grammaticalization cline in (2.20) underpins this process, whose last step is the complete omission of the case feature. Theta-role assignment seems to suffice to establish grammatical relations (rather than structural case). In addition, the fact that languages have different case alignments – nominative-accusative, ergative-absolutive, or mixed types – strongly suggests that case is not a necessary universal feature of languages, but rather an emerging property resulting from grammaticalization processes.

The analysis of subject-verb agreement presented here also reveals some interesting effects of grammaticalization (formalization) on syntactic operations and language change phenomena. The requirements of chain formation and feature valuation can trigger syntactic operations (especially movement). Some of these outcomes are quite pervasive in the sense that they can also be captured as parametric variation – i.e. variation manifested by linguistic cues in the input and with clustering effects, as Gallego (2011) puts it. If language is optimally designed to satisfy interface conditions, features that exist only in the syntax, such as formal features, should not be found for economy reasons. However, syntactic features are not only necessary: they can even be considered the most economical alternative to avoid markedness or opacity of structures endowed with two co-referential sets of semantic features. Constructions with doubled semantic features, albeit marked, are quite common. Even if formal features are not economical per se, they are still the best option to reduce parsing problems. Consequently, if a formal feature is not needed in order to rescue a complex structure or does not unambiguously trigger syntactic effects, there is, in principle, no need for the language learner to postulate the existence of such a feature, be it case, φ or a different one.

Since parametric variation is encoded in the formal features attached to LIs, their grammaticalization, conditioned to a certain degree by pragmatics or information structure, may bring along re-parametrization, observable in a number of syntactic effects. In the case of the grammaticalization of subject pronouns, the change from being full DPs to becoming agreement markers involve a change in the null-subject parameter (e.g. subjects must be obligatorily realized), followed by other syntactic effects such as new word order restrictions.

In sum, the whole process of grammaticalization (i.e. the emergence and loss of formal features) is guided by language economy: formal features improve the cognitive burden of semantic doubling, but once their task is fulfilled and there is no syntactic evidence to postulate them, formal features are superfluous and disappear. Still, one question remains open, namely if and to what extent an inverse relationship would be possible – i.e. syntactic phenomena having an effect on the further grammaticalization of certain features, thereby giving rise to new parameter settings. This issue will be discussed in the following chapters.

7.4 Interim Summary

In this part of my dissertation, I have discussed the theoretical background that will be needed for the analysis of participle agreement in Catalan. In Chapter 5, I have exposed some assumptions on

the architecture of grammar and the central role of formal features in syntactic theory. I have also explored some aspects of the relation between morphology and syntax as well as between morphological and syntactic change. Since formal features have been identified as the locus of the most important syntactic operations (i.e. Merge and Agree), variation has been considered under this perspective too. In Chapter 6, I have exposed the main theoretical claims of my dissertation: that grammaticalization applies at the feature level whenever constructions with semantic doubling pose processing difficulties. The emergence of formal features mirroring the semantic ones aims at reducing complexity by interpreting semantic doubling as syntactic agreement. I have argued that several well-known phenomena (negation cycle, emergence of definite articles, etc.) could be explained in this way. In Chapter 7, I have tested these assumptions for the diachronic analysis of subject-verb agreement in Romance. Since it seems to successfully account for this phenomenon, in Part Three I will apply the same framework to object-verb agreement, more specifically to PPA in Catalan.

PART THREE

Object-Verb Agreement: the Grammaticalization of Past Participle Agreement in Catalan

In the preceding chapters, I have provided an overview on the behavior of past participle agreement (PPA) in different Romance languages (mainly French, Italian and Catalan). I have then extensively discussed several previous accounts and argued that almost all of them fail to explain some important aspects of the data. This is due to the fact that they focus on some properties (structural, semantic or pragmatic), while overlooking that agreement involves the interaction of morphology with syntactic constraints as well as aspect and definiteness/specificity, and that several phenomena concerning object syntax (e.g. object movement, clitic doubling and differential object marking) are interconnected. Whereas the idea that position is responsible for PPA seems to prevail (e.g. Rosselló 2002, Poletto 2014, etc.), it has been shown that different readings for certain wh-elements emerge in French as they are used with or without PPA (cf. Obenauer 1992, Déprez 1994, Belletti 2008). Similarly, Salvà i Puig (2017) shows agreement patterns in Majorcan Catalan that depend on aspectual features of the verb and are thus not covered by merely structural approaches. Even though these data are rather marginal, their existence is very revealing of the process of change. Additionally, the variability and optionality attested across Romance and within each Romance language that maintains PPA have to be explained.

A diachronic perspective seems to be more appropriate to deal with all these facts. In fact, all these properties of PPA look like interface effects. As I have suggested above, interface phenomena are supposed to be more vulnerable to language change, therefore a diachronic view is appropriate to properly analyze such interface effects. This does not mean that the positional criterion is not adequate to account for some cases of PPA in certain languages and/or varieties, but position alone will hardly account for the synchronic data in its entirety. In this sense, I regard diachronic evidence as a necessary component in the explanation of PPA, especially w.r.t. its optionality and correlations with aspect, definiteness and/or specificity.

In Part Two, I have claimed that the grammaticalization of the subject φ-features can explain different diachronic stages in the development of subject-verb agreement in Romance (Chapter

7). The proposal presented in Chapter 5 and 6 proved to be adequate to account for this phenomenon. Following Kayne (1984 and ff.), I assume that object-verb agreement (including PPA) shows a behavior parallel to subject-verb agreement. According to Tsakali & Anagnostopoulou (2008), there is variation as for how object features are checked in the syntax – bundled in a single functional head or split among two (or more) heads. As I have done for subject-verb agreement, I will show that the grammaticalization of the verbal φ-features is essential to understand the loss of PPA across Romance. At some stages of the development, agreement seems to interact with accusative case assignment, understood as agreement of an uninterpretable aspect feature on the noun – [uAsp]. This gives rise to specificity effects which, however, will be considered LF effects rather than being syntactically motivated. In addition to grammaticalization, I will show that economy pressures can lead to syntactic change (in a broader sense) or re-parametrization: A reduction in the number of syntactic operations in a derivation – i.e. a preference for bundle-checking over split-checking (cf. Tsakali 2014) – may result in a new distribution of formal features in functional heads. In turn, a consequence of the conflation of these two functional projections is the advance of grammaticalization: If the φ-features in AgrO and Asp conflate under a single functional projection, the actual trigger for movement to the pre-verbal position is concealed. Superfluous features (in this case, the formal φ-features of the participle) are thus deemed to disappear, according to the last step in the grammaticalization cline in (2.20). Finally, I will argue that optional morphological agreement in Modern Romance can be seen as a post-syntactic operation, supporting the claim that syntactic change precedes morphological change.

This section is organized as follows: In Chapter 8 and Chapter 9, I will describe the criteria and data found in a newly compiled corpus for participle agreement in Old Catalan, and the results of an acceptability judgment task testing for some particularly conflicting structures (e.g. the specific vs. non-specific readings of the partitive clitic *en*, etc.) in Modern Catalan. At the end of Chapter 9, I will argue that the collected data can be captured as a cyclic change, directly connected with the Clitic Doubling Cycle (Vega Vilanova et al. 2018). In Chapter 10, I will analyze the different stages of the PPA cycle according to the framework proposed in Part Two and will try to give an answer to the research questions stated at the beginning of the dissertation: What is the role of aspect and specificity in the synchronic and diachronic analysis of PPA in Catalan? How are economy, grammaticalization and parametric change related to specificity and to each other? What is the connection between syntactic and morphological change? Some open issues and conclusions are discussed in Chapter 11.

Chapter 8. Empirical Data

Data on PPA in Catalan are rather scarce. Since PPA in Modern Catalan is felt to be purely optional (an 'embellishment' possibly motivated by prosodic and/or stylistic considerations), it has not received much attention in the literature in recent years. This is probably in part due to the fact that the conditions that affect the realization of overt agreement are rather difficult to capture. Also, the empirical basis for most judgments is not very solid: Both prescriptive and descriptive grammars rely on the use of impressionistic data or on the normative models of French and, to a lesser degree, Italian (see Chapter 3.2). Hence, the same conditions that apply to French and Italian are discussed (and sanctioned) for Catalan with the help of a few judgments and few data. Number and gender inflection in the participle are certainly optional in Catalan under the known conditions (e.g. cliticization, wh-movement...), but some correlations of agreement with aspect and definiteness/specificity (as well as other object phenomena linked to these features) have been found. Therefore, special attention will be paid to the role of these features in language change.

To my knowledge, Old Catalan data have not been thoroughly described yet. Some studies (e.g. Par 1928, Moll 1952, Solà 1973, Badia i Margarit 1981, Pérez Saldanya 1998, Farreny Sistac 2004, etc.) comment on aspects of participle agreement in Old Catalan, but they have usually accessed a limited amount of data and do not provide a deep analysis of the development of PPA. Needless to say that the diachronic perspective might provide new insights on the sources and the nature of optionality, which is crucial to account for the general tendency to lose participle agreement in Romance.

It is commonly admitted that Old Catalan participles used to agree with any object type (i.e. pre- or post-verbal, irrespective of their features), but aside from some general considerations on the reanalysis of the V+PstPrt+DO complex, the more fine-grained changes from Old to Modern Catalan have not been investigated in detail so far. One of the most exhaustive empirical studies on PPA in Catalan is Gavarró & Massanell (2013). They show that PPA was obligatory until the 15th century. They further claim that a slight decay of the realization of agreement began in the 16th century, but that it was not until the 20th century that the omission of PPA has become more or less generalized. Their observations stem from a large corpus search, but they do not provide any analysis that could help identify the triggers for the change. Unfortunately, during the period from the 16th until the end of the 19th century, known as *Decadença* ('decline'), Spanish was established

as the prestige language in Catalonia and the use of Catalan was confined to informal contexts. For this reason, it is rather difficult to find useful written documents in Catalan during the *Decadença*, so that our knowledge about the language during this period is rather sketchy. In this context, my data collection is aimed at confirming the obligatory use of PPA until the 15th century, 'filling the gap' between the 16th and the 19th centuries by presenting newly collected data, and identifying the mechanisms of language change and their triggers. After gathering a consistent sample of data ranging from the 13th to the 19th century, I have codified and analyzed the extracted sentences in order to find effects or correlations that would otherwise have gone unnoticed. This will constitute the starting point for the description of the development of PPA as a cyclic change in the next chapter, and its analysis in terms of grammaticalization and syntactic change due to economy pressures in Chapter 10.

8.1 Corpus Search in Old Catalan (11th-15th Centuries) and *Decadença* Catalan (16th-19th Centuries)

In this section, I will describe the method by which the corpus was compiled. First, I will expose general methodological issues. I will then discuss the criteria that I have applied to select the texts that are part of the corpus. Finally, I will list the features that have been coded and will present the coding conventions used by myself, two blind-coders and a proof-reader.

8.1.1 General Properties of the Catalan Corpus

The main goal of the corpus search was to document the different constructions with past participles in Catalan from the first records (some fragmentary documents of the 11th century) until the end of the 19th century, a moment of revitalization of the Catalan language and culture known as *Renaixença* ('revival'). Although the contexts in which PPA appears are quite restricted, it is a relatively frequent structure. Transitive clauses with a participle form and a feminine and/or plural DO were the search target. Clauses with masculine singular objects were ignored, since the masculine singular form of the participle is also used as default agreement. Since there are reasons to believe that PPA is linked to other phenomena (mainly phenomena affected by definiteness/specificity, such as CLD, DOM and object movement), I have also gathered data concerning samples of other constructions (e.g. passive sentences, absolute small clauses, present participles, gerunds, non-nominative subjects, word order peculiarities, etc.) which might help

better understand the behavior of the past participle and/or help shed light on other properties of the clause.

The objective of the search was not to achieve a predetermined total number of sentences. Instead, any target sentences found in the first ca. 100 pages of the selected works have been included in the corpus. Thus, a similar extension of text was analyzed for each author or work.

After I have identified the target sentences, they were copied with sufficient context into a coding table. The context was often indispensable to discern the values of features whose interpretation goes beyond the sentence boundaries. As a last step, the corpus items were coded according to the parameters listed in Chapter 8.1.3. Afterwards, three coders with very good proficiency in Catalan and at least some knowledge in linguistics blind-coded the whole corpus using the same coding conventions, so that the original coding could be checked and amended[30]. Sentences with inconsistent answers were inspected once again.

The Old Catalan corpus contains a total of 2162 full sentences, most of them with past (1681 tokens) or present participles (257 tokens). The rest of tokens (224) were sampled to illustrate different unrelated structures.

8.1.2 Text Selection

The quality and availability of usable texts varies drastically from one century to another. In addition, as Berta (2016) and Stark (2017) point out, PPA is quite sensitive to language register: Agreement in Modern French, for instance, is a phenomenon belonging to the cultivated and written language, but not to oral and informal registers. This should be seen as prevention against using literary and in some sense 'artificial' texts in the analysis. Furthermore, Old Catalan data could be skewed by two additional properties – the frequent use of archaisms and Gallicisms by certain authors and/or historical periods. Written formal texts show a clear preference for older structures legitimized by the linguistic norm and the prestige variety. Spoken language, on the contrary, is more receptive to innovations, so that "novel patterns which arise individually in spoken language may cumulate for a long period of time before they jointly achieve a breakthrough, as a set, into writing" (Janda & Joseph 2003:140-141). Language change thus

[30] I would like to express my gratitude to Svenja Gottschick and Laura Golla for their willingness to help in the codification of the corpus. A big thank also to Conx Vega for her final revision with respect to the consistency in the coding conventions.

affects the spoken language first, and only after some time it is reflected in written documents. For this reason, it seems advisable to choose texts that are plausibly closer to spoken registers. Berta (2016) reaches the same conclusion. The rates of PPA in Catalan vary according to the literary genre. Therefore, I have excluded, among others, texts put into verse because it is possible that the metrical scheme had an effect on the realization (or omission) of agreement morphology. Hence, prose texts that are not primarily scientific were preferred. These comprise chronicles (i.e. narrative texts than more often than not include direct speech), tales and fables (which also show a strong tendency to include direct speech and avoiding complex structures as well as rhetorical devices), personal correspondence and personal diaries (which are not compelled by strong stylistic guidelines). What these text types have in common is a relatively low level of stylistic guidance and a frequent use of direct discourse, which probably reflects some traits of spoken language (but perhaps not all of them, a question that might never be fully solved).

In order to avoid a possible bias toward the speakers' individual preferences, texts by at least three different authors were chosen for each century. A total of 12 longer texts were analyzed, as well as 26 shorter works (such as oaths, letters, etc.). Some of them were consulted directly from the current commercial editions; others were taken from Russell-Gebett (1965), Steinkrüger (2004) and the *Corpus Informatitzat del Català Antic* accessible online in www.cica.cat.

Nevertheless, some shortcomings of the selection should be pointed out. Due to the limited availability of texts (especially for the period after the 16th century), not all intended conditions could be met. Also, the socio-linguistic variables with respect to the authors could not always be properly controlled, as these are often unknown. Regional variation, which is likely to be already present in these works, has thus been disregarded in the present study. Some of these socio-linguistic variables, however, could have had an important effect on PPA. Information on the origin of the speaker, which other languages s/he spoke besides Catalan, etc., would be useful to identify phenomena influenced by language contact situations (or by bilingualism). The predominance of French as a prestige language, for instance, could have led to the maintenance of agreement morphology, whereas the Castilian influence could have favored the more 'innovative' structure without agreement. Moreover, although all texts are supposed to reflect spontaneous speech in some way, it cannot be excluded that the philosophical or doctrinal purpose of some of these works does not introduce formulaic and rhetoric expressions. This observation is also valid for historical works (e.g. chronicles and reports). In addition to other inherent difficulties such as the lack of fully reliable judgments by native speakers and the impossibility to carry out acceptability or grammaticality judgment tasks, these are well-known risks when investigating a diachronic phenomenon.

Despite all these obstacles, I believe that the deficiencies in the choice of the texts do not prevent us from drawing valid conclusions. First, as I will show below, the results of the analysis are consistent, and show tendencies and correlations among the variables that cannot be considered accidental. The decision to include more than two different authors for each period aims at reducing the effects of individual variation. Moreover, the results of my corpus analysis are in line with data investigated by other authors (Par 1928, Moll 1952, Solà 1973, Gavarró & Massanell 2013, etc.). Of course, it would be beneficial to replicate the results by studies that use other texts chosen based on similar criteria. If, again, similar patterns of PPA are found, this would strengthen the conclusions of my study. Finally, it would be of great interest to control for the impact of dialectal variation and language contact.

In sum, the analysis presented in the next chapter must be treated with caution because it is based on corpus data that are, in some aspects, flawed, but I am convinced that it still provides new relevant insights on the development of PPA in Catalan.

8.1.3 Coded Features and Coding Criteria

Several features have been claimed to correlate with the production of agreement morphology in Romance (cf. first section for an overview). As for Catalan, Fabra (1919) points out gender and number, but position, specificity and aspect too have been shown to be related to PPA. Since participle agreement is a multi-factorial phenomenon that seems to interact with other phenomena concerning object-verb agreement (cf. Chapter 2), any feature involved in these other phenomena could potentially account for PPA as well. For this reason, taking a wide range of morpho-syntactic and semantic-pragmatic features into consideration is indispensable.

I have grouped the different morpho-syntactic and semantic-pragmatic features under the categories denoting the domain in which they apply: A) the verb and verbal phrase; B) the noun and nominal phrase; and C) the whole clause. In what follows, I will briefly define the coding categories, the motivation for including them in the corpus, and the adopted coding conventions, which were also applied by the blind-coders and proof-reader.

A/ The verb

A1/ Verbal lexeme

The motivation for taking the verbal lexeme into consideration for PPA comes from some accounts on DOM. It has been claimed that, whereas DOM with some verb types depends directly on the properties of the DO (e.g. animacy, specificity or definiteness), certain lexical items are prone to be combined with DOM irrespective of the nominal features carried by their complement (cf. Torrego 1999 and García García 2014). The distinction among verb types can be based on different criteria: Semantic classes, *aktionsart*, and perhaps frequency.

Also, the morpho-phonological properties of the lexemes should not be overlooked. Is a regular participle (*tancar* → *tancat/-ada* 'to close' → 'closed'), for example, more likely to show PPA than an irregular one (*metre* → *mes/mesa* 'to put' → 'put')? Are monosyllabic participles (*vist* 'seen') 'easier' to agree with the DO than e.g. disyllabic ones (*comprat* 'bought')? If PPA is constrained by formal features, then such lexical variation is not expected. If, on the other hand, overt agreement is inserted post-syntactically (provided that syntactic change precedes morphological change and true optionality exists), morpho-phonological features would come to the fore.

A2/ Form of the lexical verb

The properties of the past participle in potential constructions for PPA were contrasted with the features of the participle in other constructions and the properties of the present participle. Absolute small clauses (ASCs), albeit rather marginal, are particularly interesting in this respect. ASCs provide helpful information about the nature and development of the past participle, especially with respect to some aspectual constraints (cf. Vega Vilanova 2016). Participle agreement is virtually obligatory in ASCs, but along with increasing restrictions in ASCs, the Gerundival Small Clause (GerSC), formed around a present participle or gerund, became more wide-spread. Interestingly, the gerund also undergoes grammaticalization in some cases, being reanalyzed as a preposition (e.g. *durant aquests dies* 'during these days'). Therefore, it is interesting to see how changes in these three constructions (participle agreement in main clauses, in ASCs and in GerSCs) correlate and which other aspects change.

The corpus sentences were coded with respect to the form of the lexical verb as shown in (3.1).

(3.1) *Form of the lexical verb:*

PP = past participle
Ger = present participle/gerund

A3/ Auxiliary verb

Auxiliary alternation has been proposed to correlate with the presence or absence of PPA (Lois 1990, Muxí 1996; see Chapter 1.2.4 for details and discussion). In some languages, HAVE is the only auxiliary both for unaccusative and unergative verbs (Spanish, Portuguese, Romanian and Catalan), whereas other languages use different auxiliaries (BE vs. HAVE) to mark these verb classes (Italian and French). The correlation between auxiliary alternation and PPA, however, is not strong enough to consider it a reliable diagnostic for agreement. There are still varieties and languages – among them Catalan – which do not fit into Lois's and Muxí's generalization.

Nevertheless, auxiliary selection does show a meaningful asymmetry: Constructions with the auxiliary BE (passives, unaccusatives, etc.) trigger practically obligatory agreement; clauses with the auxiliary HAVE show a higher deal of variation and optionality. The gradual abandonment of the auxiliary BE in unaccusative clauses could also correlate with changes in overt participle agreement or other properties of the constructions in which the past participle is involved.

This feature has been coded as follows:

(3.2) *Auxiliary verb:*

BE = *ser (ésser)*
HAVE = *haver*
OTHERS = *estar*, *tenir*...
Ø = no auxiliary verb needed (e.g. ASCs and GerSCs)

A4/ Participle agreement

Obviously, this is not a trigger for PPA but rather the dependent variable. The past participle inflects for gender and number, the present participle has only number morphology. Default agreement coincides with the masculine singular endings. For this reason, sentences with DOs specified for masculine singular will only be included in the corpus as illustration of other phenomena, or because the example exhibits an unexpected behavior (e.g. agreement *ad sensum*, agreement with another argument, etc.). For the latter, it is not possible to discern

whether the participle has an agreeing form or a default one, since they are identical. The few sentences with masculine singular arguments were therefore coded with '?'.

Agreement with conjoint DPs was considered successful if it follows one of these two agreement patterns: Either the participle agrees with the whole conjoint (i.e. plural agreement) or with the closest member.

The coding conventions for this feature are shown in (3.3).

(3.3) *Participle agreement:*

+ = overt agreement on the PstPrt (i.e. agreement with a feminine and/or plural argument)
- = no overt agreement on the PstPrt (i.e. use of a default masculine singular form for a feminine and/or plural argument)
? = agreement with a masculine singular object (not discernible between + and -)

B/ The object noun phrase (NP/DP)

B1/ Gender and number

In Catalan, there is a strong tendency to avoid agreement with masculine arguments. Fabra (1919) already observed that PPA with feminine plural forms, followed by feminine singular forms, is much more frequent than agreement with masculine arguments. As I have just pointed out, the past participle is sensitive to the gender and number of the DO (and the derived subject), whereas the present participle only responds to the number of the subject argument. Hence, the subject of present participles was only coded for number (i.e. plural).

In a few cases, agreement is controlled by a conjoint DP. Number was then considered plural. When the members of the conjoint DP have different gender, the DP was coded as masculine.

Following coding conventions were used for gender and number:

(3.4) *Gender and number:*

M Sg = masculine singular DO/derived subject
M Pl = masculine plural DO/derived subject
F Sg = feminine singular DO/derived subject
F Pl = feminine plural DO/derived subject
Pl = plural subject (only for present participles/gerunds)

B2/ Person

Since person was shown to have an effect on PPA in French and Italian (see Chapter 1), it seems interesting to explore which kind of restrictions concerning the grammatical person might have emerged in Catalan and when and under what conditions.

Only 1st and 2nd person were explicitly coded – the 3rd person is left blank, since it is equivalent to the "absence of person" (Benveniste 1971).

In the case of coordinated arguments with different person specifications, the DP was coded as 1st person when one of the members was 1st person. The combination 2nd-3rd person was coded as 2nd person.

The coding criteria are summed up in (3.5).

(3.5) *Person:*

1 = 1st person (or 1st + 2nd/3rd person)
2 = 2nd person (or 2nd + 3rd person)
Ø = 3rd person

B3/ Case

Nominative case assignment is essential for the explanation of subject-verb agreement (but see Chapter 7 for a different view). In the same fashion, accusative case has been often discussed with respect to object agreement. Case is therefore a necessary item in the feature repertoire coded in a corpus on object syntax.

Case requirements vary according to the construction type. Passives and unaccusative verbs, where the agreement controller raises to the subject position, mark their argument with nominative case (recall Burzio's generalization). Generally, accusative arguments are associated with transitive verbs. However, there are some cases of partitive marking, either through the presence of a partitive clitic *en* or through the insertion of the partitive article *de*. Sentences in which the DO is introduced by *de* are quite rare in Catalan and should probably be interpreted as French interference. Hence, the evidence of these sentences should be taken cautiously.

In Italian, clitic datives can marginally trigger PPA in reflexive clauses with a phrasal DO. If the DO itself is cliticized, the participle must agree with the accusative. In both cases, however, the dative

and the accusative reflexive pronouns are co-referential with the subject of the clause, and the auxiliary used is normally BE, with which PPA is obligatory. Belletti (2006) is inclined to analyze the reflexive clitic (accusative or dative) as the controller of agreement, meaning that it occupies the same position as other object clitics. Le Bellec (2009), on the contrary, provides evidence that reflexives form a chain with the subject, so that agreement is subject-oriented. This way, all nominal features (case, gender, number, definiteness, etc.) involved in verbal agreement will stem from the subject DP. Consequently, reflexive clauses are subject to the same restrictions as unaccusatives and passives.

The following coding conventions have been adopted for case:

(3.6) *Case:*

Nom	=	nominative case (agreement with the subject of passive, unaccusative and reflexive clauses)
Acc	=	accusative case (agreement with the DO)
Dat	=	dative case (agreement with a dative non-reflexive clitic)
Part	=	partitive case (agreement with a marked DP, either through the presence of the partitive clitic *en* or partitive article *de*)

B4/Definiteness and specificity

As discussed in Chapter 2.2.2, definiteness and specificity are two notions difficult to keep apart. Definiteness has been identified with familiarity or uniqueness (see references above). These conceptions partly overlap with the notion of specificity as "referential anchoring" or "referential intention" (cf. von Heusinger 2011). Both concepts are connected to discourse properties in a way. Sorrenti (2015) suggests a practical solution to establish coding criteria. She confines definiteness to a basically formal criterion – e.g. the use of certain nominal markers, immediately related to the mentioned semantic-pragmatic content but also sensitive to the morpho-syntactic configuration (for an extensive explorations of the definiteness effect, see Fischer, Gabriel & Rinke (2016) – and specificity to a domain that comprises interface information – e.g. specificity as scope over quantification, as epistemic reading, as partitivity... all in all, approaches that delimit the referential values of the nominal phrases in different ways. In a similar line of reasoning, Leonetti (2007) suggests that specificity does not belong to the possible syntactic features in Romance. It is a matter of fact that the distribution of specificity is not random, so that only certain constructions are associated with specific readings (cf. Diesing 1992, and discussion in Chapter 2). Specificity is not only responsible for the definiteness effect in existentials,

unaccusatives, ASCs, etc., but it has also been proposed that is related to the appearance of CLD, DOM and object movement (see Chapter 2.3). Constructions in which specificity is involved show a typical behavior as "interface phenomena" (cf. Sorace 2006). If specificity is not encoded in the syntax, there should be another means of generating the observed interpretation effects and distributional restrictions.

That definiteness and specificity could be relevant for PPA has already been shown for Romance. Their codification in the corpus goes without saying. Their coding criteria, however, are complex. Definiteness is understood as a formal trait of the DP. Hence, a DP introduced by the definite article (*el*, *la*), a demonstrative (*aquest*, *aquell*...), a possessive (*el meu*, *el teu*...) or a universal quantifier (e.g. *tots*) has been marked as definite in the corpus. Proper nouns too have been considered definite. Bare nouns and DPs introduced by quantifiers other than the universal one were coded as indefinite.

Unfortunately, it is very difficult to find clear criteria to codify specificity in a diachronic corpus. The tests for specificity according to most definitions require a manipulation of the sentences or the judgments of a native speaker, which, of course, is impossible. The idea of scopal specificity, for instance, is practically useless since not every clause contains interacting operators required to check the specific reading, and there are no judgments available to confirm the alleged scope reading. Not even in modern languages are there conclusive tests for specificity. For the sake of convenience, I define specific DPs as those phrases referring to entities identifiable to the speaker (epistemic specificity), since I assume that other properties of specificity (e.g. wide scope) are derived from this basic characteristic. I am aware that by doing this, I run the risk of falsifying the results to a certain extent. The accuracy of the results will depend on the correct interpretation of the speaker's intention in the data. Lacking more reliable (and objective) criteria, this is probably the best thing to be done.

Considering that DPs with a mismatch between definiteness and specificity seem to be much less frequent than DPs with the same value (plus or minus) for both features, they are often treated as interchangeable notions in the present work. Non-specific definites (sentences such as 'I read the newspaper every day', where the DP is interpreted as 'familiar' but is not easily understood as identifiable, or is not intended to refer to some identifiable newspaper) are certainly rare in the corpus. However, four possible feature combinations have been coded (3.7).

(3.7) +Definite +Specific
+Definite –Specific
–Definite +Specific
–Definite –Specific

B5/ Genericity

Generic DPs do not refer to individuals but rather to categories that are presupposed as being familiar as a whole with none of the singular items of this category being identifiable in the context of the utterance (cf. Kupisch & Müller 2009:313-314). They are marked by means of definite or indefinite determiners in some languages, and by means of bare nouns in others. Their interpretation is closer to non-specific DPs, since they do not refer to uniquely identifiable entities. Thus, it would be interesting to check whether genericity has a similar effect on agreement as definiteness or specificity is supposed to have.

Genericity is a binary feature. However, it is usually difficult to decide when a DP is unambiguously interpreted as generic. Therefore, only clear cases have been marked. In addition, generic objects seem to be rather infrequent in the sample. Other non-referential object DPs (e.g objects that refer to a class or are combined with light verbs such as *fer mostra* 'to show', *posar mans* 'to take', etc.) have been also tagged as 'non-referential'.

In sum, although genericity does not provide enough data for a quantitative analysis, it may nevertheless contribute valuable qualitative information to better understand the phenomenon.

B6/ Animacy

Animacy has been claimed to be relevant for DOM and CLD (alone or in conjunction with specificity). It is thus another candidate to explain PPA.

Since animacy is a binary feature as well, I have distinguished between animate (humans, animals, etc.) and inanimate objects (all other arguments). Institutions (cf. Nishida 2012) have been included under the animate group when they refer to the group of individuals rather than to the infrastructure belonging to the institution.

C/ The clause

Some of the relevant properties for PPA are not ascribed to single constituents (the verb or the noun) but to the entire sentence. The corresponding criteria are construction type, word order peculiarities, position of the DO with respect to the verb and adjacency of the DO to the verb.

C1/ Construction type

The following constructions have been included as coding categories:

(3.8) *Construction types:*

ASC	=	Absolute Small Clause
GerSC	=	Gerundival Small Clause
Caus	=	Causative (or control) verb (e.g. *fer* 'let' or *oir* 'to hear')
Mod	=	Modal verb (e.g. *voler* 'to want' or *poder* 'can')
Clitic	=	cliticized DO
Rel	=	the DO is a relative pronoun
WH	=	the DO is a wh-word
Fronting	=	the DO is a pre-verbal full DP (but there is no clitic resumption)
Refl	=	PPA is mediated by a reflexive (or reciprocal) pronoun
Unacc	=	unaccusative clause
Pass	=	passive clause
Main	=	main clause with postposed DO
CP	=	embedded clause with postposed DO

All categories can be combined a priori, with exception of 'Main' and 'CP', used only when no special construction applies. Clitic left dislocation (CLLD) has not been coded as fronting. First, the closest controller of agreement is the clitic, not the dislocated DP; furthermore, the analysis of the DP is not univocally accepted (there are arguments for a base-generation and for a movement analysis). CLLD has thus been listed under 'Observations'. Passives, unaccusatives and reflexives have been coded as three distinct categories, although they have in common that the controller of agreement occupies the subject position.

C2/ Word order, position w.r.t. the verb, adjacency

Other clausal properties that have been coded in the corpus comprise word order (which allows to see how many constituents are placed before and after the auxiliary and/or the participle,

whether a constituent is extraposed, what the relative order of the subject and the different objects is, etc.), position with respect to the verb (i.e. before or after the participle) and adjacency (i.e. whether other constituents intervene between the participle and the controller of agreement or not).

Not all information extracted from these parameters is relevant for PPA. Apart from object position (i.e. in situ vs. displaced), one of the most pervasive explanations for PPA in Romance, and adjacency, it is not expected that other word order properties are directly related to agreement. The constituency analysis, though, will be useful for future research on other topics, but is not being used in the present dissertation.

Observations

Besides the coding features just presented, I have annotated any other outstanding properties that do not match the mentioned categories. Quantification, DOM, CLLD and unaccusatives with the auxiliary HAVE are the most common ones. It is not possible to make a quantitative analysis on the basis of these cases. Instead, the annotation of this information makes it possible to retrieve a series of unsystematic traits. As word order properties, many of these observations do not serve to explain PPA but might be useful for future analyses.

8.2 Acceptability Judgments in Modern Catalan

The data assembled in the Old Catalan corpus is limited to the middle of the 19th century. According to Gavarró & Massanell (2013), there has been another turning point in the development of PPA during the last century, i.e. a rapid decrease on the use of agreement. The data available for PPA in Modern Catalan, as I have already pointed out, is rather scarce, though, and there is a relative lack of interest on the part of present-day research, probably due to the optional character of PPA. Apparently, participle agreement in Catalan represents nothing more than a tendency guided by stylistic choices, much more than in Italian or even French, where PPA follows clear rules. Speakers' preferences, however, are not very telling, especially if the variability does not follow any system, i.e. it is truly optional. In this sense, the aim of collecting Modern Catalan data is not primarily to identify the syntactic contexts in which PPA is preferred or dispreferred, but rather to detect subtle correlations between agreement morphology and

effects on interpretation. The interaction of PPA with aspect and definiteness/specificity could be taken as evidence that a grammaticalization process, already active in *Decadença* Catalan, is guiding the loss of PPA: the current specificity effects could be seen as a residual manifestation of former constraints, and optionality as the last step of a grammaticalization cline.

According to this, I have designed an acceptability judgment task to test three constructions related to differents effects of grammaticalization. If the results do not show any effect on the overt realization of agreement (i.e. a random distribution of the judgments), this can be taken as evidence that the grammaticalization process of PPA is very advanced.

8.2.1 Target Constructions of the Test

It is uncontroversial that PPA is no longer allowed in Catalan with post-verbal objects (with the exception of some cases in Majorcan Catalan discussed in Salvà i Puig 2017) and PPA in passives is obligatory. In some constructions with preposed objects, agreement is optional. Since it is not possible to test all possible structures – this would require an overload of test items, which might lead to unreliable answers due to fatigue or habituation – I have selected a few structures for the questionnaire that I have considered of particular interest for an analysis of PPA based on grammaticalization. More specifically, the test is focused on the following three constructions:

i) the possibility of interpolation of certain adverbials (*mai*, *pas*) between the auxiliary and the past participle, which is taken as a symptom of the degree of grammaticalization of the auxiliary verb and the compound tense form. Interpolated elements point to a looser link between the finite verb and the participle and, consequently, a more natural presence of agreement morphology (hence, speakers that accept interpolation should be more prone to use PPA).

ii) PPA with cliticized arguments of control/causative verbs. This construction is included due to the discrepancy between normative impositions in the form of a complex rule system, and the description of the effective use of agreement. Normative works prescribe agreement with the embedded subject of certain control verbs, but not with the embedded object, whereas this distinction does not hold true for spontaneous speech. I will thus test whether grammatical relation (embedded object, embedded subject and embedded derived subject), in fact, shows different patterns of acceptability (which would be expected if normative rules apply) or not (which

would be consistent with the observations of more descriptive papers). From a theoretical point of view, a purely positional constraint on PPA (as proposed for Italian) also predicts no discrimination among different argumental relations of the preposed DP, as long as the clitic that has climbed to the main verb (i.e. to the left of the auxiliary verb) bears accusative case. It is difficult to figure out how the clitic would have reached this position without going through the participle projection in some cases, but not in the others.

iii) PPA with the partitive clitic *en*. These constructions allow manipulating the reading of the associate DP according to the context in which the clitic is used: In some contexts, the specific reading was stimulated, in others, the non-specific reading (it cannot be fully controlled, though, that the participants accept or reject the sentence because of the intended interpretation). Since specificity has been shown to be linked to the realization of PPA in other constructions, I expected to find some effects in the rates of acceptability according to different readings of the partitive clitics as well. The absence of any measurable effects will be interpreted as a more advanced stage in the grammaticalization of the PPA structure.

In sum, by means of this questionnaire I seek to test three crucial factors that are supposed to be involved in PPA: grammaticalization of the verb, positional/movement rules and specificity.

8.2.2 Structure of the Questionnaire

Because of the optionality of PPA in Modern Catalan, grammaticality judgments do not seem to be adequate to obtain useful data on the phenomenon. Hence, the test has been designed as an acceptability judgment task. The participants were asked to rate the acceptability of PPA in certain constructions, seeking for answers that should reflect their spontaneous language use (or their perception of it). More specifically, the goal of the questionnaire was to find out which properties or features (i.e. adjacency of the participle to the auxiliary, position of the clitic vs. grammatical relation, specificity) favor the acceptance of PPA.

The test consisted of a total of 22 items, including 12 experimental sentences. These were assigned the following conditions: 2 items have supposedly ungrammatical agreement with 1st or 2nd person clitics, 4 items show agreement with embedded arguments with different grammatical relations, 2 items were constructed with interpolated adverbs between the auxiliary and the

participle, and 4 items contain partitive clitics that trigger PPA with a specific or a non-specific reading. All experimental items have overt participle agreement. PPA is in all cases grammatical, although optional (except for the two ungrammatical items). Furthermore, there were 9 distractors and an ungrammatical control item. Half of them were grammatical, the others were ungrammatical. The distractors illustrated a variety of more or less unrelated phenomena (ASC, different types of CLD, and existential sentences).

The questionnaire was administered to the participants in printed form as well as online as a pdf file. The participants needed around 20-25 minutes to complete the task. At the beginning, they received explicit instructions about how to answer, i.e. they were told that their answers should not reflect normative rules but rather how they personally judge the sentences in their language use and that there were no correct or incorrect answers. They were also encouraged not to go back in the questionnaire to correct or revise previous answers, but rather to answer as spontaneously as possible. They were then provided with two examples from the Catalan variety of Tortosa to show them that forms deviating from Standard Catalan were tolerated.

Each item of the questionnaire was introduced by a short context of one or two lines. The test items were marked in boldface. For each of the 22 test items, the participants had to decide to what extent they accepted or rejected it according to their own language use in am four-point scale. When the participants rated an item as unacceptable, they were also requested to correct the sentence to make it sound acceptable. Only if the correction had to do with the respective test condition, the ratings were included in the analysis. If the sentence were rated as unacceptable due to other phenomena, an arbitrary value of 1.5 was assigned (i.e. it was considered that the speaker accepts the test item).

Finally, the participants were asked for some information about their language use as well as sociolinguistic variables.

8.2.3 Participants

A total of 33 Catalan native speakers took the test. 9 out of these 33 speakers, however, failed to reject the control item and were excluded from the analysis.

The mean age of the remaining 24 participants was 32.9, ranging from 18 to 47. The speakers were divided into two groups according to the place where they had acquired their L1 (until the age of 16) following the main Catalan dialectal partition: Oriental Catalan (roughly the provinces

of Girona, Barcelona and the North of Tarragona) and Occidental Catalan (roughly the provinces of Lleida, the South of Tarragona, Andorra and the Comunitat Valenciana).

According to their answers about language use (when and with whom they speak Catalan: with their family, with friends, at work, in everyday situations, etc.) and to the self-assessment of their language dominance, they were further divided into Catalan-dominant bilinguals and Spanish-dominant bilinguals.

The four resulting groups are shown in Table 3.1.

	Catalan-dominant bilingual	***Spanish-dominant bilinguals***
Oriental Catalan	9 speakers	6 speakers
Occidental Catalan	4 speakers	5 speakers

Table 3.1. Distribution of the participants according to their Catalan variety and language dominance

Chapter 9. The PPA Cycle

In what follows, I will present the results of the corpus research and the questionnaire. In Chapter 9.1, I will look into the effects of those features that could be assumed to play a role in PPA in Old Catalan until the 19th century. As in Chapter 8.1.3, I will distinguish features at the verbal, nominal and clausal domains to offer a systematic analysis of the data. For each feature, I will try to interpret the result under the theoretical assumptions exposed in Part One and Part Two. This will establish the basis for the analysis of the loss of PPA as a grammaticalization change presented in Chapter 10.

As for the Modern Catalan data (Chapter 9.2), I will only discuss the three special constructions presented in Chapter 8.2.1. In the third part of this chapter, I will try to systematize the conclusions drawn from the empirical data. I will show that the process from obligatory agreement in the first written records up to the optionality (or even the complete loss) of PPA in Modern Romance languages can be captured as a cyclic change, an idea that is consistent with a widespread view on general language change patterns.

9.1 Results of the Corpus Analysis

As a first step for the analysis of the corpus data, I have distinguished between different sentence types. This was necessary to separate constructions with very different requirements. Passive sentences, for instance, have obligatory participle agreement in Old and Modern Romance, a fact which is probably linked to the presence of the auxiliary BE instead of HAVE. Unaccusative verbs formed with the auxiliary BE do not show variation either. The data coming from these constructions is thus not very meaningful about the conditions of PPA when the auxiliary is HAVE and a greater deal of variation is attested. Absolute small clauses and gerundival small clauses have also been treated separately.

The second main division in the data is based in auxiliary selection – clauses with auxiliary HAVE or auxiliary BE. This division partly overlaps with sentence type: sentences with BE comprise passives and unaccusatives. The behavior of PPA in unaccusatives according to auxiliary selection is variable. For auxiliary BE – as is the case in French and Italian as well as Old Catalan –

agreement is (almost) obligatory. Auxiliary alternation, though, gradually disappears, as can be seen in the corpus data, and unaccusative verbs are subject to the same restrictions as other sentence types formed with HAVE[31]. In this case, the restrictions on agreement are more complex, giving rise to optionality.

The general distribution of the corpus items combining the criteria of sentence type and auxiliary selection is shown in Table 3.2 (in the next page. Clauses containing auxiliary BE do not undergo language change with respect to participle agreement: PPA in passives is still obligatory, and unaccusatives formed with the auxiliary HAVE are included under the category 'HAVE'. Taking this into consideration, I have decided to focus on sentences containing the auxiliary HAVE (i.e. 1185 tokens).

Passives and unaccusative verbs with auxiliary BE practically show obligatory agreement during all periods, as shown in Table 3.3: Only five examples out of 321 do not show agreement.

[31] Hualde (1992:88-89) discusses the possibility of having PPA with an unaccusative verb combined with the auxiliary HAVE in Modern Catalan:

(i) ?? Les cartes han **arribades**.
the letter.FPl have.3Pl arrive.PP.FPl
'The letters have arrived.'

(ii) ?? Unes cartes han **arribades**.
some letter.FPl have.3Pl arrive.PP.FPl
'Some letters have arrived.'

(iii) Han arribat cartes interessants?
have.3Pl arrive.PP.Def letter interesting.FPl
Sí, n' han **arribat** / **arribades** unes de molt interessants.
yes CL.Part have.3Pl arrive.PP.Def / .FPl some.FPl of very interesting.FPl
'Did you get any interesting letters? Yes, I got some very interesting ones.'

The sentences in (i) and (ii), with a pre-verbal definite or indefinite subject, sound odd. However, (iii) is readily accepted. These contexts for PPA certainly resemble the conditions described for participle agreement in Modern Catalan with clauses containing the auxiliary HAVE, namely, that only 3rd person clitics (here the partitive clitic *n*') trigger agreement.

Century	Work	Tokens (all)	ASC	GerSC	BE	HAVE	Others
Before 13th	*Miscell.*	16	0	0	0	15	1
13th	*Meravelles*	203	3	7	28	151	14
	Desclot	162	0	0	27	125	10
	Miscell.	31	0	4	3	22	2
14th	*Eiximenis*	141	0	25	12	91	13
	Somni	329	39	70	57	160	3
	Lletres privades	28	0	0	5	22	1
	Sereneta	90	0	0	11	73	6
15th	*Urgell*	185	40	66	25	50	4
	Curial	309	70	53	49	124	13
	Flor	63	0	4	14	37	8
16th	*Tortosa*	227	26	26	41	87	47
	Estefania	123	0	0	9	68	46
	Hipòlita	69	1	0	22	35	11
17th	*Successos*	77	1	2	10	53	11
	Noble vigatà	20	0	0	0	18	2
18th	*Can Torres*	25	0	0	5	15	5
	Anglasell	40	0	0	1	25	14
19th	*Mata del Racó*	19	0	0	1	12	6
	Cardoner	5	0	0	1	2	2
TOTAL		2162	180	257	321	1185	219

Table 3.2. Overall results of the corpus.

Century	Work	Tokens	BE	# Agree	% Agree	HAVE	# Agree	% Agree
Before 13th	*Miscell.*	16	0			15	13	86.67
13th	*Meravelles*	203	28	28	100.00	151	148	98.01
	Desclot	162	27	27	100.00	125	120	96.00
	Miscell.	31	3	3	100.00	22	18	81.82
14th	*Eiximenis*	141	12	12	100.00	91	82	90.11
	Somni	329	57	57	100.00	160	118	73.75
	Lletres privades	28	5	5	100.00	22	22	100.00
	Sereneta	90	11	10	90.91	73	69	94.52
15th	*Urgell*	185	25	24	96.00	50	45	90.00
	Curial	309	49	48	97.96	124	114	91.94
	Flor	63	14	13	92.86	37	36	97.30
16th	*Tortosa*	227	41	41	100.00	87	47	54.02
	Estefania	123	9	9	100.00	68	40	58.82
	Hipòlita	69	22	22	100.00	35	21	60.00
17th	*Successos*	77	10	10	100.00	53	23	43.40
	Noble vigatà	20	0			18	6	33.33
18th	*Can Torres*	25	5	4	80.00	15	10	66.67
	Anglasell	40	1	1	100.00	25	11	44.00
19th	*Mata del Racó*	19	1	1	100.00	12	2	16.67
	Cardoner	5	1	1	100.00	2	0	0.00
TOTAL		2162	321	316	98.44	1185	945	79.75

Table 3.3. Rates of PPA according to the auxiliary verb (BE/HAVE) in Old Catalan.

Until the 15th century, PPA in clauses with the auxiliary HAVE can be considered obligatory – with only a few exceptions. Agreement decays at the beginning of the 16th century (approximately half of the tokens lack agreement). The period between the 16th and the 18th century is relatively stable, but at the turn of the 19th century there is a sudden decline of PPA again. However, recall that the data during this period, known as *Decadença*, have to be interpreted with caution, since the number of texts and the number of target sentences is much lower than for the centuries before due to a decrease in the use of Catalan as written language. The general development of PPA in constructions with the auxiliary HAVE in Catalan is shown in Figure 3.1, based on the data in Table 3.3.

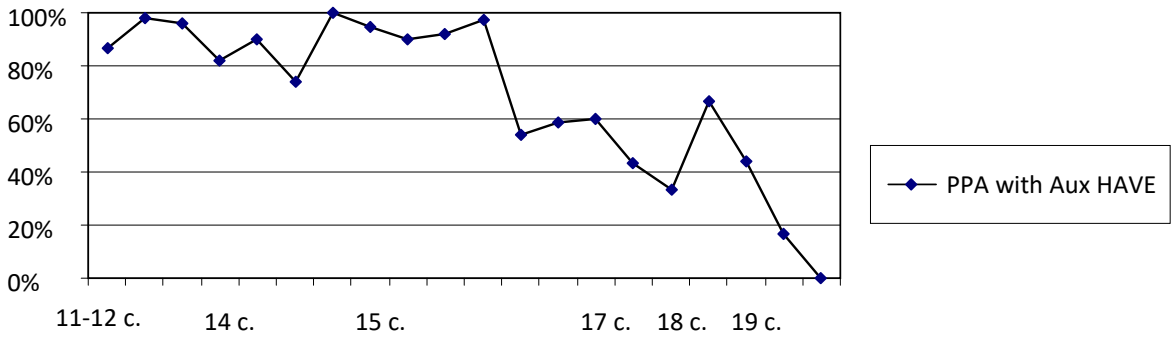


Figure 3.1. Rates (%) of PPA with auxiliary HAVE.

The picture in Figure 3.1 is basically the same as found by Gavarró & Massanell (2013). They show that agreement was common until the 15th century even in contexts where it is not allowed in Modern Catalan any more, i.e. with post-verbal DOs, objects in the embedded clause of any type of control or causative verb, relative pronouns, etc. (3.9).

(3.9) a. cor [...] a cecs à retut o veser e
because […] to blind people have.3Sg give.PP.MSg the seeing and
a sortz l'auzir [...], e à **feyts** mortz ressucitar
to deaf people the hearing […] and have.3Sg make.PP.MPl dead.MPl resurrect
'since, for his merits, he has made blind people see, deaf people hear […] and he has made dead people resurrect' (1275-1299, Vides: 104)

b. [et] aquí trobà misser Tisí Dòria et d'altres amichs
[and] here find.PST.3Sg M. Tisí Dòria and Art.Part other friend.MPl
que havia **sabuts** guanyar,
REL have.PST.3Sg know.PP.MPl win
'[and] he found here M. Tisí Dòria and other friends that he had known how to make,'
(1352, Muntaner, *Crònica*: f. 106va)

From the 16th century on, however, Gavarró & Massanell (2013) show some cases of missing agreement in contexts in which PPA is impossible in Modern Catalan (e.g. post-verbal or masculine plural objects). They illustrate the change by means of comparing the original version of *Blanquerna* by Ramon Llull in the 13th century (3.10a,c) with the modernized translation of the 16th century (3.10b,d).

(3.10) a. he **haüda** conexença de Déu
have.1Sg have.PP.FSg knowledge.FSg of God

b. yo he **hagut** coneixença de Déu
I have.1Sg have.PP.Def knowledge.FSg of God
'I have had knowledge of God'

c. beneyren nostra Dona qui ·ls havia **volguts** remebrar
bless.PST.3Pl our Lady who CL.Acc.3MPl have.PST.3Sg want.PP.MPl remember

d. beneïren a la verge sancta Maria la qual los havia **volgut** recordar
bless.PST.3Pl to the Virgin Saint Mary REL.FSg CL.Acc.3MPl have.PST.3Sg want.PP.Def remember
'they blessed our Lady who was willing to consider them'

The question that remains to be answered is what the trigger of these changes is. Gavarró & Massanell (2013), following Guasti & Rizzi (2002), suggest that the distribution of PPA is explained by syntactic verb movement, in other words, agreement is a manifestation of morphological checking taking place in the syntax (cf. Guasti & Rizzi 2002:177). They see evidence for different movement operations in interpolated adverbs: A sentence such as (3.11a) is ungrammatical in Catalan, but Old Catalan even allowed interpolated full DPs between the auxiliary verb and the participle (3.11b).

(3.11) a. *Han ben acollit l'espectacle només ells.
have.3Pl well accept.PP.MSg the performance only they
'Only they have accepted well the performance.'

b. E quant agren les péres **venudes**, donaren lo preu a pobres.
and when have.PST.3Pl the pear.FPl buy.PP.FPl give.PST.3Pl the price to poor people
'and as they had bought the pears, they gave the money to the poor people.'
(1275-1299, *Vides*: 89)

A1/ Verbal lexeme

One of the main problems when analyzing the incidence of lexical choice on agreement is the fact that many lexemes are underrepresented. In my corpus, there are 276 different verbs. Most of them, however, are used only once or twice, or only in some specific works or by certain authors. Almost all of the most frequently used verbs express telic events. In Table 3.4, I show the twelve most frequent verbs of the corpus and their agreement rate. Since around 20% of the whole corpus lacks agreement, the deviation from the mean values is in most cases not very strong.

VERB	***# of tokens in the corpus***	***Without PPA #***	***Without PPA %***
fer 'to do'	188	37	19.68
haver 'to have'	65	6	9.23
dir 'to say'	62	10	16.13
donar 'to give'	49	12	24.49
prendre 'to take'	41	5	12.20
tenir 'to have'	33	19	57.58
veure 'to see'	33	8	24.24
rebre 'to receive'	32	4	12.50
oir 'to hear'	29	4	13.79
voler 'to want'	14	5	35.71
deixar 'to let'	12	5	41.67
poder 'can'	11	4	36.36

Table 3.4. Rates of PPA with most frequent verb in Old Catalan.

The case of the verbs *haver* and *tenir*, though, is very meaningful. The former was replaced in Modern Catalan by the latter, so the non-agreement rate of *haver* is much lower (9.23%) than for *tenir* (57.58%). This can be directly ascribed to the fact that the rate of agreement in Old Catalan until the 15th century was higher than from the 16th century on.

Other verbs with particularly high rates of default agreement are *voler*, *deixar* and *poder* (35-42% of the examples lack PPA). But as these verbs are control verbs (i.e. agreement is with the embedded argument), the effect of syntactic construction could be responsible for these results. In sum, frequency does not seem to correlate with participle agreement in Catalan.

As for the form of the participle, I have distinguished between participles with the ending -t (regular verbs and some irregular ones) and participles with the irregular ending -ès (irregular verbs). Only the latter have a preference for the overt realization of morphological agreement (75 out of 83 realize PPA).

A3/ Auxiliary verb

As mentioned above (cf. Table 3.3), auxiliary selection has a direct reflect in the rates of PPA. Only in five examples with the auxiliary BE (passives and unaccusatives) is agreement missing (3.12). The first example is particularly interesting: Only the main verb, not the auxiliary, shows agreement. (3.13) shows that participle agreement of the passive auxiliary is possible.

(3.12) a. con són **estat** **pagats** los traginés qui els
since be.3Pl be.PP.Def pay.PP.MPl the carrier.MPl who CL.Dat.Pl
ó àn duyt.
CL.Acc.Neut have.3Pl bring.PP.MSg
'since the carriers who have brought it to them have been paid.'
(14.Sereneta_10:7-11)

b. li fou **aportat** una creu ab lo crucifix
CL.Dat.Sg be.PST.3Sg bring.PP.Def a cross with the crucifix
'a cross with the crucifix was brought to him' (15.Comte_50:14-16)

c. en lo qual alguna impressió de Amorós plaer encara no
in the which any impression of lovely pleasure yet not
era **entrat**,
be.PST.3Sg enter.PP.Def
'whom no feeling of the pleasure of love had touched until now,' (15.Curial_50:17-20)

d. que los bons espanyols, cavallés, noples y altres particulas
that the good Spaniard.MPl gentleman.MPl noble.MPl and other particular
catalans se heran **espantat**
Catalan.MPl CL.Refl.3 be.PST.3Pl frighten.PP.Def
'that the good Spaniards, gentlemen, noble people and other private Catalans were scared' (18.Can Torres_271:3-5)

(3.13) las diffinitions e renuntiations que éran **estades** **promeses** fer
the definition.FPl and abstentions REL be.PST.3Pl be.PP.FPl promise.PP.FPl do
'the definitions (?) and abstentions that they promised to do' (15.Comte_94:20-22)

The realization of morphological agreement in passives and unaccusatives, which are formed with the auxiliary BE in Old Catalan, is very stable over time. The loss of auxiliary selection does not seem to correlate with the change in PPA, which only affects constructions with auxiliary HAVE. In fact, the first instances of unaccusative verbs using auxiliary HAVE show participle agreement under the same conditions as other sentence types (cf. Gavarró & Massanell 2013).

B1/ Gender and number

According to Fabra's (1919) (and many others') intuitions on Modern Catalan, the rate of agreement with feminine singular DOs should be higher than with feminine plural DOs, which, in turn, should be higher than with masculine singular objects. My data do not show any clear preference for PPA when the DO is feminine singular until the 17th or 18th century (Figure 3.2). Other feature specifications, however, still show high rates of overt agreement (3.14a-b). The restriction according to gender and number thus seems to be a relatively recent development. Agreement with masculine plural objects, however, was already slightly dispreferred before the 16th century in certain texts (3.14c).

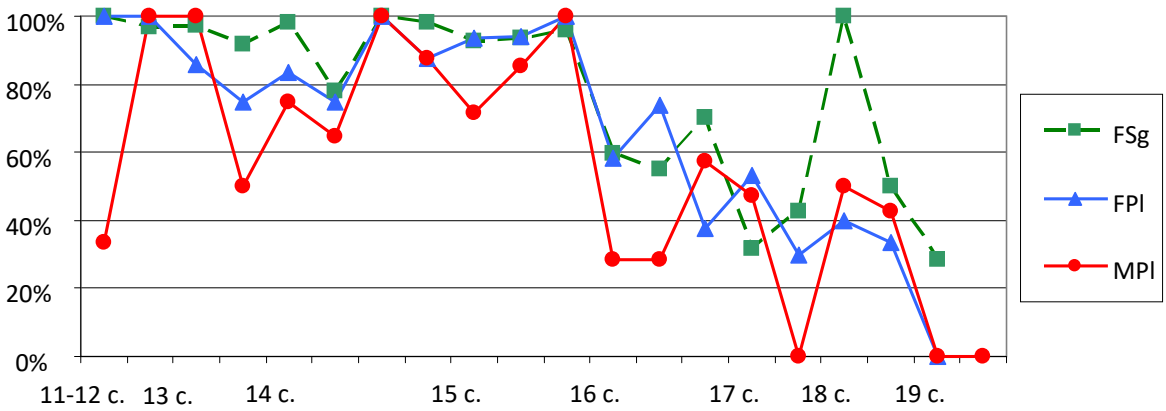


Figure 3.2. Rates of PPA according the gender and number of the DO.

(3.14) a. e no me ·n vendré tro que Déus vula
and not CL.Refl.1Sg CL.PART come.FUT.1Sg until that God want.SUBJ.3Sg
que ajam la terra **conquesta**,
that have.SUBJ.1Pl the land.FSg conquer.PP.FSG
'and I will not come back until God's will is that we have conquered the land,'
(14.Desclot_71:10-11)

b. Quant agren **desbaratats** los sarraÿns e **conquestes**
when have.PST.3Pl disperse.PP.MPl the Saracen.MPl and conquer.PP.FPl
moltes ciutats,
many city.FPl
'When they had dispersed the Saracens and conquered many cities,'
(14.Desclot_37,3-6)

c. mas sols conta los que aprés han **tengut** aquells noms,
but only against REL.MPl afterwards have.3Pl have.PP.Def that name.MPl
'but only against those who have had those names afterwards,' (16.Tortosa_86:4-5)

B2/ Person

In Modern Romance, there is a bias between the 1st and 2nd person, on the one hand, and the 3rd person, on the other. The development of PPA with 3rd person objects mostly overlaps with the general development of PPA. Unfortunately, there are not enough target sentences with 1st/2nd person objects to draw reliable conclusions. It seems that until the 15th century, PPA was obligatory with 1st/2nd person clitics (3.15a). For the 16th and 17th century, there are only 5 tokens containing the 1st person, 3 out of which include agreeing participles. Agreement should thus be considered optional (3.15b-c). The person restriction found in Modern Catalan (and Modern French), i.e. the unacceptability of PPA with 1st and 2nd person clitics, must have emerged later.

(3.15) a. Muira aquest qui ens ha **fets** tornar orats!
die.SUBJ.3Sg this who CL.1Pl have.3Sg do.PP.MPl become crazy.MPl
'that this who has made us go crazy dies!' (14.Eiximenis_39:23-24)

b. Lo bale d'Ebrera m' à **pregada** recordàs
the mayor of Ebrera CL.Acc.1Sg have.3Sg beg.PP.FSg recall.SUBJ.1Sg
a vostra senyoria son negosi
to your Lordship his business
'the mayor of Ebrera asked me to remind your Lordship about his business'
(16.Estefania_13:98-100)

c. lo que sentiren molt los Consistoris per havernos
REL.Neut feel sorry.PST.3Pl much the council.MPl for have=CL.Acc.1Pl
desemparat en esta ocasio
abandon.PP.Def in this occasion
'what the councellors strongly regretted since they had abandoned us on this occasion' (17.Successos_236:21-23)

B3/ Case

Since different case values depend on construction type, some aspects of this feature will be dealt with below, where constructions types are discussed. However, I would like to comment on some details of sentences that bear cases other than accusative – i.e. unambiguous partitive marking by means of the partitive clitic *en* or the partitive article *de*, or dative.

As for the latter, no cases of participle agreement controlled by dative arguments were attested in the corpus.

For the 14th century, four sentences have been unequivocally coded with partitive case. Only one of them lacks agreement (3.16a). Two things must be noted: The partitive object triggering PPA is

either preposed, accompanied by a partitive clitic *en*, or both (3.16b). Otherwise, PPA does not apply. The low number of examples in the corpus does not allow us to make generalizations; rather, these observations suggest that the constraints on agreement with partitive objects are quite similar to the positional rules stated for Modern Romance. These issues are closely related to definiteness and/or specificity. Hence, they will be discussed in more detail below.

(3.16) a. puis tots los sants han **haut** de mes candeles
since all the saints have.3Pl have.PP.Def PART my candle.FPl
'since all saints have had some of my candles' / 'since I have lit candles for all saints'
(14.Eiximenis_69:1-3)

b. [de marits] e havia 'n **haguts** ja tres o quatre.
[of husband.MPl] and have.1Sg CL.PART have.PP.MPl already three or four
'since I have already had three or four (husbands).' (14.Eiximenis_28:17-21)

B4/Definiteness and specificity

One of the most salient characteristics of the Old Catalan data until the 15th century is the observation that position does not play a role for the realization of PPA – which is different from Old Italian, as claimed by Poletto (2014). The participle agrees with pre- and post-verbal DOs (3.17). This means that the positional rule cannot have appeared before the 16th century in Catalan.

(3.17) a. e membrà les paraules que la pastora li havia
and recall.PST.3Sg the word.FPl REL the shepherdess CL.Dat.3Sg have.PST.3Sg
dites de Déu
say.PP.FPl about God
'and he recalled the words that the shepherdess had said to him about God'
(13.Meravelles_28:17-19)

b. com en aquest món hage **haüts** molts més
as in this world have.SUBJ.3Sg have.PP.MPl many.MPl more
hòmens de molt gran santadat,
man.MPl of much big sanctity
'as there have been many more men of great sanctity in this world,'
(13.Meravelles_118:19-22)

Instead, definiteness/specificity seems to be related with the realization of overt participle agreement. Although the corpus has been coded according to the four categories presented in Chapter 8.1.3 (example 3.7), only very few objects fell into the mixed categories – 'Indefinite

specific' and 'Definite non-specific' – so that these data have not been dealt with in the representation of the results below. Since these data do not constitute a large sample and almost all items (in both groups) showed a similar pattern of PPA, this decision does not substantially affect the interpretation of the data.

The relation between definiteness/specificity and PPA is shown in Figure 3.3[32].

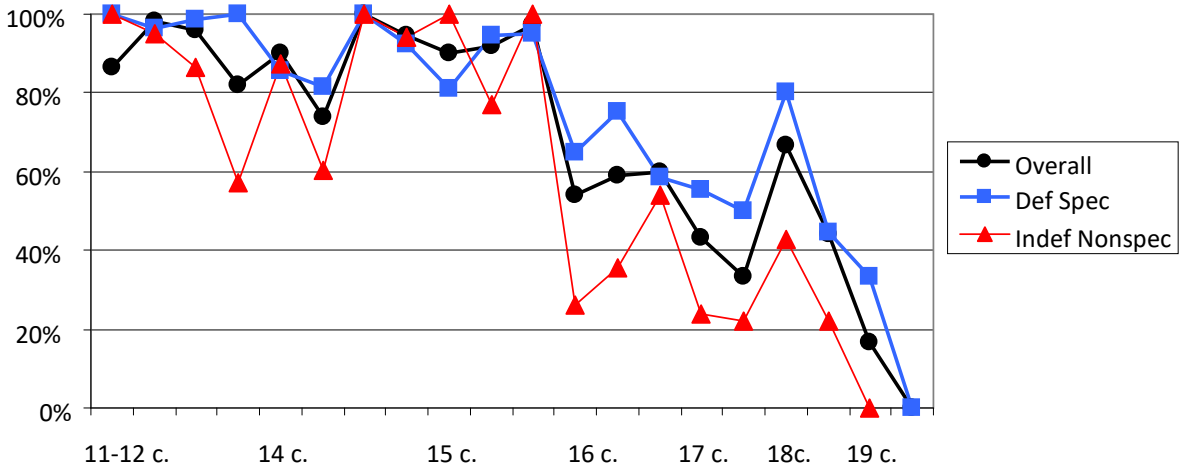


Figure 3.3. Rates of PPA according to definiteness/specificity of the DO.

Non-specific indefinites have a tendency to be employed with default agreement on the participle (3.18) by some authors in the 14th century. This pattern is generalized from the 16th century on. Hence, PPA is more prone to be associated with specific definite objects than with indefinite ones – agreement with post-verbal definite DPs is still found in the 18th century (3.19). In fact, the first examples of (optional) non-agreeing participles in linguistic studies on Old Catalan show indefinite DPs (3.20) – a fact that often goes unnoticed.

(3.18)	Natura	ha	**donat**	<u>vianda</u>	a sustentació	de vida,
	nature	have.3Sg	give.PP.Def	food.FSg	to sustenance	of life
	'nature has given food for the preservation of life,'					(14.Somni_164:13-14)

[32] Wh-elements have also been excluded from this figure. Although they are generally considered to be indefinite, due to their status as CP-operators, they show a different behavior. In fact, wh-elements trigger participle agreement slightly more frequently than other indefinites.

(3.19) he **feta** la Prezent nota perlo molt que
have.1Sg do.PP.FSg the present note.FSg for=the much that
nos vol ÿ el volem.
CL.Acc.1Pl love.3Sg and CL.Acc.3MSg love.1Pl
'I have written the present note because he loves us so much and we love him.'
(18.Anglasell_285 l.:3-9)

(3.20) a. perquè tan prestament havien en sa cort trobat cavallers
because so promptly have.PST.3Pl in his court find.PP.Def knight.MPl
qui ·ls havien **deliurats**.
who CL.Acc.3MPl have.PST.3Pl release.PP.MPl
'since they had very promptly found knights in his court who had released them.'
(1490 [1460], Martorell, Tirant: 290)

b. Parents has **perdut**, los quals, aquella matexa fortuna qui
parent.MPl have.2Sg lose.PP.Def which.MPl that same fortune who
·ls donà, los te ha **levats**
CL.Acc.3MPl give.PST.3Sg CL.Acc.3MPl CL.Dat.2Sg have.3Sg remove.PP.MPl
'You have lost your parents, which the same fate that has given them to you has taken them away'
(1490 [1460], Martorell, *Tirant*: 1306, from Gavarró & Massanell 2013)

However, it is often assumed that specificity interacts with position (cf. Chapter 2.3), hence the results ascribed to this feature could instead be due to positional restrictions. It is true that the effects of position on PPA strongly resemble the pattern of definiteness/specificity. Ca. 80% of the pre-verbal objects are definite, and almost all of them (92%) trigger agreement. By and large, Figure 3.4 has the same shape as Figure 3.3.

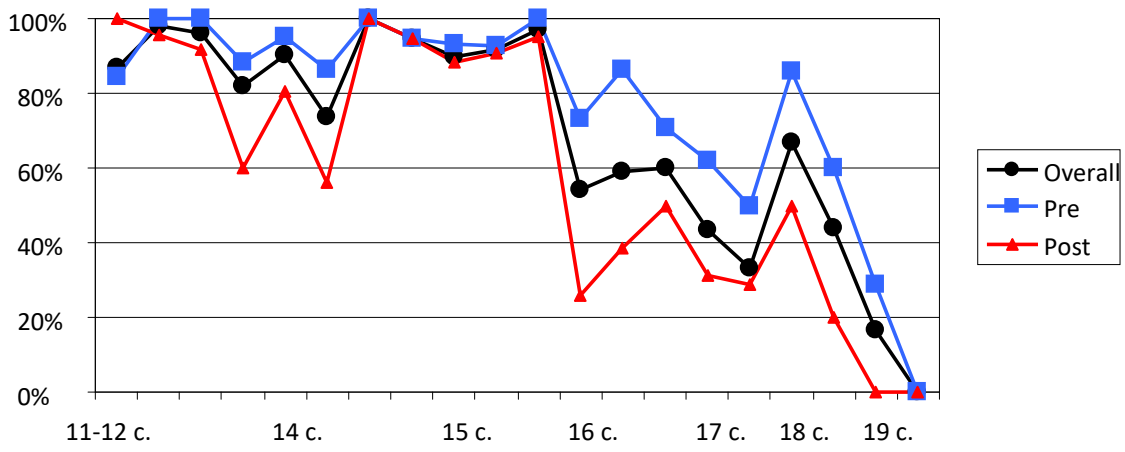
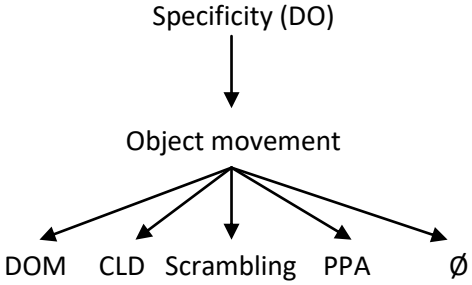


Figure 3.4. Rates of PPA according to object position.

Nevertheless, there are also reasons to assume that PPA is associated rather with specificity than with object placement (which feature or property is the real trigger of agreement will be further discussed in Chapter 10). On the one hand, there are some theoretical considerations. Recall the discussion on object movement, definiteness effects, DOM, etc. in Chapter 2, and especially Diesing's (1992) Mapping Hypothesis (1.43) by which specific objects are forced to leave the VP. Accordingly, the intended interpretation of the DP triggers syntactic movement, whereas movement is arguably responsible for the analysis of other phenomena such as DOM. As Fischer (2010) and Navarro et al (2017) argue, Catalan has undergone a language change with respect to verb movement by which the positions available for A'-moved objects are lost. The expression of specificity can no longer be object placement, but other means of conveying this information must be developed – i.e. clitic doubling. According to the landing site for the object, movement can result in different constructions (cf. López's [2012] short scrambling account of DOM), which would ultimately be motivated by specificity. In other words, as the positional freedom of the object gets more constrained, the contexts in which PPA is possible decrease. At the same time, other phenomena that recover the information otherwise lost in this process may arise. This is summed up in (3.21): Verb movement is forced by specificity, but according to the constraints on possible landing sites for the DO, different constructions can be found in a language. In Chapter 10, I will discuss how this proposal is compatible with a grammaticalization approach of PPA in Catalan and will reconsider some aspects of it.

(3.21)



On the other hand, there is empirical evidence supporting the idea that specificity could determine PPA. First, if position were the only factor at work, only post-verbal objects would be expected to lose PPA, but the figures show that agreement becomes optional at the same rate in both contexts, i.e. with pre- and post-verbal objects, simultaneously. What is more, there are some asymmetries in the distribution of definite/specific objects with respect to the verb, especially during the period from the 16th to the 18th century. Here, pre-verbal indefinites show a higher rate of agreement than post-verbal ones. This can be due to information structure, i.e. the need for focalization or topicalization, so that some of these objects could, in fact, be analyzed as specific indefinites. Finally, almost half of the 240 non-agreeing participles with auxiliary HAVE in

the corpus take indefinite objects, and around 20% take a wh-constituent. Considering that an overwhelming majority of the corpus sentences have definite objects, it is particularly interesting that only a third of the default participles are controlled by definites.

For these reasons, I conclude that specificity plays a crucial role in the realization of participle agreement in Catalan. However, increasing restrictions conditioned by the verb movement parameter could give rise to a reinterpretation of the constraints on PPA. Since only some limited positions are available, only special structures can still trigger agreement (e.g. cliticization and wh-movement). In a further step, the restrictions on PPA can be reinterpreted as a positional criterion, as analyzed in the approaches presented in Chapter 1.2.4 and 1.2.5. This is also the situation we find in Italian and in Catalan from the 19th century on.

B5/ Genericity

Unfortunately, there are not many unambiguous sentences containing generic objects or objects used non-referentially. Until the 15th century, there are only very few cases in which agreement is missing with non-referential objects (3.22). In the 16th century, only half of the generic/non-referential examples show PPA (3.23). From the 17th century on, agreement with this type of object is no longer attested. Genericity thus seems to follow the same path as definite-ness/specificity and is probably dependent on this feature.

(3.22) a. e molts més són estats los hòmens qui han
and many more be.3Pl be.PP.MPl the man.MPl who have.3Pl
enganades dones,
cheat.PP.FPl woman.FPl
'and many more have been the men who have cheated on women,'
(14.Somni_156:22-23)

b. com si totstemps havien navegat, o **fet** mercaderia
as if always have.PST.3Pl sail.PP.Def or do.PP.Def trade.FSg
d'aquell (vi).
of that (wine)
'as if they had always sailed and traded with that (wine).' (14.Somni_123:23-24)

(3.23) perquè no han **tingut** ocasió d' alterar -la com
because not have.3Pl have.PP.Def occasion.FSg of modify CL.Acc.3FSg like
los valencians;
the Valencians
'because they haven't had the chance to modify it the way the Valencians did;'
(16.Tortosa_52:15-16)

B6/ Animacy

Animacy did not give rise to any observable effects.

C1/ Construction type

Some specific constructions have been discussed so far, among them ASC und GerSC, passives and unaccusatives. I refer to the preceding discussion.

Thirty-four tokens in the corpus contained the past participle of a causative or modal verb. Until the 14th century, PPA is almost obligatory (3.24) irrespective of the position and grammatical relation of the embedded argument. Later, it is more difficult to find the appropriate contexts in the corpus. According to the few tokens, it seems that PPA was not obligatory, even if the raised argument is a clitic (3.25). However, the collected data are not enough to delimit the restrictions that apply to control, modal and causative verbs at different diachronic stages.

(3.24) a. que per boca d'aquest infant ha **volguda** tan piadosament
that through mouth of this child have.3Sg want.PP.FSg so mercifully
corregir ma error!
correct my fault.FSg
'that he so mercifully wanted to correct my fault through the words of this child!'
(14.Eiximenis_96:3-5)

b. Les gallines hic havie **fetes** tornar,
the hen.FPl CL.LOC have.PST.3Sg make.PP.FPl come back
'he had made the hens come back there,' (14.Lletres_5:39-40)

(3.25) A la jermana de na Serana, n' é **fet** dar
to the sister of the Serana CL.PART have.1Sg make.PP.Def give
altres dos quarteres.
other two sack.FPl
'I have ordered to give Serana's sister two more sacks.' (16.Estefania_18:41)

As for the remaining constructions, it is expected according to the current standard grammar of Catalan that sentences with a clitic almost obligatorily trigger agreement in the whole data, whereas sentences in which the controller of agreement is a wh-word or a relative pronoun progressively lose the possibility to have PPA. Table 3.5 shows the rates of agreement according to these constructions. The numbers at the top show how many items out of the total number of tokens found for that period show PPA. The numbers at the bottom provide the percentages for

agreement. Under 'Others' I have subsumed any sentences that do not belong to one of the preceding types (i.e. causative verb, unaccusatives, clitic constructions, etc.).

	Clitic constructions	***Wh/Rel constructions***	***Others***	***Overall results (constructions with HAVE)***
11th-13th centuries	46 / 46 100%	89 / 92 96.74%	157 / 168 93.45%	299 / 313 95.53%
14th century	71 / 74 95.95%	61 / 70 87.14%	146 / 186 78.49%	291 / 346 84.10%
15th century	35 /35 100%	73 / 76 96.05%	82 / 93 88.17%	195 / 211 92.42%
16th century	34 / 39 87.18%	31 / 47 65.96%	39 / 92 42.39%	108 / 190 56.84%
17th-19th centuries	10 / 12 83.33%	15 / 25 60%	11 / 37 29.73%	52 / 125 41.60%
TOTAL	196 / 206 95.15%	269 / 310 86.77%	435 / 576 75.52%	945 / 1185 79.75%

Table 3.5. Rates of PPA in Old Catalan according to construction type.

As for clitic constructions[33], the expectation is confirmed. Although there are some cases of default agreement from the 16th century on, PPA is almost obligatory (3.26a). Wh-moved objects still trigger agreement in 60-65% of the sentences (3.26b). Most examples of non-agreement, however, show complex structures – e.g. PPA combined with a control or causative verb, or the controller of the agreement is separated from the participle by parenthetical phrases as in (3.26c). Main and embedded clauses with the canonical word order (S)VO have the most marked decrease of PPA: 80-90% until the 15th century (3.26d-e), and 30-40% from the 16th century on (3.26f-g).

(3.26) a. é agut a pendre sinquanta ducats de miser Toredemer
have.1Sg have.PP.Def to take fifty ducat.MPl of miser Toredemer
lo qual, per socórerme, los m' à **dexats**,
REL.MSg for help=CL.Acc.1Sg CL.Acc.3MPl CL.Dat.1Sg have.3Sg lend.PP.MPl
'I have had to borrow fifty ducats from miser Toredemer, who has lent them to me to help me,' (16.Hipòlita_155:4-6)

b. Si io et demanava ara aquests vint sous que t'
if I CL.Dat.2Sg ask.PST.1Sg now this twenty coin.MPl REL CL.Dat.2Sg
he **posats** al puny,
have.1Sg put.PP.MPl in-the fist
'If I asked you now for those twenty coins that I put in your hand,'
(14.Eiximenis_81:12-16)

[33] This includes reflexive clitics. Although PPA is controlled by the subject, it is also mediated by the reflexive clitic which is placed in the same position as other object clitics. The person feature, as discussed above, did not give rise to any effects.

c. menysprees los dons que amor, pus piadosa de tu que tu mateix,
despise.2Sg the gift.MPl REL love more merciful of you than yourself
t' à **ofert**.
CL.Dat.2Sg have.3Sg offer.PP.Def
'you despise the gifts that Love, which is more merciful to you than you are to yourself, has offered you.' (15.Curial_49:34-37)

d. ha **ornada** la terra ab bells edificis.
have.3Sg embellish.PP.FSg the Earth.FSg with beautiful buildings
'he has embellished the Earth with beautiful constructions.' (14.Somni_30:15)

e. jamai no volguera haver **demanat** uns patins ne un vel,
never not want.SUBJ.3Sg have ask.PP.Def some shoes.MPl nor a veil.MSg
'never would she have wanted to ask for some shoes or for a veil,'
(14.Somni_158:26-27)

f. que lo exercit enemich avia ya **vistas** las murallas de la ciutat,
that the army enemy have.PST.3Sg already see.PP.FPl the wall.FPl of the city
'that the adversary army had already seen the walls of the city,'
(17.Successos_243:26)

g. dos galeras que estavan y se trobavan dins la abadia
two galleys REL be.PST.3Pl and CL.Refl.3 find.PST.3Pl inside the bay
de Rosas que avian **aportat** provisions a dita Fortaleza
of Rosas REL have.PST.3Pl bring.PP.Def supply.FPl to said fortress
'two galleys that were there and were located on the bay of Rosas, which had brought supplies to the mentioned fortress' (17.Successos_249:1-3)

In addition, if we take a look at the indefinite objects of (S)VO main and embedded clauses, an interesting effect can be seen, as shown in Table 3.6. Whereas the rate of agreement controlled by indefinites does not differ from the global proportions in constructions with HAVE (third column) until the 15th century, it decreases drastically in the 16th century. Missing agreement is attested to a lower degree with pre-verbal indefinites and post-verbal definites – and even lower with pre-verbal definites. In other words, optional PPA is found in main and embedded (S)VO clauses as in almost all contexts, but again an effect of definiteness is attested.

	Main and embedded clauses	*Main and embedded clauses with indefinite objects*	*Overall results (constructions with HAVE)*
11th-13th centuries	157 / 168 93.45%	**68 / 76** **89.47%**	299 / 313 95.53%
14th century	146 / 186 78.49%	**96 / 118** **81.36%**	291 / 346 84.10%
15th century	82 / 93 88.17%	**32 / 37** **86.49%**	195 / 211 92.42%
16th century	39 / 92 42.39%	**20 / 75** **26.67%**	108 / 190 56.84%
17th-19th centuries	11 / 37 29.73%	**4 / 23** **17.39%**	52 / 125 41.60%
TOTAL	435 / 576 75.52%	**220 / 329** **66.87%**	945 / 1185 79.75%

Table 3.6. Effects of definiteness on the rates of PPA in Old Catalan (S)VO clauses.

In short, clitics, which are inherently definite/specific, usually trigger PPA whereas wh-elements (i.e. CP-operators) allow for optionality. The remaining items (most of them with post-verbal DP object, which tend to carry new information, which is why they are indefinite/non-specific in the first place) show lower agreement rates, but this rate becomes even lower from the 16th century on, in particular if they are clearly indefinite/non-specific objects.

C2/ Word order, position w.r.t. the verb, adjacency

Data about word order were collected to provide information that might potentially be useful for future research, albeit not directly related to PPA.

Object position with respect to the verb has already been discussed in connection to definiteness/specificity, hence I refer the reader to the preceding discussion in this chapter.

It must be noted that adjacency, i.e. the possibility of separating the agreeing participle from the controller of the agreement, does not play a role until the 17th century (3.27a). Adjacent and non-adjacent objects practically coincide with the percentage for agreement (Figure 3.5). After this, the requirement to keep the object close to the verb in order to have PPA becomes stronger (3.27b). This can be interpreted as a growing structural fixation of the clause. The reduction of the contexts in which PPA is applicable (due to changes in the verb movement parameter which affected the positions available for the object to move) arguably led to a reinterpretation of the trigger for agreement, i.e. a positional criterion emerges (cf. discussion w.r.t. specificity above). The data thus suggest that the structural motivation for PPA is gaining ground from the 17th

century on. Finally, if optional PPA were analyzed as a morphological relic of a previous diachronic stage without a syntactic counterpart – i.e. as post-syntactic agreement – adjacency would be required as well: The closer the DO is to the participle, the easier it is to show overt agreement for the participle.

(3.27) a. Cant Blanquerna hac **recomptada** […] a Fèlix la rahon
when Blanquerna have.PST.3Sg tell.PP.FSg to Fèlix the reason.FSg
'when Blanquerna had told Felix the reason' (13.Meravelles_104:16-17)

b. havent **donat** la Ciutat a cada tercio les armes que
having give.PP.Def the City to each regiment the weapon.FPl REL
avian menester,
have.PST.3Pl need
'the City having given to each regiment the weapons they needed'
(17.Successos_236:32-36)

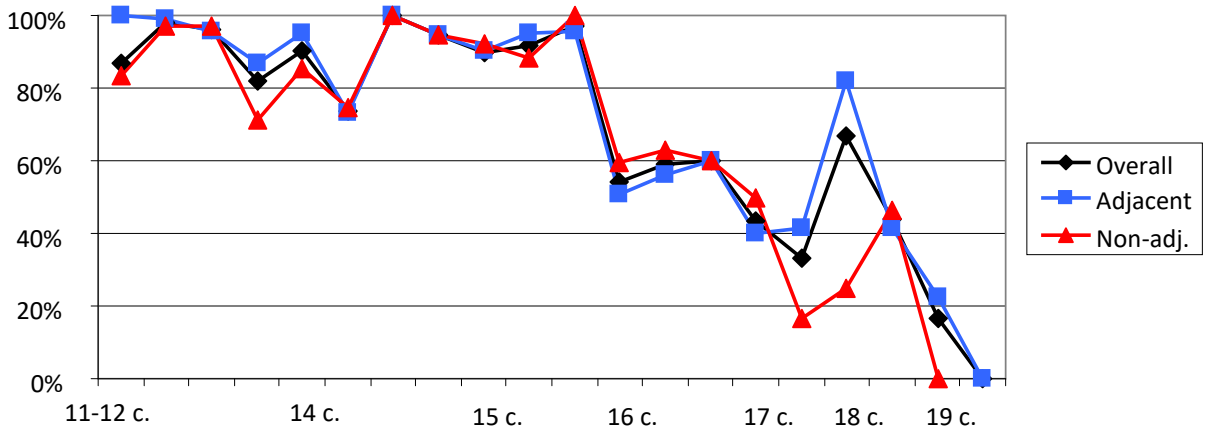


Figure 3.5. Rates of PPA according to adjacency of the DO and the participle.

9.2 Results of the Acceptability Judgment Task

9.2.1 Interpolation

The first of the three constructions tested by means of the acceptability judgment task for Modern Catalan (cf. Chapter 8.2) is interpolation, i.e. the possibility of inserting an adverbial between the auxiliary verb and the participle. This property is considered to be connected to the degree of grammaticalization of the auxiliary verb and the compound tense form, which is in turn supposed to correlate with the possibility of having PPA.

The speakers had to rate two sentences with an interpolated element (the negative adverbials *mai* and *pas*) and participle agreement (3.28). In both sentences, the trigger of participle agreement is a clitic in a CLLD construction, which is one of the most favorable contexts for PPA.

(3.28) a. Aquestes paraules, jo no les he pas **dites**!
this word.FPl I not CL.Acc.3FPl have.1Sg not say.PP.FPl
'These words, I have not said them!'

b. Ell no l' hauria mai **feta**, aquesta bestiesa.
he not CL.Acc.3FSg have.COND.3Sg never make.PP.FSg this silly thing.FSg
'He would have never made this silly thing.'

The participants rejected interpolation in 29.2% of the cases, although most of them rejected only one of the two test sentences (only two participants rejected both). This means that interpolation is still seen as grammatical in Modern Catalan, even if only marginally. Two thirds of the participants that had corrected interpolation rejected participle agreement in the same sentences. Among the tokens in which interpolation was accepted, PPA was corrected in only one third of the cases. Almost half of all ratings (45.8%) considered PPA with interpolation to be acceptable. The results are shown in Table 3.7.

N=48	***With PPA***	***Without PPA***
With interpolation	22 (45.8%)	12 (25.0%)
Without interpolation	5 (10.4%)	9 (18.8%)

Table 3.7. Acceptability ratings of the interaction between PPA and interpolation in Modern Catalan.

Two conclusions can be drawn from the table. First, interpolation does not impede but rather foster PPA, hence the high acceptability rates of sentences with PPA and interpolation. Speakers that prefer PPA also allow interpolation (45.8 vs. 10.4%). However, speakers that reject PPA do not show such a clear preference for or against interpolation (25 vs. 18.8%). Second, in this domain too there is optionality so that all possible answers are represented. The claimed tight connection between grammaticalization of the verbal construction and participle agreement cannot be observed.

9.2.2 Causatives

As pointed out before, the corpus search did not provide conclusive data about the restrictions on causative, control or modal verbs in Old Catalan. The participants of the questionnaire had to give judgments about the acceptability of PPA triggered by a climbed clitic that was co-referential with an embedded object (3.29a), an embedded subject (3.29b) or an embedded derived subject (3.29c).

(3.29) a. Les instruccions, me les ha **fetes** repetir
the instruction.FPl CL.Dat.1Sg CL.Acc.3FPl have.3Sg make.PP.FPl repeat
tres vegades.
three times
'He made me repeat the instructions three times.'

b. A aquestes noies, ja les he **vistes** demanar
to this girl.FPl already CL.Acc.3FPl have.1Sg see.PP.FPl ask
almoina moltes vegades.
alms.FSg many times
'These girls, I have already seen them many times asking for alms.'

c. La seva mare les ha **fetes** anar al pis de dalt.
the their mother CL.Acc.3FPl have.3Sg make.PP.FPl go to-the floor of top
'Their mother made them go upstairs.'

In consonance with the descriptions found in some of the descriptive grammars (e.g. Rosselló 2002), the difference between embedded objects and embedded subjects was not very salient. The mean value of the ratings for agreement with the embedded object was 2.18 in the four-point scale (1=completely acceptable, 4=completely unacceptable). The mean rating for agreement with the embedded subject was 2.24. Embedded derived subjects, i.e. subjects of embedded unaccusative verbs, received a worse rating, 2.58, which means that this construction is slighty less acceptable. Again, one can conclude that PPA is optional in this kind of

constructions, but not restricted in the way proposed by Fabra (1919) and many others. Grammatical relations were only relevant when there was an embedded subject of an unaccusative verb, which can be ascribed to the special properties of these arguments (e.g. greater structural or computational complexity due to the additional movement operation required by unaccusatives).

9.2.3 Partitive Objects

I have argued above (Chapter 9.1) that specificity/definiteness plays an important role in PPA (at least between the 15th and the 17th century), as is the case in the other object constructions discussed in Chapter 3.3. This is why items expressing different readings with respect to specificity were included in the test.

Due to the context, (3.30a) is more easily interpreted as specific (the speaker mentions two specific skirts he or she liked; the further specification by the relative clause, with indicative mood, reinforces a specific interpretation). On the contrary, (3.30b) is interpreted as non-specific (the speaker refers to a big amount of works by the author rather than to some particular titles; the DP expresses cardinality).

(3.30) a. *Context*:
Necessito una faldilla nova. Avui he anat de compres...
'I need a new skirt. Today I went shopping…'
Test item:

i	n'	he	**vistes**	dues	que	m'	han
and	CL.PART	have.1Sg	see.PP.FPl	two.FPl	REL	CL.Dat.1Sg	have.3Pl
agradat	força.						
like.PP.Def	quite						

'and I have seen two (skirts) which I liked quite a lot.'

b. *Context*:
El meu escriptor preferit és la Mercè Rodoreda.
'Mercè Rodoreda is my favorite writer.'
Test item:

De les seves obres,	ja	n'	he	**llegides**	moltes.
of the her work.FPl	already	CL.PART	have.1Sg	read.PP.FPl	many.FPl

'I have already read many of her works.'

Specific sentences such as (3.30a) received an acceptability rating of 2.01, whereas the rating of non-specific contexts such as in (3.30b) was 2.21. Once more, the difference is quite small. PPA was not unanimously rated as completely acceptable (the values are much worse than 1.00), but it is neither categorically rejected. In other words, participle agreement with the partitive clitic *en* is basically optional and no definiteness/specificity effect could be attested in the results of the questionnaire.

9.2.4 Influence of Dialect and Language Dominance

I divided the participants according to their variety (Occidental or Oriental Catalan) and the self-assessment of their language dominance (Catalan- or Spanish-dominant) and checked whether there was a correlation with their acceptance/rejection of PPA in the different constructions of the questionnaire.

The differences between the two variety groups are not relevant (see Table 3.8). There is a slight tendency for speakers of the Occidental variety to accept interpolation of *pas* and *mai* (it was corrected only four times, instead of 10 times by speakers of Oriental Catalan), a fact that was rather unexpected as this property tends to be associated with Northern Catalan varieties of Oriental Catalan. Speakers of Oriental Catalan were more prone to accept agreement controlled by the partitive clitic *en*, especially with a specific reading.

PPA with:	***Oriental Catalan***	***Occidental Catalan***
embedded subject	2.27	2.17
embedded object	2.05	2.12
embedded derived subject	2.53	2.67
+Specific partitives	1.95	2.11
-Specific partitives	2.10	2.39

Table 3.8. Acceptability ratings of PPA according to language variety.

The results for the effect of language dominance are presented in Table 3.9. Unexpectedly, Spanish-dominant Catalan speakers show a tendency to accept agreement controlled by the partitive clitic *en* more frequently than Catalan-dominant speakers. The latter also have a slight tendency to reject interpolating elements. These results are striking since Spanish-prominent speakers are using properties in Catalan (PPA, interpolation) that are absent in their dominant language. This could be interpreted as an overgeneralization, i.e. a strategy to magnify the distinctive traits between the two languages.

PPA with:	Catalan-dominant	Spanish-dominant
embedded subject	2.33	2.07
embedded object	2.00	2.14
embedded derived subject	2.54	2.64
+Specific partitives	2.27	1.70
-Specific partitives	2.40	1.98

Table 3.9. Acceptability ratings of PPA according to language dominance.

To sum up, the results of the acceptability judgment task show that the embedded argument of control or causative verbs optionally triggers participle agreement irrespective of its grammatical function in the embedded clause (except when it is a derived subject of an unaccusative verb, which showed lower ratings in any speaker group). Also, specific readings showed an effect on the acceptability of PPA controlled by the partitive clitic *en*, especially in Oriental Catalan and Spanish-dominant speakers. The differences, however, are rather small and the variation in the answers in all groups show that the judgments are not clear-cut. In fact, the results of the test suggest that there are no clear patterns of agreement and the decision to use it or not is unsystematic, i.e. PPA and default agreement are not associated with interpretive differences, contrary to Obenauer's (1992) conclusions for French. Instead, the kind of optionality in Catalan seems to be based on personal preferences that are, in turn, based on stylistic considerations. In a way, this situation can be logically considered the last stage before the complete loss of agreement, i.e. the final step of the respective language change process (i.e. grammaticalization).

9.3 The PPA-Cycle

At first sight, default agreement in sentences with auxiliary HAVE seems to be possible in any context in Old Catalan and *Decadença* Catalan. There is no single feature that unambiguously determines when overt agreement must take place or not. φ-features, definiteness, specificity, object placement, adjacency to the verb, or construction type are all features that correlate with the change in PPA from Old to Modern Catalan. However, none of them seems to account for the whole process. Some features interact with each other but the observable effects do not remain stable over time. For instance, indefinite objects, especially when positioned post-verbally (in situ), showed lower rates of agreement than definite DPs during the 16th and 17th century, but the effects of definiteness on the current language use are negligible.

Taking into consideration both the data from the corpus and the acceptability judgment task, different tendencies can be identified (the relevant data have been discussed in Chapter 9.2). The

development of PPA in Romance languages, and especially in Catalan, is summed up in (3.31). Until the 15th century, PPA is almost obligatory, with only a few exceptions (Stage 1). In the 16th century (Stage 2), the situation is very different: Lack of agreement is allowed, but indefinite or non-specific objects seem to favor it. Preposed and cliticized definite objects trigger agreement more frequently than indefinite post-verbal ones. Additionally, object placement has been understood as a function of the specificity value of the DO (see (3.21) and the discussion there). The link between PPA and specificity has also been observed in other Romance languages or varieties; hence it is plausible to think that a period in which specificity was the determinant for the realization of agreement could generally have existed in any Romance language. Under this perspective, PPA exhibits the behavior expected for interface phenomena (i.e. combination of restrictions at different linguistic modules), which would predict its variability and optionality, i.e. its synchronic and diachronic instability. By the 19th century, post-verbal objects do not trigger agreement any more. At this stage (Stage 3), a positional rule (or set of rules) emerges, such as the one found in Italian[34]. The distribution of agreement in Romance, though, is language-specific, which means that different constructions may trigger agreement only in certain languages (e.g. 3rd person clitics vs. 1st and 2nd person clitics, wh-elements, etc.). In Stage 4, default agreement is accepted in those contexts in which PPA was obligatory in Stage 3. Finally, Spanish, Portuguese and Romanian represent the last step of the process, in which PPA is obsolete (Stage 5).

(3.31) *Cyclic development of PPA in Catalan (and other Romance languages):*

Stage 1	→	Obligatory PPA – 12th-15th centuries
Stage 2	→	PPA linked to definiteness/specificity – 16th century (possibly until the 18th century)
Stage 3	→	PPA controlled by object placement (i.e. pre-verbal position after A- or A'-movement) – 17th-19th century (also normative Italian)
Stage 4	→	Optional PPA – 20th-21th century (also spoken French)
Stage 5	→	Complete loss of PPA (Spanish, Portuguese and Romanian)

To some extent, the development of PPA seems to mirror the CLD cycle described in Vega Vilanova et al. (2018). CLD starts out in a few optional contexts (e.g. only strong personal pronouns are doubled by a clitic) and gradually spreads to other constructions until it is generalized for all kind of arguments. In the end, the pronoun loses its grammatical status as a

[34] Subject-verb agreement in French has undergone a similar change (cf. Salvesen & Bech 2014): Post-verbal subjects used to trigger agreement in Old French, while only pre-verbal subjects trigger agreement in Modern French (see also fn. 13). The apparent asymmetry found in Modern Romance languages (i.e. post-verbal objects do not show verbal agreement whereas post-verbal subjects do) can probably be explained under the same framework (cf. Fuß 2005:87 and references therein).

clitic and becomes an agreement marker. The last step of this process would be morpho-phonological erosion of the inflectional affix and the complete loss of CLD, which would be equivalent to the initial state of the cycle. Hence, both the PPA-cycle and the CLD-cycle can be captured as two runs of a more general 'object agreement cycle' (cf. van Gelderen 2011).

The development of PPA goes in the opposite direction. PPA shows increasing restrictions: The contexts that require PPA become fewer and more specific. Compulsory agreement becomes optional in these few constructions. Finally, PPA is lost. This reverse relation has already been noticed by Franco (1994), Tsakali (2006) and Tsakali & Anagnostopoulou (2008). A common development of both phenomena is thus not far-fetched. When PPA reaches the last stages of the change process, other elements can be introduced to restore the function that was lost along with PPA – e.g. the externalization of specific readings.

It could be objected that the paths of change of CLD and PPA are rather different. Animacy, which is intimately related to CLD, for instance, does not play a role in PPA. Case is assumed to be involved in CLD but not directly in PPA. What is more, the controller of PPA (i.e. the clitic) is at the same time the morpheme that substitutes the agreement morphology on the verb. This is not necessarily a problem. First, as I have shown in Chapter 3.3.2, CLD and PPA do not co-occur within the same clause. In (1.68), repeated here as (3.32), I argued that a sentence with both PPA and CLD is ungrammatical and that either agreement must be omitted or the object must be dislocated to 'repair' the structure. Furthermore, different factors could be at work in the explanation of different phenomena. For the explanation of CLD, for instance, it was necessary to look at the grammaticalization path of the clitic and the specifications of the verb movement parameter (cf. Fischer et al. 2019). Even if the same factors are involved in PPA, their role could be different in this case. Furthermore, according to assumptions on the operation Agree, the feature configuration of the clitic cannot be the same in PPA and in CLD. Whereas the clitic must be endowed with interpretable φ-features c-commanding [uφ] on AgrO when it triggers participle agreement, its φ-features must be uninterpretable in the case of CLD so that the doubled DP can bear the interpretable counterpart of them, avoinding to have a chain with two sets of interpretable features.

(3.32)	a.	Avui	les	he	**vist**	a elles.	→ √ CLD / DOM
		today	CL.Acc.3FPl	have.1Sg	see.PP.Def	to them.FPl	
	b. *	Avui	les	he	**vistes**	a elles.	→ * CLD/DOM + PPA
	c.	Avui	les	he	**vistes**,	a elles.	→ √ CLRD + PPA
		today	CL.Acc.3FPl	have.1Sg	see.PP.FPl	to them.FPl	
		'I have seen them today.'					

In Chapter 6, I have suggested that grammaticalization can apply at the feature level and that doubled constituents, which emerge due to pragmatic needs or information structure, are the source of the entire grammaticalization process. I have shown that subject-verb agreement can be analyzed according to these assumptions (cf. Chapter 7) – the properties of a doubling set of φ-features, rather than case, are responsible for several changes related to the subject with respect to word order, the null-subject parameter, etc. Building on a strict analogy between subject-verb agreement and object-verb agreement (cf. Kayne 1985 among others), in Chapter 10 I will propose an account for the diachronic data of PPA in Catalan based mainly in the grammaticalization of formal features. Keeping in mind the conclusions of this section, I will provide a syntactic analysis for the different stages in the PPA cycle and show how and why different restrictions emerge in each stage of the cycle.

Chapter 10. A New Grammaticalization Approach to Past Participle Agreement in Catalan

Based on the results of my empirical study of Catalan, I have characterized past participle agreement (PPA) as a cyclic change that could be included in a more general pattern, which van Gelderen (2011) calls 'object cycle'. This characterization of the data is compatible with the proposal in Fischer et al. (2019) on clitic doubling as a cyclic change. In fact, PPA seems to interact with a series of unrelated properties and constructions, CLD possibly being the most obvious one. A diachronic perspective allows us to integrate the interface effects attested in PPA across Romance (i.e. the variability and optionality) into a diachronic explanation of the interplay between CLD and PPA – i.e. when they emerge, how they spread and get lost.

The loss of PPA has been linked to the emergence of clitic doubling (cf. Franco 1994, Tsakali & Anagnostopoulou 2008). In the same way as changes in the verb movement parameter and the grammaticalization of the clitic pronoun are responsible for the emergence and distribution of CLD (cf. Fischer et al. 2019), it is necessary to identify which factors and features are involved in the loss of PPA – whether they are the same as for CLD, or not. The results presented in Chapter 9 suggest that the conditions that govern PPA do not seem to be the same in all periods. First, agreement is obligatory; then, it correlates with definiteness/specificity; after this, a positional criterion arises and PPA becomes optional and eventually disappears. Is it possible to derive the different restrictions along the PPA cycle from a unified criterion, or single basic syntactic mechanism or language change process? How and why is a criterion replaced by a new one? I will suggest that the grammaticalization of formal (syntactic) features explains the diachronic data. Even more, I will show that, as for the analysis of subject-verb agreement, only a few features (i.e. φ-features and case/aspect) are necessary to derive the different conditions in each stage of the cycle.

This chapter is organized as follows: In Chapter 10.1, I will present some theoretical assumptions concerning specific properties of object constructions, needed in order to accommodate the analysis for subject-verb agreement to the analysis of PPA. In Chapter 10.2, I will present my analysis and discuss the interaction of different kinds of language change processes involved in the development of PPA.

10.1 Additional Assumptions

Before proceeding with the analysis of the different stages in the development of PPA in Catalan, it is necessary to point out some peculiarities of object syntax.

An important element of Pesetsky & Torrego's (2004, 2007) approach to subject-verb agreement is the definition of nominative case as an uninterpretable tense feature on the noun, [uTns], since nominative case can only be assigned in finite clauses. In their account, [Tns] forms an agreement chain in T, v and the subject DP. Is it possible to analyze accusative case in the same fashion?

As discussed in Chapter 2.2.2, aspect is the verbal category closest to the DO. On the one hand, aspect is often assumed to be structurally low within IP, or even within the VP complex (cf. Cinque 1999, Belletti 2006). Hence, there is a parallel between the more 'external' feature [Tns], which corresponds to the case for the external argument, and the 'lower' feature [Aspect], which corresponds to the internal argument. On the other hand, certain properties of the DO give rise to different aspectual meanings in the clause, and vice versa, aspect features may give rise to different interpretations of the object DP (cf. Krifka 1989, Leiss 2000, Ritter & Rosen 2001, Fischer 2005, etc.). In some languages, this is manifested in case alternation (or DOM), e.g. in Turkish, Finnish and Slavic languages. In this sense, if an uninterpretable aspect feature on the noun is interpreted as accusative case, how do these interpretive effects emerge? Or are definiteness and/or specificity reflexes of the interpretation of case at LF?

I think it is not necessary to postulate a direct link of case to specificity or definiteness. For instance, it is not clear why the internal argument of unaccusative verbs does not carry [uAsp] and is, hence, assigned accusative case. Instead, accusative case is not available and the internal argument is raised to the subject position, where it checks nominative case (cf. Burzio 1986). But if case is understood as aspect, there is no motivation for the ban on [uAsp], since unaccusative clauses do not lack aspect. I therefore propose that the noun only has an unspecified uninterpretable feature for case, probably a verbal feature, which can be checked against the next adequate verbal goal. This notion of structural case makes it possible to motivate structural case uniformly. If the higher goal [Tns] has already been checked, the DP will try to agree with the next possible candidate, [Asp]. Thus, in transitive clauses, the DO is associated with aspect. Furthermore, according to Karimi (1990) and Leonetti (2007), specificity does not belong to the feature repertoire of Romance (it is rather an effect of mapping syntactic outputs at the CI-interface). For these reason, I will assume that accusative case is an uninterpretable aspect

feature [uAsp]. The features that will be taken into account in the following analysis of PPA are the object φ-features and [Asp].

Another difference between subject-verb and object-verb agreement resides in the organization of the functional material in the syntactic tree. According to Tsakali & Anagnostopoulou (2008), functional projections hosting object agreement are more complex than the projections for subject agreement. Different object features can be bundled into one node or be spread over AgrO (with gender and number features) and ClVoice (with only a person feature). These phrases, however, are apparently vacuous, i.e. their labels do not make explicit what they contribute to the interpretation of the clause. How can the existence of these projections be properly justified? I propose to substitute AgrO and ClVoice by an aspect phrase AspP and a 'participant phrase' PartP, following a proposal by Koeneman & Zeijlstra (2014). According to this idea, the higher projection, AspP, hosts [iAsp] and is thus associated with accusative case assignment through the agreement chain with [uAsp] in the noun. All φ-features are contained in PartP, a projection in charge of identifying event participants and, possibly, assigning a thematic role and referential values to them. An advantage of this representation is that the structure is quite flexible and provides enough positions for the participle and the DO to be in different positions. Also, both projections are semantically motivated. Being separated from each other, it is easy for both sets of features to be grammaticalized independently. As I will discuss later, syntactic change is also possible: Either the formal features of these two functional heads are reorganized (e.g. into one low or high projection only; this kind of change is independent of the grammaticalization stage of the formal features), or some of the features is further grammaticalized and, subsequently, deleted, along with their functional projection.

In the following, I will show that the restrictions that apply during the five stages of the PPA cycle are subject both to grammaticalization changes in the formal features of the object as well as to other independent syntactic changes that arise in order to render the derivation more economical. The different processes, in turn, interact with each other.

10.2 Grammaticalization to Avoid Redundancy

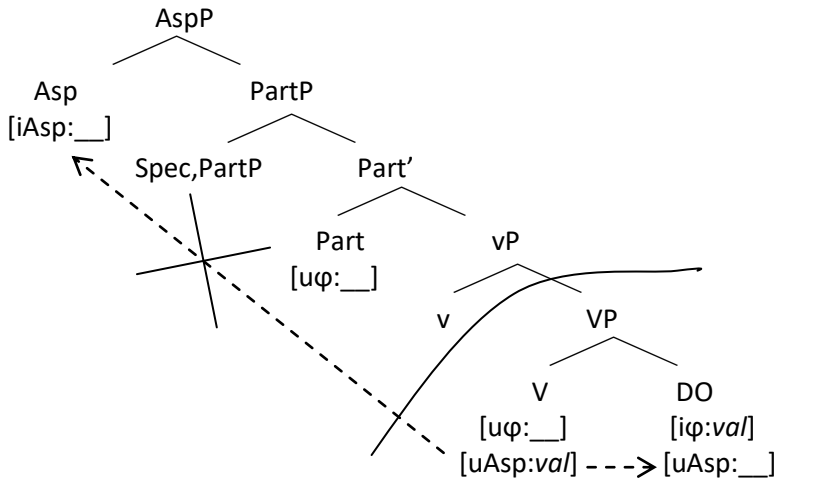
10.2.1 Stage 1: Obligatory Agreement

In Chapter 7, I have argued that in some cases, verbal morphology may carry semantic φ-features. These are of a pronominal nature and, consequently, the presence of an overt argument with the same φ-features should be considered a case of doubling from an extra-sentential (A'-)position rather than pure agreement. Some analyses of passive clauses assume that the passive participle absorbs the case and theta-role (see e.g. Lois 1990:240 and fn. 8). In a preliminary stage, the agreeing morphology of the past participle can also be considered to be pronominal, i.e. endowed with semantic φ-features doubling the φ-features of the object. Recall that the DO and the past participle form a small clause governed by the main verb, which cannot yet be considered an auxiliary verb (cf. Macpherson 1967 and others). The DO functions as a subject in these constructions. Once the grammaticalization of the auxiliary verb HAVE advances and the small clause is reinterpreted as a compound tense form plus a canonical object, the verbal ending can be assumed to be already endowed with formal features. The relation PstPrt-DO has then been incorporated into the syntactic derivation as an agreement chain. The verb cannot satisfy the subcategorization requirements of the verbal valency by means of inflectional morphology (as opposed to passive participles and finite verbs in null-subject languages).

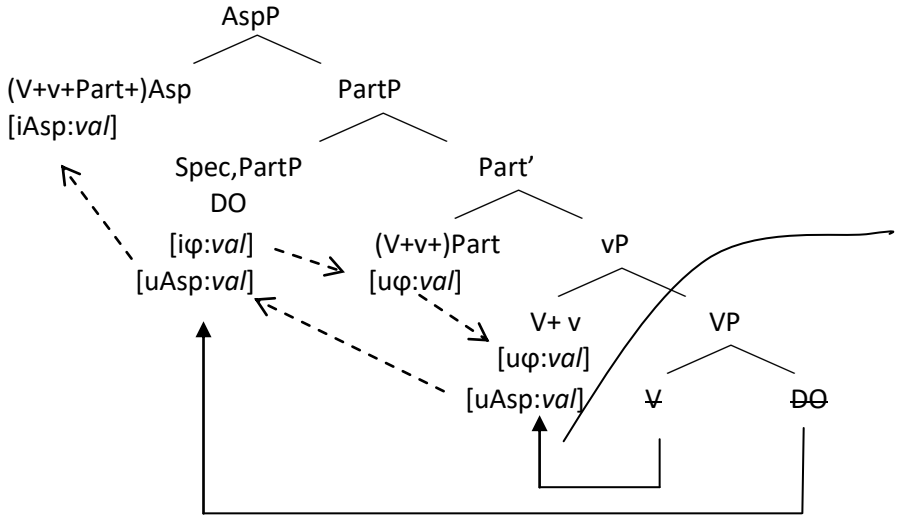
The past participle also carries aspect features. The respective agreement chain contains unvalued interpretable aspect under Asp°, [iAsp:__] (just like T° has [iTns:__], see Chapter 7). The verbal morphology on the participle is valued, but not interpretable, [uAsp:*val*]. Finally, the object DP requires case assignment, i.e. an uninterpretable aspect feature must be valued there, [uAsp:__]. In sum, two feature chains are involved in object agreement: [φ] and [Asp]. According to Tsakali & Anagnostopoulou (2008), split-checking is possible. I therefore assume that the φ-feature chain is placed lower than Asp°, namely in the participant phrase, as dicussed in the preceding section. Since only empty categories are able to enter into cyclic agreement (cf. Merchant 2001, cited by Tsakali & Anagnostopoulou 2008), clitic doubling structures are not licensed. For Old Catalan sentences with obligatory PPA, I propose the structure in (3.33).

(3.33) *agren conquestes moltes ciutat* 'they had conquered many cities'

a.



b.



Since interpretable aspect c-commands all other members of the chain, the value of [uAsp:*val*] in V can be shared by the entire chain. The chain conditions are met: only one occurrence of aspect is interpretable and the chain does not contain contradictory values, but rather a single shared value. Verb movement is subject to its own constraints, but is probably placed quite high (e.g. Fischer 2010).

The agreement chain for [φ], however, shows a different pattern. The object DP carries interpretable and valued φ-features. The uninterpretable features in PartP, however, must be properly c-commanded by [iφ], in order to fulfill the well-formedness requirements of the agreement chain. Hence, the object must raise to Spec,PartP in order to prevent the derivation from crashing. This has an additional benefit. Assuming a derivation by phases, [uAsp:__] on the

object DP could not have entered the agreement chain headed by Asp°, i.e. accusative case assignment would be impossible, because the base-position of the object belongs to the lower phase, which has already been sent to spell-out. What is more, the presence of [uφ] in PartP has visible syntactic (and interpretive) effects and is thus indispensable (i.e. PPA is obligatory).

The past participle in compound tenses in Old Catalan (as, possibly, in Proto-Romance), also carries φ-features which agree with the φ-features of the DO. It could be speculated that they are directly derived from the Latin small clause. Since the DO functions as the subject of the small clause, its φ-features should agree with the uninterpretable φ-features under the verbal head in the small clause, in the same way as subject φ-features agree with the uninterpretable φ-features under T°. The φ-features in V° are easily maintained because they can be incorporated into the agreement chain between PartP and DO, which has a clear syntactic effect (the object leaves the lower phase in order to c-command the uninterpretable features under Asp°). The restructuring change from the small clause led to a duplication of [uφ] in Part°, which then overrides the prominent role formerly carried out by the [uφ] of V° in the small clause. This could represent a first step toward the deletion of the formal features present in the verbal morphology.

It must be noted that according to this analysis PPA is independent of case assignment as well as aspect and specificity. The main function of φ-agreement is to establish a referent that qualifies as a bearer of a thematic role. This means that definite and indefinite DPs as well as accusative and partitive objects can trigger agreement at this stage.

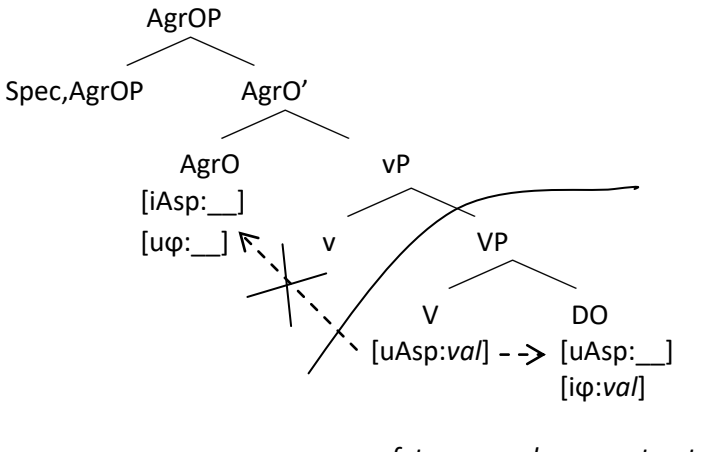
10.2.2 Stage 2: Specificity as Controller of Agreement

From the 16th century on, a correlation of PPA with specificity is noticeable. The first cases of missing agreement are linked to indefinite/non-specific objects, especially in post-verbal position (cf. Chapter 9). I argue that this can be taken as evidence that the functional projections concerning the object syntax – PartP and AspP – conflate. I will label the new projection AgrO°. Bundle-checking is a pre-requisite for the emergence of clitic doubling, although it does not imply the existence of CLD constructions in the language. And indeed, the first optional CLD examples are attested in Old, but especially *Decadença* Catalan (cf. Vega Vilanova et al. 2018).

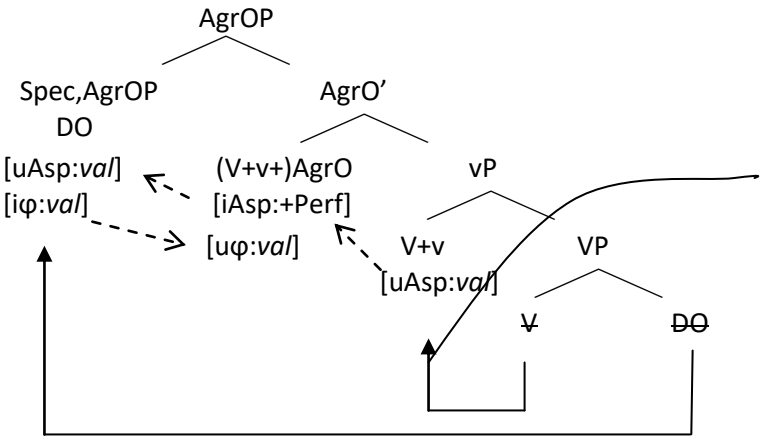
A possible syntactic analysis for this stage is shown in (3.34).

(3.34) *he feta la present nota* 'I have written the present note'
vs.
ha donat vianda 'he has given food'

a.

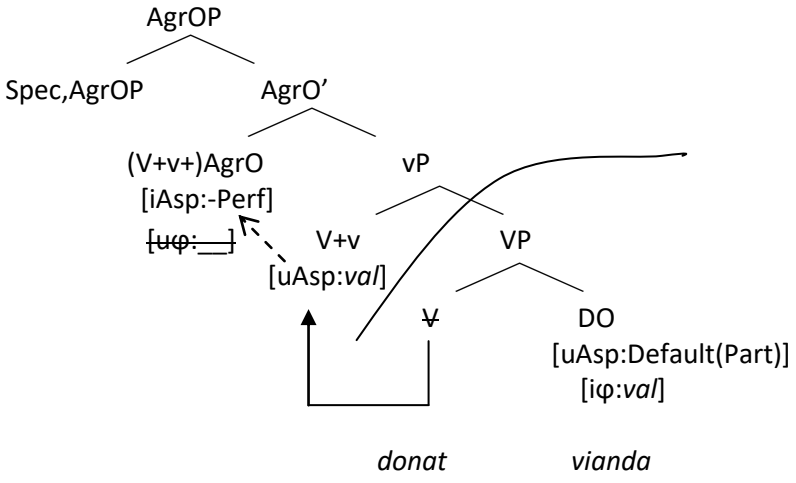


b.



la present nota *(feta)*

c.



The motivation for unifying PartP and AspP stems from considerations on language economy. Agreement in a single step, if possible, should be preferred to a two-step operation. Data on language acquisition of PPA (Tsakali & Wexler 2004, Tsakali 2014) show that children first use bundling strategies in their first language, even if it is a split-checking language. The move toward simpler structures can be seen as a 'syntactic change' not directly motivated by the properties of the formal features (i.e. parametrization) nor by their modification through grammaticalization. The result of this change is rather a reorganization of the formal features contained in the lexicon into new feature bundles, which are associated with certain functional heads.

φ-agreement is still the trigger for object movement, since the interpretable occurrences of the φ-features are placed in a lower position than their uninterpretable counterparts. However, at the end of the medieval period and the beginning of *Decadença* Catalan, aspect and φ-features seem to be fused, possibly as a consequence of the combination of AspP and PartP. These two features are coupled to the point that the φ-features under AgrO° are only active if aspect receives a positive value in a sort of 'analogical extension' (i.e. all features hosted in a functional head should adopt 'harmonic' values). If AgrO does not instantiate [uφ], the DO is not forced to leave the VP. The value of [uAsp:*val*] in v is expressed as imperfect aspect on the verb or partitive/default case on the noun (cf. Belletti 1988)[35]. The formal φ-features in the DP form a vacuous chain which can be simply sent to spell-out, since it fulfills the criteria of interpretability and valuation.

From this follows a 'specificity effect' – PPA depends on specificity. However, specificity is not coded in the syntax, as I have argued in Chapter 2.2.2. Specificity in Romance languages is rather a semantic/pragmatic property of the clause. Specific readings arise from how the CI-interface interprets syntactic outputs. If there is object movement triggered by φ, the construction is mapped as [+specific], otherwise it is interpreted as [-specific]. If this is on the right track, the connection between specificity and aspect is mediated by the syntactic operations that happen during the derivation (e.g. φ-feature agreement). In this sense, it could be assumed that it is not specificity that triggers agreement, but rather the other way round. The fact that agreement is instantiated in the syntax has an implication for the interpretation, which 'translates' as specificity.

[35] There is still a technical problem in this analysis. The object in situ would be excluded of the aspect/case chain, since it is placed in the lower phase and has already been sent to spell-out. Hence, an additional movement operation to the phase edge should be postulated. Since the main argument for the realization of PPA depends on the satisfaction of φ-feature agreement, I will not discuss the details here.

However, 'feature harmony' can be considered to be optional, as the corpus results clearly show. In many cases, PPA is still used with indefinite/non-specific objects, whereas definite/specific objects allow lack of agreement in some cases. W.r.t. participle agreement, mapping narrow syntax to interface properties (cf. Diesing 1992) seems to pose problems for language use, a conclusion which is consistent with the claims of the Interface Hypothesis.

10.2.3 Stage 3: Positional Rules

It is commonly accepted that information structure has an effect on word order, more specifically, on object placement in Old Catalan (see Fischer 2010 and references therein). In several modern languages, object shift and scrambling are constrained by definiteness or specificity; other syntactic operations (fronting, cliticization, etc.) only affect definite/specific DPs. There is a range of constructions that are linked to specific readings. If one of them is unavailable for different reasons, the gap can be filled by using alternative structures. I suggest that this is the situation we find in the beginning stages of Modern Catalan. An increase of the restrictions due to changes in the verb movement parameter (Fischer et al. 2019) led to a new situation in the transition from Old to Modern Catalan: Free object placement, which had been dependent on information structure, is progressively lost. Only some specific operations trigger clear object movement – cliticization and wh-movement to the CP. Since object placement is not unambiguously motivated by φ-agreement any more (i.e. the presence of φ has become dependent on the other feature found in the same LI or functional head), the language learner does not encounter clear evidence for the fact that the object has to be moved in order to check the uninterpretable φ-features in AgrO°, as was the case in previous stages of the PPA cycle. This allows us to redefine the restrictions on participle agreement as a range of positional criteria, discarding φ.

Stage 3 is instantiated in *Decadença* Catalan**,** Standard French and normative Italian. In these languages, PPA is linked to certain construction types rather than to the properties of formal features. Since both are placed in the same functional position, the trigger for agreement has become ambiguous between φ and aspect/case. The conditions for cliticization and wh-movement, on the contrary, are easily identifiable, since they provide unambiguous cues. The additional marking on the verb is redundant: There are no cases in which participle morphology disambiguates the interpretation of the clause, perhaps with the exception of the examples discussed in Obenauer (1992) and Salvà i Puig (2017), and some others (these are cases in which word order disposition could not express different readings, though).

Summing up, structural accounts seem to describe adequately the data in French and Italian, which correspond to the third stage in the PPA cycle. However, the diachronic perspective provides valuable information for the understanding of some of the peculiarities of PPA constructions. For example, the occasional interaction of specificity and agreement can only be understood if the way in which PPA evolves is taken into consideration. As I have argued with respect to the EPP-like features in Chapter 7, past participle agreement too seems to require a semantically empty category as trigger for the movement. In fact, the existence of this category (and the feature therein) can be seen as the result of the bleaching of the content of a previous projection whose function has become obsolete (e.g. because it has been transferred to other functional heads or features).

10.2.4 Stage 4: Optional Agreement

As a result of the conflation of AspP and PartP, the triggers for object movement (and the consequent differences in the semantic/pragmatic interpretation) have been shifted. In such a configuration, the formal φ-features of the verb and under AgrO°, which emerged for the reasons already discussed and which had a semantic motivation (e.g. they were linked to the identification of the referent for the event participant, or mapped to specific readings of the object), become superfluous. Also, there are no syntactic cues to postulate the existence of [uφ] in AgrO° (only an optative morphological expression on the verb) – movement of the object is dependent on the need for an appropriate host (if it is a clitic), or on the properties of a wh-element. In sum, [uφ] in AgrO° does not "keep the derivation going" (cf. van Gelderen 2011).

According to the grammaticalization cline in (2.20), repeated below, redundant formal features undergo phonological reduction and disappear, leaving semantic features (i.e. the φ-features of the DO) on their own in the structure. While the first steps of the cline have been illustrated on the basis of the development of subject-verb agreement (Chapter 7), the loss of PPA in Modern Romance represents the two last steps (in boldface).

(2.20) doubled semantic features [σ] > (simple) [σ] + **[iF]/[uF] > simple [σ]+ Ø**

As an intermediate – but perhaps necessary – step in the grammaticalization of formal features, a more or less extended period of optionality can be observed. Optionality, as discussed in Chapter 2.1, can be understood as a set of competing grammars (building on Kroch 2002) or as 'true' optionality, probably post-syntactic morphology. According to the results of the acceptability

judgment task for Modern Catalan (cf. Chapter 9.2), the variability on the realization of PPA cannot be unambiguously linked to different interpretations or syntactic structures – an explanation that postulates different pathways and positions for the DO (e.g. two different movements of the clitic to reach its host) leads to circularity (cf. Chapter 1.2.4).

Pineda (2016) proposes a different analysis for the variability observed in dative clitic doubling. Contrary to Demonte (1995) and Cuervo (2003), Pineda argues that the structural asymmetry between using a doubling dative clitic in ditransitive verbs or not (3.35) does not apply in Catalan (nor in Spanish). The analyses that treat optional dative clitic doubling as dative alternation – i.e. analyses that assume different underlying structures – are not feasible. None of Demonte's and Cuervo's tests (i.e. c-command asymmetries caused by reflexivization and bound pronouns, passivization, and lexical-semantic differences) provide clear evidence for a different analysis of sentences with or without clitic doubling. Instead, Pineda claims that the same syntactic structure (e.g. a structure in which both objects are equidistant to the finite verb) is related to two different morphological exponents – one with an overt dative clitic, one without. My data favor the same analysis: certain syntactic structures (e.g. constructions with an A'-moved object) are associated with two different morphological exponents – one with agreeing morphology, one with default agreement.

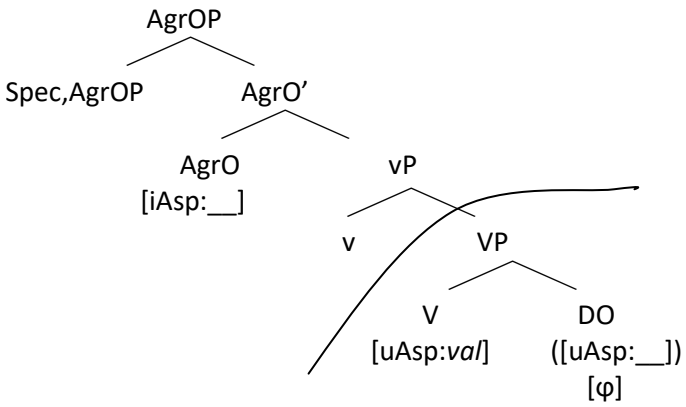
(3.35)	El premio Nobel	(le)	fue	concedido	a Cela	el año pasado.
	the prize Nobel	CL.Dat.3Sg	be.PST.3Sg	award.PP.MSg	to Cela	the year past
	'Last year the Nobel prize was awarded to Cela.'					(Demonte 1995:12)

In stage 4 of the PPA cycle, thus, the grammaticalization of the formal φ-features under AgrO is even more pronounced. Since they are detached from interpretive and syntactic effects, an increase of cross-linguistic variation (with each language developping a slightly different set of restrictions) and optionality is attested, which is a favorable situation for further change. According to the assumptions on the grammaticalization of formal features in Chapter 6, the next steps in the process would lead to the complete loss of PPA. In fact, participle agreement is already disappearing in Catalan. The maintenance of alternative morphological exponents could be explained by a stylistic preference of the speakers. Following Pineda's (2016) proposal, the competing forms are syntactically not distinct and can be considered post-syntactic morphological insertions (cf. Bobaljik 2008).

10.2.5 Stage 5: Loss of Agreement

In Spanish, Portuguese and Romanian (as well as in spoken French and probably for some Catalan speakers), PPA has completely disappeared. The syntactic structure, thus, looks like the one in (3.36).

(3.36)



Only the semantic φ-features of the DO are still present in the derivation; formal φ-features have been deleted. At the end of the grammaticalization process, the structure has become simpler. There are less duplicated features, formal and semantic. Due to new pragmatic requirements (e.g. emphasis, but also information structure), a new element could now be introduced, starting a new cycle. A clitic pronoun, for instance, could double the referential features of the object. As a result of this doubling structure, the grammaticalization process in (2.20) would begin anew.

Besides the grammaticalization and deletion of φ-features, changes in the realization of aspect (and case as [uAsp]) are also plausible. I refer to the discussion in Chapter 7.3. In this respect, the object DP bears uninterpretable case features that do not give rise to visible syntactic or interpretive effects. According to the premises developed so far, accusative case should be suppressed in the same manner as other formal features. The gradual expansion of DOM in Spanish, for instance, could be taken as evidence for this. The DO does not receive structural case any more, instead another element – the preposition-like element *a* – is introduced to assign case to 'non-canonical' objects. A detailed analysis of this process, however, cannot be developed here.

Chapter 11. Repercussions and Conclusions, Outcomes and Shortcomings

Before concluding this dissertation, I would like to highlight some outcomes and problems of the analysis proposed here. The argumentation so far gives rise to several consequences that are not trivial for syntax theory. Unfortunately, a full development of these issues would go beyond the scope of this research, so that I will just provide a few guiding comments on possible explanations. This is thus only an indication for a necessary expansion of the present considerations in future work. In the second part of this chapter, and the last one of the dissertation, I will sum up the main results of the dissertation and will come back to the research questions formulated in the hypotheses in Chapter 4 in order to give them an answer on the basis of the collected data and proposed explanation of the diachronic development of past participle agreement.

11.1 Outcomes

In Chapter 10, I have provided a syntactic analysis for each stage of the participle agreement cycle under the main assumption of linguistic change due to the grammaticalization of formal features. When trying to motivate the change from one stage to the next, it became evident that other factors are at work. More specifically, the conflation of two functional heads – PartP and AspP – leads to a new configuration that may have speeded up the grammaticalization of the [uφ] under Asp°/AgrO°. Erosion of case (i.e. [uAsp]) could also be related to this process of syntactic simplification.

The present account raises several interesting questions. First, it seems to confirm that the theoretical framework developed in Chapter 5 and 6 provides an adequate tool to analyze phenomena avoiding a circular explanation. PPA is not explained by means of postulating the existence of a certain structural position (i.e. a dedicated position for PPA), but by means of the grammaticalization of formal features from doubled semantic features in the clause. Drawing a parallel to subject-verb agreement, I have proposed that object φ-features, instead of case, as commonly assumed, is responsible for the distribution and development of participle agreement in Romance. Crucially, this allows us to avoid the postulation of vacuous features (e.g. EPP) and functional heads (e.g. AgrO in the classical sense), instead, the φ-features under Asp°/AgrO° evolve from the pronominal nature (hence, referentiality) of the verbal morphology. A similar idea

is found in D'Alessandro's (2016) analysis of 'omnivorous participle agreement' (among other phenomena) in some southern Italian varieties. She argues that a microtypology of v accounts for different constructions in which the object is involved, and that the position of π, a projection endowed with person features, is decisive for the generation of the structures discussed in her paper. The data obtained by means of a typological or diachronic perspective, thus, leads to conclusions that could not have been reached in a strictly synchronic analysis.

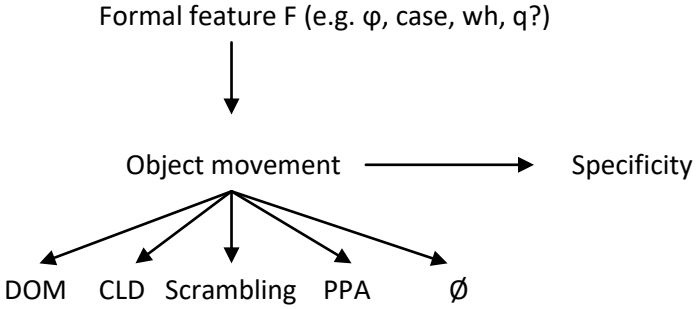
A language system with a very small number of operations (e.g. only Merge and Move) and operating features is certainly very economical, and therefore desirable under the assumptions of the Minimalist Program. The analysis of PPA in the preceding section was circumscribed to the presence of case and φ. Unrestricted syntactic operations, though, run the risk of an overgeneration of syntactic structures. The restrictions imposed by the mechanisms of language change could be a means to constrain the possible syntactic outcomes. In Chapter 7, I have shown that the grammaticalization of subject φ-features implies a re-parametrization of the null-subject parameter. With respect to object-verb agreement, it is not enough to look at the properties of the φ-features, but it is also necessary to pay attention to the distribution of the object features along different functional heads. The conflation of Asp° and Part° is a crucial moment in the process that ends in the elimination of participle agreement. First, it allows resetting the clitic doubling parameter from a language that allows PPA (split-checking language) to a language that allows CLD (bundle-checking language) (cf. Tsakali & Anagnostopoulou 2008). Second, the conflation of the syntactic structure fosters the already ongoing grammaticalization process. Interestingly, a syntactic change strengthens the following grammaticalization steps regarding the formal features so that in the end there is a new parameter choice. Alternatively, the reorganization of the formal features in a new functional head (i.e. the conflation of PartP and AspP) could be considered another kind of parametric change. In this sense, all types of language change are ultimately connected to the specifications of the formal features in the lexicon. Any type of language change (e.g. grammaticalization) would then have repercussions on the other types (e.g. parametrization and 'syntactic change') through modifications of the properties of the LIs.

11.2 Shortcomings

11.2.1 Reconsidering the Interface Hypothesis

I have previously shown that in some cases, PPA gives rise to a series of effects related to a [+specific] interpretation of the DO (in the synchronic as well as the diachronic data). However, in my approach to the diachronic development of PPA in Catalan, specificity can be dispensed with. In (3.21), I have suggested that specificity is the motivation for object placement, which, in turn, constrains the realization of CLD, DOM, PPA, etc. However, at the end of Chapter 10.2.2, I have proposed, following Karimi (1990), Leonetti (2007) and Sorrenti (2015), that specificity is not instantiated in narrow syntax in Romance. Specificity is not equivalent to definiteness. The specific reading can be found in perfective and imperfective clauses, either with definite or indefinite objects. Specificity cannot be identified with case, either. Case alternation in languages such as Finnish or some Slavic languages is linked to aspect. Instead, specificity is a semantic interpretation of the syntactic output at the conceptual-intentional interface. Specificity, thus, does not trigger syntactic (or morphological) operations, since this would lead to *look-ahead* problems (i.e. the object moving to satisfy a feature that the current working module cannot yet foresee). Leonetti (2004) solves the conflict between the necessity of the DO to vacate the VP and the interpretation of the object itself as [+specific] as a 'pragmatic inference'. If there is no [Specificity] feature responsible for movement in the syntax, the trigger for movement should be found elsewhere. According to the outputs generated by these other features, the CI-interface assigns the specific reading to certain configurations. This means that the figure in example (3.21) should be modified as follows:

(3.37)



For one thing, this scheme accounts for the vagueness of the notion of specificity. Heterogeneous structures are mapped as [+specific]. The wide scope of specific DPs, for example, emerges from their syntactic requirements but not from their interpretation as specific. In a way, the specificity

effects shown by Obenauer (1992) could be accidental. Moreover, this notion of specificity seems to weaken the Interface Hypothesis, which predicted the variability and optionality of the phenomenon in Modern Romance. Minimalist assumptions seem to imply that 'interface phenomena' cannot exist since the different language modules (i.e. narrow syntax, CI- and AP-interfaces) work independently from each other. According to this (which is consistent with my analysis as well), however, the attested interface effects remain unexplained, unless one postulates that they constitute a consequence of the grammaticalization cline of formal features. Under this view, the grammaticalization of formal features, a gradual process with intermediate steps that leave space for optionality, would be the only source of variation. This is an important issue that remains open for further research. Moreover, the connections between aspect and specificity, as well as between definiteness and aspect (and, possibly, between definiteness and specificity) should be further investigated in order to gain a full understanding of the matter. This would allow keeping the IH, although slightly reformulated. The mapping of syntactic outputs to semantic or pragmatic properties seems to be more demanding in some cases than in others. A next step would then be to determine which criteria have an influence on the degree of processing complexity attributable to different mapping operations, which in turn gives rise to the well-known interface effects.

Another consequence of my analysis is the reduction of optionality (in certain stages of language change) to a post-syntactic operation, which implies that morphological change follows syntactic change, rather than the other way round (*contra* e.g. Drijkoningen 1999, Guasti & Rizzi 2002, Poletto 2014). Under a strict division of narrow syntax and interfaces, the association with determined morphological exponents is mapped to syntactic outputs in the same way the CI-interface associates semantic or pragmatic properties with it. Since the assignment of more than one morphological exponent to a syntactic structure is not in the line with what is commonly considered an efficient computation, different devices can be in charge of reducing this redundancy (cf. Fuß 2012), from language drift to language policies.

11.2.2 Some Consequences for Case

My account runs against another common assumption: the role of case as a licenser of DPs in argument positions – i.e. the case filter and subsequent concepts deriving from it (cf. Chomsky 1981; see also the discussion on nominative case in Chapter 7.3). The loss of accusative case is a logical consequence of the mechanisms of grammaticalization presented here, but a detailed analysis of this process is still required and the question of whether the emergence of the

accusative can be subsumed under a doubling structure (e.g. as a 'duplication' of aspectual features on the noun) still needs to be answered. Is the grammaticalization path for (accusative) case comparable to the grammaticalization of the object and subject φ-features on the verb? It is important to note that only accusative arguments trigger PPA. In the context of the discussion on the dative alternation, it is often claimed that the IO c-commands the DO (e.g. Larson 1988, Gonçalves, Duarte & Hagemeijer 2016). Pineda (2016) argues that both arguments are equidistant to the finite verb. Either way, this account does not explain why the IO cannot trigger PPA. Taking into consideration that applicative morphology in some languages may alter verbal valency (cf. Pylkkänen 2002, McGinnis 2008), PPA could be considered the externalization of an applicative projection, just like the dative clitic is assumed to be in some approaches (e.g. Cuervo 2003). Unfortunately, these considerations go beyond the scope of my dissertation.

Another puzzling aspect of the accusative case feature is what I have called 'feature harmony' in Chapter 10.2.2. I have argued that the values of all features contained in the functional head which results from the conflation of Asp° and Part° should 'harmonize', that is, be set to an analogous value. This notion – intuitively linked to a typological generalization found in Hawkins (1982), the Cross-Category Harmony Principle – has been reformulated more recently as the Input Generalization strategy by Biberauer & Roberts (2015:300): "if a functional head F sets parameter P_j to value v_i then there is a preference for all functional heads to set P_j to value v_i". Is the evidence available robust enough to postulate a principle such as 'cross-category harmony' for formal features contained within the same functional head? In order to answer this question, further research is needed.

11.2.3 Other Open Issues

Besides the theoretical shortcomings mentioned above (i.e. the missing explanation for the grammaticalization of accusative case and lack of motivation for the harmonic values under AgrO°), some problems could be derived from the data collection. As mentioned in Chapter 8.1, access to written documents in some periods of Catalan (especially *Decadença* Catalan until the 19th century) is very restricted, and the required quality cannot always be guaranteed. Hence, the data found in the last period before the *Renaixença* – i.e. the revival of the Catalan culture at the end of the 19th century – could be insufficient to draw solid conclusions. However, together with the data reflecting the current acceptance of PPA collected by means of the acceptability

judgment task, the results seem to be consistent. An extension of the corpus data would be desirable, though.

Many details of related constructions, of which I have only pointed out the most relevant ones, have not been dealt with in this dissertation. From the outset, passives have been excluded because passive clauses do not admit variation – PPA is obligatory in all cases in all Romance languages. I have then focused on agreement when the auxiliary is HAVE. But what are the differences between these two auxiliaries? Is BE less grammaticalized then HAVE? To what extent is it expected that passive sentences undergo a similar change (i.e. the loss of agreement)? Or do passive and active clauses correspond to entirely separate constructions, in which two different participles impose separate restrictions? Unaccusative clauses too have properties that deserve further attention.

Finally, some theoretical issues should be explored further. I have proposed that the emergence of formal features is required to reduce the markedness of semantic doubling. The role of 'markedness' in language change, however, is controversial. Whereas marked structures tend to be avoided in first language acquisition, it is assumed (e.g. Biberauer & Roberts 2015) that language change goes the opposite way, i.e. down the parameter hierarchy with increasing markedness. Fischer et al. (2019), however, challenge this view and show that, in the case of cyclic change, both directions must be possible. In this sense, a more precise definition of markedness is needed to determine the way in which it affects grammaticalization processes. It seems to be true that from a typological perspective, languages that make use of both head-marking and dependent-marking strategies are rare. What is more, formal features cannot be considered 'economical' solutions per se. In fact, in order to reduce the complexity due to doubled semantic features, formal features are introduced into narrow syntax, which in the end increase the number of required syntactic operations (i.e. with a new Agree operation, possibly also Move; this has been shown in Chapter 7 for the change from long-distance agreement between the verb and the subject to a strict Spec-Head relation, which requires an additional movement). In sum, is markedness relevant for language change and, if so, under which conditions?

Finally, the analysis presented here is reduced to a few tools based on the mechanisms of grammaticalization. Other factors are supposed to have an impact on the changes related to the object syntax as well. Changes in the verb movement parameter, which have a direct effect on CLD, could add new limitations on word order which might have rendered [uφ] prematurely obsolete. Labeling (see fn. 24), as van Gelderen (2015) suggests, could also be responsible for certain well-known changes, e.g. the reduction of phrases to heads (cf. (2.16) in Chapter 6.2).

Although Labeling proved to be irrelevant for the explanation of PPA, it should be incorporated in a language change framework based on the properties of the features contained in the LIs. In the end, a better understanding of all these diachronic phenomena would improve our knowledge about the lexicon, its organization and its link to narrow syntax and, in general, the other linguistic modules.

11.3 Tying up loose ends

My discussion of the properties of participle agreement in Catalan has been imbued with two central ideas – the consideration of PPA as a multi-factorial phenomenon, and the problematic nature of its optionality. I have introduced these two concerns in Chapters 1 and 2, in which I have presented data on PPA in Italian and French discussing previous approaches that investigated this construction from different perspectives. Many of the observations put forth in these papers are basically correct, but cannot account for all of the data: PPA has to do with the grammaticalization of the auxiliary and the reanalysis of the small clause, and correlates with auxiliary selection; structural considerations help understand some of the positional restrictions, but are less telling on several of its interpretive effects and diachronic development. Hence, I have suggested addressing the phenomenon from the point of view of the Interface Hypothesis (Sorace 2006, White 2011, etc.). The IH offers an attractive framework to analyze optionality. Considering PPA an interface phenomenon is prima facie well motivated. In Chapter 3, I have shown that PPA in Catalan too is a multi-factorial and optional phenomenon.

One of the first questions that arose in my dissertation was whether and to what extent the IH is compatible with current linguistic developments on the theory of grammar. In Chapter 5, I have established my theoretical framework deduced from minimalist assumptions. A rigorous symmetry between the checking conditions for subject-verb and object-verb agreement, the avoidance of 'vacuous' categories (i.e. features such as EPP or functional heads such as AgrS and AgrO) and reducing the sets of operations within UG to Merge and Agree (and probably Move and Labeling as by-products) are essential postulates that I have adopted in my analysis of PPA. In addition, I have assumed there to be a strict separation between narrow syntax and the interfaces (CI and AP), as well as a clear distinction between three types of language features – semantic, phonological and formal/syntactic features (Zeijlstra 2012). These assumptions, however, challenge the existence of the IH. If the computation requires a sequential application of the different linguistic modules so that the interfaces can only interpret the output of narrow syntax

without having an influence in the syntax itself, there are a priori no differences on the cognitive load of a computation over the other. Interface effects should rather be related to syntactic complexity, measured e.g. by the number of operations needed in a derivation or the number of embedded constituents. In this fashion, the spirit of the IH can be maintained, as it is in line with the current syntactic theory.

There is probably another answer to the question of optionality, parallel to the concept of interfaces: Optionality is a step on the grammaticalization path of formal features. In Chapter 6, I have elaborated a new characterization of grammaticalization that affects the properties of LIs through the manipulation of their formal features. This has been captured under the grammaticalization cline in (2.20). The starting point of this type of grammaticalization is the presence of a pragmatically determined construction that contains doubled semantic features, which are converted into a syntactic agreement relation. If the syntactic cues for postulating the existence of formal features disappear (or become opaque or ambiguous), a disintegration of these formal features is expected, which leads through a more or less extended period of optionality. Syntactic agreement is interpreted as a parsing strategy to repair pragmatically marked structures. The application of this approach to the diachronic analysis of subject-verb agreement (Chapter 7) and object-verb agreement (on the basis of a corpus with over 2000 sentences for Old Catalan until the 19th century, and an acceptability judgment task for Modern Catalan; see Chapters 8-10) reveals far-reaching consequences. First, the role of φ-features, rather than case as is commonly claimed, is fundamental to understand syntactic movement (of the subject as well as the object) and the loss of PPA. In the same way, specificity does not play a role in the distribution and development of participle agreement, since it is a semantic/pragmatic feature that is inserted after all the syntactic operations have taken place. Second, the progress of grammaticalization can be altered by other types of language change (i.e. parametric change, or 'syntactic change' due to language economy principles), but grammaticalization can also trigger parametric change – e.g. the change in the null-subject parameter (Chapter 7), and the CLD/PPA parameter, which has been represented as a cyclic change in Chapter 9 (cf. Tsakali & Anagnostopoulou 2008, Fischer et al. 2019). Finally, since the properties of formal features are decisive in many synchronic (e.g. movement) and diachronic processes (e.g. grammaticalization, parametrization and syntactic change due to language economy principles), morphological change can be relegated to a secondary position under this approach (cf. Cole et al. 1980 and Fischer 2010, and Drijkoningen 1999, Guasti & Rizzi 2002 and Koeneman & Zeijlstra 2014 for the opposite view). Morphological change (which is understood as a post-syntactic operation) follows syntactic change and 'true optionality' seems to be possible (cf. Fuß 2012).

According to these results, the hypotheses formulated in Chapter 4 can now be verified, or falsified, respectively:

Hypothesis 1: PPA as an interface phenomenon

a. PPA is not governed by object position, but rather by a semantic/pragmatic feature (definiteness/specificity/aspect). This allows us to analyze PPA as an interface phenomenon, with all the consequences this has (instability, vulnerability to language change, optionality, etc.).

   → **PPA is not governed by specificity, but rather by the grammaticalization of φ-features, which also accounts for the interface effects attested in PPA in Catalan. As the formal object φ-features bleach due to further grammaticalization, positional rules may be introduced (as in Modern Romance).**

b. The effects of definiteness/specificity can be observed in all diachronic stages of Catalan, but their properties are in constant change. The distinctions expressed by these features may become so opaque that 'true optionality' arises.

   → **According to a), it is not definiteness/specificity but φ that controls the diachronic development of PPA. True optionality is, though, attested.**

Hypothesis 2: different processes of language change that interact in PPA

a. The pressure of economy principles promotes the change from complex structures (PPA) to simpler ones (default agreement, possibly CLD). This process is unavoidable and irreversible and results in cyclic change.

   → **This hypothesis has been confirmed. Bundle-checking is preferred over split-checking, which leads to a cyclical change from PPA languages to CLD languages.**

b. Syntactic change interacts with the grammaticalization of the formal features involved in PPA (aspect, case, definiteness/specificity, φ…), and vice versa. Formal features can thus be relocated in the structure, grammaticalized (i.e. detached from their semantic meaning) or even deleted.

→ **This hypothesis has been confirmed by my analysis of the data. After conflating the object functional projections, formal φ-features further grammaticalize and are, finally, deleted.**

c. Change is cyclical – i.e. if specificity is no longer expressed by PPA, other constructions may adopt this function (e.g. CLD and DOM emerge).

→ **This hypothesis has been confirmed (see Chapter 9).**

Hypothesis 3: prevalence of syntactic over morphological change

a. The feature configurations encoded in the lexical items are the first ones to be affected by change. This means that change begins with grammaticalization, (re-)parametrization or syntactic change due to economy principles and the first effects of language change are syntactic (e.g. word order).

→ **This hypothesis is consistent with the results of my approach.**

b. Morphology can be considered a reflex of syntactic change. In some cases, morphology may remain 'fossilized', thereby giving rise to true morphological optionality as a transitory state after syntactic change has taken place. True optionality (without semantic correlates) is possible, but subject to further change (e.g. deletion of the morphological exponents).

→ **This hypothesis is consistent with the results of my approach.**

References

Abbott, Barbara. 1999. Support for a Unique Theory of Definite Descriptions. *Semantics and Linguistic Theory* IX: 1-15.

Adger, David & Peter Svenonius. 2011. Features in Minimalist Syntax. In Cedric Boeckx (ed.), *The Oxford Handbook of Linguistic Minimalim*, 27-51. Oxford: Oxford University Press.

Aissen, Judith. 2003. Differential Object Marking: Iconicity vs. Economy. *Natural Language and Linguistic Theory* 21: 435-483.

Alexiadou, Artemis & Anagnostopoulou, Elena. 1997. Toward a uniform account of scrambling and clitic doubling. In Werner Abraham & Elly van Gelderen (eds.), *German: Syntactic Problems- Problematic Syntax*, 142-161. Tübingen: Niemeyer.

Alexiadou, Artemis & Anagnostopoulou, Elena. 1998. Parametrizing AGR: Word order, V-movement, and EPP-checking. *Natural Language and Linguistic Theory* 16: 491-540.

Anagnostopoulou, Elena. 2005. Clitic Doubling. In Martin Everaert & Henk van Riemsdijk (eds.), *The Blackwell Companion to Syntax*, 519-581. Oxford: Blackwell.

Anagnostopoulou, Elena. 2016. Clitic Doubling and Object Agreement. In Susann Fischer & Mario Navarro (eds.), *Proceedings of the VII NEREUS International Workshop: Clitic Doubling and Other Issues of the Syntax/Semantics Interface in Romance DPs*, 11-42. Konstanz: Arbeitspapier 128. Fachbereich Sprachwissenschaft, Universität Konstanz.

Audibert-Gibier, Monique. 1992. Étude de l'accord du participle passé sur des corpus de français parlé. *Langage et Société* 61: 7-30.

Badia i Margarit, Antoni M. 1981. *Gramàtica històrica catalana*. València: Tres i Quatre.

Baker, Mark. 2008. *The Syntax of Agreement and Concord*. Cambridge: Cambridge University Press.

Barbosa, Pilar. 1995. *Null Subjects*. PhD dissertation. MIT.

Bastardas i Parera, Joan. 2003. La concordança del participi dels temps compostos de verbs que governen un infinitiu. *Llengua & Literatura* 14: 97-140.

Bayer, Josef. 1984. COMP in Bavarian Syntax. *The Linguistic Review* 3: 209-274.

Belletti, Adriana. 1988. The Case of Unaccusatives. *Linguistic Inquiry* 19: 1-34.

Belletti, Adriana. 2004. Aspects of the Low IP Area. In Luigi Rizzi (ed.), *The Cartography of Syntactic Structures* 2, 16-51. Oxford: Oxford University Press.

Belletti, Adriana. 2006. (Past) Participle Agreement. In Martin Everaert & Henk van Riemsdijk (eds.), *The Blackwell Companion to Syntax*, 493-521. Oxford: Blackwell.

Belletti, Adriana. 2008. *Structures and strategies*. London: Routledge.

Benveniste, Émile. 1971. *Problems in general linguistics*. Coral Gables: University of Miami Press.

Berta, Tibor. 2015. On the Lack of Agreement of the Participle of Compound Tenses in Old Non-Literary Catalan Texts. *Studia Romanica Posnaniensia*, 42 (5): 23-41.

Biberauer, Theresa & Ian Roberts. 2012. Towards a Parameter Hierarchy for Auxiliaries: Diachronic Considerations. *Cambridge Occasional Papers in Linguistics* 6 (9): 267-294.

Biberauer, Theresa & Ian Roberts. 2015. Rethinking Formal Hierarchies: A Proposed Unification. *Cambridge Occasional Papers in Linguistics* 7 (1): 1-31.

Bjorkman, Bronwyn & Zeijlstra, Hedde. 2014. Upward Agree is superior. Ms. URL: http://ling.auf.net/lingbuzz/002350. Accessed on the 7th February 2018.

Bleam, Tonia. 1999. *Leísta Spanish and the Syntax of Clitic Doubling*. PhD dissertation. University of Delaware.

Bobaljik, Jonathan. 2008. Where's Phi? Agreement as a Post-Syntactic Operation. In Daniel Harbour, David Adger and Susana Béjar (eds.), *Phi-Theory: Phi features across interfaces and nodules*, 295-328. Oxford: Oxford University Press.

Boeckx, Cedric. 2011. Approaching parameters from below. In Anna Maria Di Sciullo & Cedric Boeckx (eds.), *The biolinguistic enterprise: new perspectives on the evolution and nature of the human language faculty*, 205-221. Oxford: Oxford University Press.

Boeckx, Cedric. 2014. *Elementary Syntactic Structures. Prospects of a Feature-Free Syntax*. Cambridge: Cambridge University Press.

Bošković, Željko. 2011. On unvalued uninterpretable features. In Susan Lima, Kevin Mullin & Brian Smith (eds.), *Proceedings of the North East Linguistic Society 39*, 109-120. Amherst, MA: GLSA.

Bouchard, Denis. 1987. A Few Remarks on Past Participle Agreement. *Linguistics and Philosophy* 10: 449-474.

Brandt, Patrick & Eric Fuß. 2013. *Repairs. The added value of being wrong*. Berlin: Mouton de Gruyter.

Brissaud, Catherine & Danièle Cogis. 2008. L'accord du participle passé: Reconsidération d'un problème ancient à la lumière de données récentes sur l'acquisition. In Jacques Durand, Benoît Habert & Bernard Laks (eds.), *Congrès mondial de linguistique française, Paris 9-12 juillet 2008*, 413-424. Paris : EDP Sciences.

Brody, Michael. 1995. *Lexico-Logical Form: a radically minimalist theory*. Cambridge, MA: MIT Press.

Brody, Michael. 1997. Perfect chains. In Liliane Haegeman (ed.), *Elements of grammar*, 139-167. Dordrecht: Kluwer.

Burzio, Luigi. 1981. *Intransitive Verbs and Italian Auxiliaries*. PhD dissertation. MIT.

Burzio, Luigi. 1986. *Italian Syntax: A Government-Binding Approach*. Dordrecht: Reidel.

Campbell, Lyle & Richard D. Janda. 2001. Introduction: conceptions of grammaticalization and their problems. *Language Sciencies* 23 (2/3): 93-112.

Cardinaletti, Anna & Michal Starke. 1999. The typology of structural deficiency: a case study of the three grammatical classes of pronouns. In Henk van Riemsdijk (ed.), *Clitics in the languages of Europe*, 145-233. Berlin: Mouton de Gruyter.

Carmack, Stanford. 1996. *Patterns of Object-Participle Agreement in Eastern Ibero-Romance*. PhD dissertation. University of California.

Carstens, Vicki. 2016. Delayed Valuation: A Reanalysis of Goal Features, 'Upwards' Complementizer Agreement, and the Mechanics of Case. *Syntax* 19 (1): 1-42.

Chafe, Wallace L. 1976. Givenness, contrastiveness, definiteness, subjects, topics, and point of view. In Charles N. Li (ed.), *Subject and Topic*, 25-55. New York: Academic Press.

Chomsky, Noam. 1981. *Lectures on Government and Binding: The Pisa Lectures*. Dordrecht: Foris.

Chomsky, Noam. 1986. *Barriers*. Cambridge, MA: MIT Press.

Chomsky, Noam. 1993. A minimalist program for linguistic theory. In Kenneth L. Hale & S. Jay Keyser (eds.), *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, 1-52. Cambridge, MA: MIT Press.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries. In Roger Martin, David Michaels, Juan Uriagereka (eds.), *Step by step*, 89-155. Cambridge: MIT Press.

Chomsky, Noam 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: a Life in Language*, 1-52. Cambridge, MA: MIT Press.

Chomsky, Noam. 2005. Three factors in language design. *Linguistic Inquiry* 36 (1): 1-22.

Chomsky, Noam. 2007. Approaching UG from below. In Uli Sauerland & Hans-Martin Gärtner (eds.), *Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax-Semantics*, 1-29. Berlin: Mouton de Gruyter.

Chomsky, Noam. 2008. On phases. In Robert Freidin, Carlos P. Otero & María-Luisa Zubizarreta (eds.), *Foundational issues in linguistic theory*, 133-166. Cambridge, MA: MIT Press.

Chomsky, Noam. 2013. Problems of projection. *Lingua* 130: 33-49.

Chomsky, Noam. 2015. Problems of projections: Extensions. In Elisa di Domenico, Cornelia Hamann & Simona Matteini (eds.), *Structures, strategies and beyond: Studies in honour of Adriana Belletti*, 1-16. Amsterdam: Benjamins.

Cinque, Guglielmo. 1990. *Types of A'-Dependencies*. Linguistic Inquiry Monographs 17. Cambridge, MA: MIT Press.

Cinque, Guglielmo. 1999. *Adverbs and Functional Heads. A Cross-Linguistic Perspective*. Oxford: Oxford University Press.

Citko, Barbara. 2014. *Phase Theory*. Cambridge: Cambridge University Press.

Cole, Peter, Wayne Harbert, Gabriella Hermon & Shikaripur N. Sridhar. 1980. The Acquisition of Subjecthood. *Language* 56 (4): 719-43.

Company Company, Concepción. 2014. *Manual de gramática histórica*. México: Universidad Nacional Autónoma de México.

Corbett, Greville G. 2006. *Agreement*. Cambridge: Cambridge University Press.

Cortés, Corinne. 1993. Catalan Participle Agreement. Auxiliary Selection and the Government Transparency Corollary, *Probus* 5: 193-240.

Cuervo, María Cristina. 2003. Structural asymmetries but same word order. The dative alternation in Spanish. In Anna Maria Di Sciullo (ed.), *Asymmetry in Grammar. Volume 1: Syntax and Semantics*, 117-144. Amsterdam: Benjamins.

D'Alessandro, Roberta. 2015. Null Subject. In Antonio Fábregas, Jaume Mateu & Michael Putnam (eds.), *Contemporary Linguistic Parameters*. London: Bloomsbury Press.

D'Alessandro, Roberta. 2016. When you have too many features: auxiliaries, agreement and DOM in southern Italian varieties. Ms. URL: https://ling.auf.net/lingbuzz/002908. Accessed on the 16th February 2018.

D'Alessandro, Roberta & Roberts, Ian. 2008. Movement and Agreement in Italian Past Participles and Defective Phases, *Linguistic Inquiry* 39, 3: 477-491.

Daviau, Marie-Josée. 2013. *Le participle passé employé avec l'auxiliaire avoir et précédé du pronom CD en: accord ou non-accord ?* MA Thesis. Université de Montréal.

Demonte, Violeta. 1995. Dative alternation in Spanish. *Probus* 7: 5-30.

Déprez, Viviane. 1998. Semantic Effects of Agreement: The Case of French Past Participle Agreement. *Probus* 10: 1-65.

Di Tullio, Ángela, Andrés Saab & Pablo Zdrojewski. Forthcoming. Clitic Doubling in a Doubling World. The case of Argentinean Spanish reconsidered. In Ángel Gallego & Antonio Fábregas (eds.), *The Syntactic Variation of Spanish Dialects*. Oxford: Oxford University Press.

Diercks, Michael. 2012. Parameterizing Case: Evidence from Bantu. *Syntax* 5 (3): 253-286.

Diesing, Molly. 1992. *Indefinites*. Cambridge, MA: MIT Press.

Doroga, Jason P. 2014. Late Attestations of Participle Agreement in Spanish Perfective Constructions. In Chad Howe, Sarah E. Blackwell & Margaret Lubbers Quesada (eds.), *Selected Proceedings of the 15th Hispanic Linguistics Symposium*, 17-28. Somerville, MA : Cascadilla.

Dragomirescu, Adina. 2014. L'accord du participe passé en ancient roumain. *Linguistica Atlantica* 33 (2): 38-51.

Drijkoningen, Frank. 1999. Past Participle Agreement in French. Object-Agreement? Adjective Agreement. In Renée van Bezooijen & René Kager (eds.), *Linguistics in the Netherlands*, 41-52. Amsterdam: Benjamins.

Eckardt, Regine. 2012. Grammaticalization and Semantic Reanalysis. In Claudia Maienborn, Klaus von Heusinger & Paul Portner (eds.), *Semantics: An International Handbook of Natural Language Meaning*, Vol. 3, 2675-2702. Berlin: Mouton de Gruyter.

Epstein, Samuel & Daniel Seely. 2006. *Derivations in minimalism*. Cambridge: Cambridge University Press.

Escandell Vidal, Victoria. 2009. Differential object marking and topicality. In Ekkehard König & Lindsay J. Whaley (eds.), *Studies in Language*, 832-884. Amsterdam: Benjamins.

Fabra, Pompeu. 1919. *Gramàtica catalana*. Barcelona: Institut d'Estudis Catalans.

Farreny Sistac, M.Dolors. 2004. *La llengua dels processos de crims a la Lleida del segle XVI*. Barcelona: Institut d'Estudis Catalans.

Fischer, Susann. 2002. *The Catalan clitic system: a diachronic perspective on its syntax and phonology*. Berlin: Mouton de Gruyter.

Fischer, Susann. 2005. The interplay between Aspect and Reference. In Klaus von Heusinger, Georg Kaiser & Elisabeth Stark (eds.). *Proceedings of the Workshop 'Specificity and the Evolution/Emergence of Nominal Determinations Systems in Romance'*, 1-18. Konstanz: Arbeitspapier 119. Fachbereich Sprachwissenschaft, Universität Konstanz.

Fischer, Susann. 2007. Grammaticalisation within the IP-domain. In Ulrich Detges & Richard Waltereit, *The Paradox of Grammatical Change: Perspectives from Romance*, 107-126. Amsterdam: Benjamins.

Fischer, Susann. 2010. *Word Order Change as a Source of Grammaticalization*. Amsterdam: Benjamins.

Fischer, Susann & Esther Rinke. 2013. Explaining the variability in clitic doubling across Romance: a diachronic account. *Linguistische Berichte* 236: 455-472.

Fischer, Susann & Christoph Gabriel (eds.). 2016. *Manual of Grammatical Interfaces in Romance*. Berlin: Mouton de Gruyter.

Fischer, Susann, Tanja Kupisch & Esther Rinke (eds.). 2016. *Definiteness Effects. Bilingual, Typological and Diachronic Variation*. Cambridge: Cambridge Scholars Publishing.

Fischer, Susann & Jorge Vega Vilanova. 2018. Contact-induced change in Judeo-Spanish. In David M. Bunis et al. (eds.), *Caminos de Leche y Miel: Jubilee Volume in Honor of Michael Studemund-Halévy*, 135-154. Barcelona: Tirocinio.

Fischer, Susann, Mario Navarro & Jorge Vega Vilanova. 2019. The Clitic Doubling Parameter: Development and Distribution of a Cyclic Change. In Anne Breitbarth, Miriam Bouzouita, Lieven Danckaert & Elisabeth Witzenhausen (eds.), *Cycles in Language Change*, 52-70. Oxford: Oxford University Press.

Fodor, Janet Dean & Ivan A. Sag. 1982. Referential and Quantificational Indefinites. *Linguistics and Philosophy* 5: 355-398.

Fodor, Janet & William Sakas. 2016. Learnability. In Ian Roberts (ed.), *The Oxford Handbook of Universal Grammar*, 249-269. Oxford: Oxford University Press.

Fontana, Josep M. 1993. *Phrase Structure and the Syntax of Clitics in the History of Spanish*. PhD dissertation. University of Pennsylvania.

Franco, Jon. 1994. On the Absence of Spanish Past Participial Object Clitic Agreement: the AGRo Parameter in Romance. *Anuario del Seminario de Filología Vasca "Julio de Urquijo"* XXVIII-1, 247-262.

Friedemann, Marc-Ariel & Tal Siloni. 1997. Agr_{object} is not $Agr_{participle}$. *The Linguistic Review* 14, 69-96.

Fuß, Eric. 2005. *The Rise of Agreement.* Amsterdam: Benjamins.

Fuß, Eric. 2008. *Word order and language change. On the interface between syntax and morphology*. Habilitation thesis. Goethe-Universität Frankfurt.

Fuß, Eric. 2012. Syntactic change and information structure. Paper presented at the University of Cambridge.

Fuß, Eric. 2017. Language change. In Ian Roberts (ed.), *The Oxford Handbook of Universal Grammar*, 459-485. Oxford: Oxford University Press.

von der Gabelentz, Georg. 1972 [1891]. *Die Sprachwissenschaft. Ihre Aufgabe, Methoden und bisherigen Ergebnisse*. Tübingen: TBL.

Gabriel, Christoph. 2010. On Focus, Prosody, and Word Order in Argentinean Spanish. A Minimalist OT Account. *Revista Virtual de Estudos da Linguagem*. Special issue 4 "Optimality-theoretic Syntax": 183-222.

Gabriel, Christoph & Esther Rinke. 2010. Information packaging and the rise of clitic-doubling in the history of Spanish. In Gisella Ferraresi & Rosemarie Luhr (eds.), *Diachronic studies on information structure: Language acquisition and change*, 63–86. Berlin: Mouton de Gruyter.

Gallego, Ángel. 2011. Parameters. In Cedric Boeckx (ed.), *Handbook of Linguistic Minimalism*, 523-550. Oxford: Oxford University Press.

García García, Marco. 2014. *Differentielle Objektmarkierung bei unbelebten Objekten im Spanischen*. Berlin: de Gruyter.

Gaucher, Damien. 2013. L'accord du participe passé à l'oral comme variable sociolinguistique. In Fabrice Marsac & Jean-Christophe Pellat (eds.), *Le Participe Passé, entre accords et désaccords*, 115-130. Strasbourg : Presses Universitaires de Strasbourg.

Gavarró, Anna & Mar Massanell. 2013. An outline of past participle agreement in Catalan. Paper presented at the International Workshop 'The syntactic variation of Catalan and Spanish dialects', Universitat Autònoma de Barcelona, Bellaterra.

van Gelderen, Elly. 2004. *Grammaticalization as Economy*. Amsterdam: Benjamins.

van Gelderen, Elly. 2011. *The Linguistic Cycle*. Oxford: Oxford University Press.

van Gelderen, Elly. 2015. Problems of Projection: The Role of Language Change in Labeling Paradoxes. *Studia Linguistica*. DOI: 10.1111/stul.12041

Givón, Talmy. 1971. Historical syntax and synchronic morphology : An archaeologist's field trip. *Papers from the Seventh Regional Meeting of the Chicago Linguistic Society*, 394-415. Chicago: Chicago Linguistic Society.

Givón, Talmy. 1975. Serial verbs and syntactic change: Niger-Congo. In Charles Li (ed.), *Word order and word order change*, 47-112. Austin: University of Texas Press.

Givón, Talmy 1976. "Topic, pronoun, and grammatical agreement". In Charles Li (ed.) *Subject and Topic*: 151-188. New York: Academic Press.

Gonçalves, Rita, Inês Duarte & Tjerk Hagemeijer. 2016. Revisiting dative constructions – a VP-shell based approach. Paper presented at the 26th Colloquium on Generative Grammar, Cáceres.

Grevisse, Maurice. 1993. *Le bon usage. Grammaire française. Treizième édition revure.* Paris : Duculot.

Grohmann, Kleanthes K., John Drury & Juan Carlos Castillo. 2000. No More EPP. In Roger Billerey & Brook Danielle Lillehaugen (eds.), *WCCFL 19 : Proceedings of the 19th West Coast Conference on Formal Linguistics*, 153-166. Somerville, MA : Cascadilla Press.

Guasti, Maria Teresa & Luigi Rizzi. 2002. Agreement and tense as distinct syntactic positions: Evidence from acquisition. In Guglielmo Cinque (ed.), *The Structure of DP and IP: The Cartography of Syntactic Structures, Vol. 1*. Oxford: Oxford University Press.

Harbert, Wayne & Maher Bahloul. 2002. Postverbal subjects in Arabic and the theory of agreement. In Jamal Ouhalla and Ur Schlonsky (eds.), *Themes in Arabic and Hebrew Syntax*, 45-70. Dordrecht: Kluwer.

Harbour, Daniel. 2003. The Kiowa Case for Feature Insertion. *Natural Language and Linguistic Theory* 21 (3): 543-578.

Hawkins, John A. 1982. Cross-Category Harmony, X-bar and the predictions of markedness. *Journal of Linguistics* 18: 1-35.

Heim, Irene. 1982. *The Semantics of Definite and Indefinite Noun Phrases*. PhD dissertation. University of Massachussets.

Heine, Bernd & Tania Kuteva. 2003. On contact-induced grammaticalization. *Studies in Language* 27.3: 529-72.

Heine, Bernd & Tania Kuteva. 2005. *Language contact and grammatical change*. Cambridge: Cambridge University Press.

von Heusinger, Klaus. 2011. Specificity. In Claudia Maienborn, Klaus von Heusinger & Paul Portner (eds.), *Semantics: An International Handbook of Natural Language Meaning*, Vol. 2, 1024-57. Berlin: Mouton de Gruyter.

von Heusinger, Klaus & Georg A. Kaiser. 2005. The evolution of differential object marking in Spanish. In Klaus von Heusinger, Georg A. Kaiser & Elisabeth Stark (eds.), *Proceedings of the Workshop "Specificity and the Evolution/Emergence of Nominal Determination Systems in Romance"*, 33-70. Konstanz: Arbeitspapier 119. Fachbereich Sprachwissenschaft, Universität Konstanz.

Himmelreich, Anke. 2017. *Case Matching Effects in Free Relatives and Parasitic Gaps – A Study on the Properties of Agree*. PhD dissertation. Universität Leipzig.

Holmberg, Anders. 2005. Is there a little pro? Evidence from Finnish. *Linguistic Inquiry* 36 (4): 533-564.

Holmberg, Anders & Ian Roberts. 2014. Parameters and the three factors of language design. In M. Carme Picallo (ed.), *Linguistic varition in the minimalist framework*, 61-81. Oxford: Oxford University Press.

Hopper, Mike & Elizabeth Traugott. 2003. *Grammaticalization*. Cambridge: Cambridge University Press.

Hornstein, Norbert. 2009. *A Theory of Syntax: Basic Operations and the Minimalist Program*. Cambridge: Cambridge University Press.

Hornstein, Norbert & Jairo Nunes. 2008. Adjunction, Labeling, and Bare Phrase Structure. *Biolinguistics* 2 (1): 57-86.

Hualde, José Ignacio. 1992. *Catalan*. New York: Routledge.

Huang, C.-T. James. 1994. More on Chinese Word Order and Parametric Theory. In Barbara Lust & Margarita Suñer (eds.), *Syntactic Theory and First Language Acquisition: cross-linguistic Perspectives*, 15-35. Hilldale, NJ: Erlbaum.

von Humboldt, Wilhelm. 1972 [1822]. *Über das Entstehen der grammatischen Formen und ihren Einfluß auf die Ideenentwicklung*. Berlin: Abhandlungen der Akademie der Wissenschaften zu Berlin.

Ihsane, Tabea & Genoveva Puskás. 2001. Specific is not Definite. *Generative Grammar in Geneva* 2: 39-54.

Jaeggli, Osvaldo. 1982. *Topics in Romance syntax*. Dordrecht: Foris.

Jaeggli, Osvaldo. 1986. Three Issues in the Theory of Clitics: Case, Doubled NPs, and Extraction. In Hagit Borer (ed.), *The Syntax of Pronominal Clitics*, 15-42. New York: Academic Press.

Janda, Richard D. & Brian D. Joseph. 2003. On Language, Change, and Language Change – Or, Of History, Linguistics, and Historical Linguistics. In Joseph, Brian D. & Richard D. Janda (eds.), *The Handbook of Historical Linguistics*, 1-180. Oxford: Blackwell.

Jespersen, Otto. 1966 [1917]. *Negation in English and other languages*. Copenhagen: Munksgaard.

Karimi, Simin. 1990. Obliqueness, Specificity, and Discourse Functions: *râ* in Persian. *Linguistic Analysis* 20.3-4: 139-191.

Kayne, Richard S. 1985. L'accord du participe passé en français et en italien. *Modèles linguistiques* 7: 73-89.

Kayne, Richard. 1989a. Facets of Romance Past Participle Agreement. In Paola Benincà (ed.), *Dialect Variation and the Theory of Grammar*, 85-104. Dordrecht: Foris.

Kayne, Richard. 1989b. Null Subjects and Clitic Climbing. In Osvaldo Jaeggli & Kenneth Safir (eds.), *The Null Subject Parameter*, 239-261. Dordrecht: Kluwer.

Kayne, Richard. 1994. *The Antisymmetry of Syntax*. Cambridge: MIT Press.

Keenan, Edward L. 1976. Towards a universal definition of subject. In Charles N. Li (ed.), *Subject and Topic*, 303-333. New York: Academic Press.

Kempchinsky, Paula. 2000. Aspect Projections and Predicate Type. In Héctor Campos et al. (eds.), *Hispanic Linguistics at the Turn of the Millennium*, 171-187. Somerville, MA: Cascadilla Press.

Kiparsky, Paul. 1998. Partitive Case and Aspect. In Miriam Butt & Wilhelm Geuder (eds.), *The Projection of Arguments: Lexical and Compositional Factors*, 265-307. Stanford: Center for the Study of Language and Information Publications.

Koch, Harold. 1995. The creation of morphological zeroes. In Geert Booij & Jaap van Marle (eds.), *Yearbook of Morphology*, 31-71. Dordrecht: Kluwer.

Koeneman, Olaf & Hedde Zeijlstra. 2014. The Rich Agreement Hypothesis Rehabilited. *Linguistic Inquiry* 45:571-615.

Koopman, Hilda. 2006. Agreement configurations. In Cedric Boeckx (ed.), *Agreement Systems*, 159-199. Amsterdam: Benjamins.

Koopman, Hilda & Dominique Sportiche. 1991. The position of subjects. *Lingua* 85 : 211-258.

Krifka, Manfred. 1989. Nominal Reference, Temporal Constitution and Quantification in Event Semantics. In Renate Bartsch, Johan van Benthem & Peter van Emde Boas (eds.), *Semantics and Contextual Expressions*, 75-115. Dordrecht: Foris.

Kroch, Anthony. 2000. Syntactic Change. In Mark Baltin & Chris Collins (eds.), *Handbook of Contemporary Syntactic Theory*, 699-729. Oxford: Blackwell.

Kupisch, Tanja & Natascha Müller. 2009. Relating Italian articles and clitic object pronouns in bilingual children acquiring German and Italian. In Christine von Dimroth & Peter Jordens (eds.), *Functional Categories in Learner Language*, 307-342. Berlin: De Gruyter.

Kupisch, Tanja & Jason Rothman. 2016. Interfaces in the acquisition of syntax. In Susann Fischer and Christoph Gabriel (eds.), *Manual of Grammatical Interfaces in Romance*, 551-586. Berlin: Mouton de Gruyter.

Kuryłowicz, Jerzy. 1965. The evolution of grammatical categories. *Diogenes* 51: 55-71.

Langacker, Ronald. 1977. Syntactic Reanalysis. In Charles Li (ed.), *Mechanisms of Syntactic Change*, 57-193. Austin: University of Texas Press.

Larson, Richard. 1988. On the Double Object Construction. *Linguistic Inquiry* 19: 335-392.

Lazard, Gilbert. 1994. *L'actance*. Paris: Presses Universitaires de France.

Le Bellec, Christel. 2009. L'accord du participe passé dans les langues romanes: entre pragmatique et syntaxe. *Revue Romane*, 44-1: 1-24.

Lefebvre, Claire. 1988. Past Participle Agreement in French: Agreement = Case. In David Birdsong & Jean-Pierre Montreuil (eds.), *Advances in Romance Linguistics*, 233-253. Dordrecht: Foris.

Lehmann, Christian. 1995. *Thoughts on grammaticalization*. Munich: Lincom Europa.

Leiss, Elisabeth. 2000. *Artikel und Aspekt. Die grammatischen Muster von Definitheit*. Berlin: De Gruyter.

Leonetti, Manuel. 2004. Specificity and differential object marking in Spanish. *Catalan Journal of Linguistics* 3: 75-114.

Leonetti, Manuel. 2007. Clitics do not encode specificity. In Georg A. Kaiser & Manuel Leonetti (eds.), *Proceedings of the Workshop "Definiteness, Specificity and Animacy in Ibero-Romance Languages*, 111-139. Konstanz: Arbeitspapier 122. Fachbereich Sprach-wissenschaft, Universität Konstanz.

Li, Charles N. & Sandra A. Thompson. 1976. Subject and topic: a new typology of language. In Charles N. Li (ed.), *Subject and topic*, 459-89. New York: Academic Press.

Lightfoot, David. 1979. *Principles of Diachronic Syntax*. Cambridge: Cambridge University Press.

Lightfoot, David (ed.). 2002. *Syntactic effects of morphological change*. Oxford: Oxford University Press.

Lois, Ximena. 1990. Auxiliary selection and past participle agreement in Romance. *Probus*, 2(2): 233-255.

López, Luis. 2012. *Indefinite objects: Scrambling, choice functions, and differential marking*. Cambridge, MA: MIT Press.

Lyons, Christopher. 1999. *Definiteness*. Cambridge: Cambridge University Press.

MacDonald, Jonathan E. 2008. *The Syntactic Nature of Inner Aspect*. Amsterdam: Benjamins.

MacKenzie, Ian. 2013. Participle-object agreement in French and the theory of grammatical viruses. *Journal of Romance Studies* 13 (1): 19-33.

Macpherson, Ian. 1967. *Past Participle Agreement in Old Spanisch: Transitive Verbs*, Bulletin of Hispanic Studies, 44, 4: 241-254.

Manzini, Rita & Leonardo Savoia. 2005. *I dialetti italiani e romanci: Morfosintassi generativa*. Alexandria: Edizioni dell'Orso.

Marchis, Mihaela & Artemis Alexiadou. 2013. The syntax of clitics revisited: Two types of clitics. *Lingua* 127: 1-13.

Martins, Ana M. 1994. Cliticos na História do Português. PhD dissertation. Universidade de Lisboa.

McGinnis, Martha. 2008. Applicatives. *Language and Linguistics Compass* 2 (6): 1225-1245.

Meillet, Antoine. 1912 [1965]. L'évolution des formes grammaticales. In Antoine Meillet*, Linguistique Historique et Linguistique Générale*, 130-148. Paris: Champion.

Meisel, Jürgen M. 2007. Mehrsprachigkeit in der frühen Kindheit. Zur Rolle des Alters bei Erwerbsbeginn. In Tanja Anstatt (ed.), *Mehrsprachigkeit bei Kindern und Erwachsenen. Erwerb, Formen, Förderung*, 93-113. Tübingen: Attempto.

Melis, Chantal & Marcela Flores 2009. On the interplay between forces of erosion and forces of repair in language change. A case study. *Folia linguistica historica* 43. Historica vol. 30, 271-310.

Merchant, Jason. 2001. *The Syntax of Silence: Sluicing, Islands and the Theory of Ellipsis*. Oxford: Oxford University Press.

Moll, Francesc de Borja. 1952. *Gramàtica històrica catalana*. Madrid: Gredos.

Müller, Gereon. 2017. Structure removal: An argument for feature-driven Merge. *Glossa: a journal of general linguistics* 2 (1): 28. 1-35.

Muxí, Isabel. 1996. Object Participle Agreement with Direct Object Clitics in Catalan. *Catalan working papers in linguistics* 5,1: 127-145.

Navarro, Mario, Susann Fischer & Jorge Vega Vilanova. 2017. Reconstruyendo un ciclo: doblado de clíticos y gramaticalización en las lenguas romances. In Silvia Gumiel-Molina, Manuel Leonetti & Isabel Pérez-Jiménez (eds.), *Investigaciones actuales en Lingüística. Vol. III: Sintaxis*, 111-126. Alcalá de Henares: Servicio de Publicaciones Universidad de Alcalá.

Nevins, Andrew. 2005. Derivations without the Activity Condition. *MIT Working Papers in Linguistics* 49: 283-306.

Newmeyer, Frederick. 2004. Against a parametric setting approach to language typology, *Linguistic Variation Yearbook*, 181-232.

Nishida, Chiyo. 2012. A Corpus Study of Mexican Spanish Three-participant Constructions with and without Clitic Doubling. *Linguistic Discovery* 10 (3): 208-240.

Norde, Muriel. 2009. *Degrammaticalization*. Oxford: Oxford University Press.

Obenauer, Hans-Georg. 1992. L'interpretation des structures *wh* et l'accord du participle passé. In Hans-Georg Obenauer & Anne Zribi-Hertz (eds.), *Structure de la phrase et théorie du liage*, 169-193. Paris: Presses Universitaires de Vincennes.

Paoli, Sandra. 2006. On the relation of [gender] agreement. Evidence from Friulian. In João Costa & Maria Cristina Figueiredo Silva (eds.), *Studies on Agreement*, 223-242. Amsterdam: Benjamins.

Par, Anfós. 1928. *Curial e Güelfa: Notes lingüístiques y d'estil*. Barcelona: Biblioteca Balmes.

Parodi, Claudia. 1995. Participle Agreement and Object Shift in Old Spanish: A Minimalist Theory Approach. In Héctor Campos & Paula Kempchinsky (eds.), *Evolution and Revolution in Linguistic theory*, 276-301. Washington, DC: Georgetown University Press.

Pérez Saldanya, Manuel. 1998. *Del llatí al català. Morfosintaxi verbal històrica*. València: Universitat de València.

Perlmutter, David. 1978. Impersonal Passives and the Unaccusative Hypothesis. *Proceedings of the Annual Meeting of the Berkeley Linguistics Society* 38: 157-190.

Pesetky, David & Ester Torrego. 2004. Tense, case and the nature of syntactic categories. In Jaqueline Guéron & Jaqueline Lecarme (eds.), *The syntax of time*, 495-538. Cambridge, MA: MIT Press.

Pesetsky, David & Ester Torrego. 2007. The syntax of valuation and the interpretability of features. In Simin Karimi, Vida Samiian & Wendy K. Wilkins (eds.), *Phrasal and Clausal Architecture: Syntactic derivation and interpretation*, 262-294. Amsterdam: Benjamins.

Pineda, Anna. 2016. *Les fronteres de la (in)transitivitat. Estudi dels aplicatius en llengües romàniques i basc*. Barcelona: Institut d'Estudis Món Juïc.

Platzack, Christer. 2001. The vulnerable C-domain. *Brain and Language* 77(3): 364-377.

Poletto, Cecilia. 2014. *Word order in Old Italian*. Oxford: Oxford University Press.

Pollock, Jean-Yves. 1989. Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry* 20(3): 365-424.

Preminger, Omer. 2013. That's not how you agree: a reply to Zeijlstra. *The Linguistic Review* 30: 491-500.

Preminger, Omer & Maria Polinsky. 2015. Agreement and semantic concord: a spurious unification. Ms. University of Maryland and Harvard University. URL: http://ling.auf.net/lingbuzz/002363. Accessed on the 21st February 2018.

Pylkkänen, Liina. 2002. *Introducing arguments*. PhD dissertation. MIT.

Ritter, Elizabeth & Sara Thomas Rosen. 2001. The interpretive Value of Object Splits. *Language Sciencies* 23: 425-451.

Rivas, Alberto Mario. 1977. *A Theory of Clitics*. PhD dissertation. MIT.

Rizzi, Luigi. 1982. *Issues in Italian syntax*. Dordrecht: Foris.

Rizzi, Luigi. 1997. The Fine Structure of the Left Periphery. In Liliane Haegeman (ed.), *Elements of Grammar: A Handbook of Generative Syntax*, 281-337. Dordrecht: Kluwer.

Roberts, Ian. 1993. *Verbs and diachronic syntax: a comparative history of English and French*. Dordrecht: Kluwer.

Roberts, Ian. 1997. Directionality and word order change in the history of English. In Ans van Kemenade & Nigel Vincent (eds.), *Parameters of morphosyntactic* change, 397-426. Cambridge: Cambridge University Press.

Roberts, Ian. 2007. *Diachronic Syntax*. Oxford: Oxford University Press.

Roberts, Ian. 2010. A deletion analysis of null subjects. In Theresa Biberauer, Anders Holmberg, Ian Roberts & Michelle Sheehan (eds.), *Parametric Variation: Null Subjects in Minimalist Theory*, 58-87. Cambridge: Cambridge University Press.

Roberts, Ian. 2012. Macroparameters and minimalism. A program of comparative research, in Charlotte Galves et al. (eds.), *Parameter theory and linguistic change*, 320-35. Oxford: Oxford University Press.

Roberts, Ian & Anna Roussou. 2003. *Syntax change. A minimalist approach to grammaticalization*. Cambridge: Cambridge University Press.

Rocquet, Amélie. 2010. Past participle agreement in French: a matter of phases and case-accessibility. In Duk-Ho An & Soo_Yeon Kim (eds.), *Movement in Minimalism: Proceedings of the 12th Seoul International Conference in Generative Grammar*, 405-426. Seoul: Hankuk.

Rocquet, Amélie. 2013. *Splitting Objects: A nanosyntactic account of direct object marking*. PhD dissertation. Ghent University.

Rothman, Jason & Roumyana Slabakova. 2011. The Mind-Context Divide: On acquisition at the linguistic interfaces*. Lingua* 121 (4): 568-576.

Rosselló, Joana. 2002. El SV, I: el verb i els arguments verbals. In Joan Solà et al. (ed.), *Gramàtica del català contemporani*, 1853-1949. Barcelona: Empúries.

Russell-Gebett, Paul. 1965. *Mediaeval Catalan linguistic texts*. Oxford: Dolphin Book Co.

Salvà i Puig, Sebastià. 2017. Past Participle Agreement in Majorcan Catalan: the Relevance of Inner Aspect. *Borealis* 6(1): 53-75.

Salvesen, Christine Meklenborg & Kristin Bech. 2014. Postverbal Subjects in Old English and Old French. *Corpus-based studies in contrastive linguistics*, *Oslo Studies in Language* 6: 201–228.

Sánchez, Liliana. 2010. La aparente opcionalidad del doblado de clíticos en el español limeño. *Cuadernos de la ALFAL* 1: 94-105.

Sánchez, Liliana & Pablo Zdrojewski. 2013.Restricciones semánticas y pragmáticas al doblado de clíticos en el español actual. *Lingüística (special volume)* 29 (2): 271-320.

Sapir, Edward. 1970 [1921]. *Language: an introduction to the study of speech*. London: Hart-Davis.

Schütze, Carson. 2016. AGREE and Spec-Head: Each inadequate, both necessary? Ms. University of California, Los Angeles. URL: http://ling.auf.net/lingbuzz/003111. Accessed on the 21st February 2018.

Schwenter, Scott A. 2014. Two kinds of differential object marking in Portuguese and Spanish. In Patrícia Amaral & Ana Maria Carvalho (eds.), *Portuguese-Spanish Interfaces: Diachrony, synchrony, and contact*, 237-260. Amsterdam: Benjamins.

Sheehan, Michelle. 2006. *The EPP and Null Subjects in Romance*. PhD dissertation. Newcastle University.

Sheehan, Michelle & Jenneke van der Wal. 2016. Do we need abstract Case? In Kyeong-min Kim et al. (eds.), *Proceedings of the 33rd West Coast Conference on Formal Linguistics*, 351-360. Somerville, MA: Cascadilla.

Smith, John Charles. 1995. Agreement between past participle and direct object in Catalan: the hypothesis of Castilian influence revisited. In Jacek Fisiak (ed.), *Linguistic Change under Contact Conditions*, 271-289. Berlin: Mouton de Gruyter.

Smith, John Charles. 1996. Surfonctionnalité et hyperanalyse: L'accord du participe passé dans les langues romanes à la lumière de deux théories récentes. *Faits de langue* 8: 113-120.

Solà, Joan. 1973. *Estudis de sintaxi catalana. Vol. 2*. Barcelona: Edicions 62.

Sorace, Antonella. 2000. Gradients in auxiliary selection with intransitive verbs. *Language* 76: 859-890.

Sorace, Antonella. 2006. Gradedness and optionality in mature and developing grammars. In Gisbert Fanselow, Caroline Féry, Matthias Schlesewsky & Ralf Vogel (eds.), *Gradience in Grammar*, 106-123. Oxford: Oxford University Press.

Sorrenti, Elisa. 2015. Opacity and the definiteness effect: A contrastive analysis in language with and without articles. PhD dissertation. Universität Hamburg.

Sportiche, Dominique. 1990. Movement, agreement, and case. Ms. University of California, Los Angeles. URL: http://ling.auf.net/lingbuzz/000020. Accessed on the 21st February 2018.

Sportiche, Dominique. 1996. Clitic Constructions. In Johan Rooryck & Laurie Zaring (eds.), *Phrase Structure and the Lexicon*, 213-276. Dordrecht: Kluwer.

Stark, Elisabeth 2007. Typological correlations in nominal determination in Romance Nominal Determination. In Elisabeth Stark, Elisabeth Leiss and Werner Abraham (eds.), *Nominal Determination Typology, context constraints and historical emergence*, 49-71. Amsterdam: Benjamins.

Stark, Elisabeth. 2017. L'accord du participe passé dans la langue standard et en français vernaculaire. Ms. URL: https://doi.org/10.5167/uzh-111526. Accessed on the 7th February 2018.

Steinkrüger, Patrick. 2004. *Das Katalanische in der Frühen Neuzeit. Untersuchungen zur Grammatikalisierung von Auxiliaren und Kopulae in Selbstzeugnissen der Epoche*. München: Lincom.

Strozer, Judith R. 1976. *Clitics in Spanish*. PhD dissertation. University of California.

Suñer, Margarita. 1988. The Role of Agreement in Clitic-Doubled Constructions. *Natural Language and Linguistic Theory* 6: 391-434.

Thomason, Sarah & Terrence Kaufmann. 1988. *Language Contact, Creolization, and Genetic Linguistics*. Berkeley: University of California Press.

Thráinsson, Höskuldur. 2001. Object shift and scrambling. In M Baltin & C Collins (eds.), *The Handbook of Syntactic Theory*, 148-202. Oxford: Blackwell.

Torrego, Ester. 1999. El complemento directo preposicional. In Ignacio Bosque & Violeta Demonte (eds.), *Gramática descriptive de la lengua española*, vol. 2, 1779-1806. Madrid: Espasa Calpe/Real Academia Española de la Lengua.

Traugott, Elizabeth. 2010. Grammaticalization. In Silvia Luraghi & Vit Bubenik (eds.), *Continuum Companion to Historical Linguistics*, 269-283. London: Continuum Press.

Traugott, Elizabeth & Bernd Heine (eds.). 1991. *Approaches to grammaticalization*. Amsterdam: Benjamins.

Travis, Lisa de Mena. 2000. Event Structure in Syntax. In Carol L. Tenny & James Pustejovsky (eds.), *Events as Grammatical Objects*, 145-185. Stanford, CA: CSLI.

Tsakali, Vina. 2006. *The Syntax and Acquisition of Pronominal Clitics: A Crosslinguistic Study with Special Reference to Modern Greek*. PhD dissertation. University College London.

Tsakali, Vina. 2014. Acquisition of clitics: the state of the art. In Kleanthes K. Grohmann & Theoni Neokleous (eds.), *Developments in the Acquisition of Clitics*, 161-187. Cambridge: Cambridge Scholars Publishing.

Tsakali, Vina & Kenneth Wexler. 2004. Why children omit clitics in some languages but not in others: New evidence from Greek. In Jacqueline van Kampen & Sergio Baauw (eds.), *Proceedings of Generative Approaches to Language Acquisition 2003*, vol. II, 493-504. Utrecht: LOT.

Tsakali, Vina & Elena Anagnostopoulou. 2008. Rethinking the Clitic Doubling parameter: The inverse correlation between clitic doubling and participle agreement. In Dalina Kalluli & Liliane Tasmowski (eds.), *Clitic Doubling in the Balkan Languages*, 321-357. Amsterdam: Benjamins.

Uriagereka, Juan. 1995. Aspects of the Syntax of Clitic Placement in Western Romance. *Linguistic Inquiry* 26: 79-124.

Vallduví, Enric. 1994. Catalan detachment and information packaging. *Journal of Pragmatics* 22: 573-601.

Vázquez Rozas, Marcos & Victoria García Salido. 2012. A discourse-based analysis of object clitic doubling in Spanish. In Kristin Davidse, Tine Breban, Lieselotte Brems & Tanja Mortelmans, *Grammaticalization and Language Change. New Reflections*, 271-297. Amsterdam: Benjamins.

Vega Vilanova, Jorge. 2016. Verbal Aspect and Definiteness Effects in Catalan Absolute Small Clauses. In Susann Fischer, Tanja Kupisch & Esther Rinke (eds.), *Definiteness Effects: Bilingual, Typological and Diachronic Variation*, 333-373. Cambridge: Cambridge Scholars Publishing.

Vega Vilanova, Jorge. 2019. Language Policies and Language Change: On the Optionality and Loss of the Past Participle Agreement in Catalan. In Renata Szczepaniak et al. (eds.), *Zweifelsfälle: Definition, Erforschung, Implementierung*, 273-295. Hildesheim: Olms.

Vega Vilanova, Jorge, Mario Navarro & Susann Fischer. 2018. The clitic doubling cycle. A diachronic reconstruction. In Gabriela Pană Dindelegan et al. (eds.), *Romance Syntax. Comparative and diachronic perspectives*, 117-134. Cambridge: Cambridge Scholars Publishing.

Veny, Joan. 1982. *Els parlars catalans: síntesi de dialectologia*. Palma de Mallorca: Moll.

Vikner, Sten. 2005. Object Shift. In Henk van Riemsdijk & Martin Everaert (eds.), *The Blackwell Companion to Syntax*, 392-436. Oxford: Blackwell.

Vincent, Nigel. 1980. Some issues in the theory of word order. *York Papers in Linguistics* 8: 167-179.

van der Wal, Jenneke. 2015. Evidence for abstract Case in Bantu. *Lingua* 165: 109-132.

Ward, Gregory & Betty Birner. 1995. Definiteness and the English Existential. *Language* 71 (4): 722-742.

White, Lydia. 2011. Second language acquisition at the interfaces. *Lingua* 121 (4): 577-590.

Wurmbrand, Susi. 2017. Formal and semantic agreement in syntax: A dual feature approach. In Joseph Emonds & Markéta Janebová (eds.), *Language Use and Linguistic Structure. Proceedings of Olomouc Linguistic Colloquium 2016*, 19-36. Olomouc: Palacký University.

Zdrojewski, Pablo. 2013. *Spanish DOM: a case of lacking case*. Paper presented at the Tromsø Workshop on Differential object marking, University of Tromsø.

Zdrojewski, Pablo & Liliana Sánchez. 2014. Variation in accusative clitic doubling across three Spanish dialects. *Lingua* 151: 162-176.

Zeijlstra, Hedde. 2012. There is only one way to agree. *The Linguistic Review* 29: 491-53.

Zeijlstra, Hedde. 2016. (Preliminary) Principles of Projection. Paper presented at the Hamburg Universität.

Zwart, Jan-Wouter. 2017. An argument against the syntactic nature of verb movement. In Laura R. Bailey & Michelle Sheehan (eds.), *Order and structure in syntax I: Word order and syntactic structure*, 29-47. Berlin: Language Science Press.

Zwicky, Arnold. 1977. *On clitics*. Bloomington: Indiana University Linguistics Club.

Online Resources:

Corpus de Català Contemporani de la Universitat de Barcelona CCCUB. URL: http://www.ub.edu/cccub/. Accessed on 22nd February 2018.

Corpus Informatitzat del Català Antic, CICA. URL: http://www.cica.cat. Accessed on the 15th December 2017.

Corpus Textual Informatitzat de la Llengua Catalana CTILC. URL: http://ctilc.iec.cat. Accessed on 22nd February 2018.

List of Texts Used in the Old Catalan Corpus

11th-13th century

Desclot, Bernat. 1949 [1299]. *Crònica. Vol. I*. Barcelona: Barcino.

Llull, Ramon. 1931 [1287-89]. *Llibre de meravelles. Vol. I*. Barcelona: Barcino.

Russell-Gebett, Paul. 1965. *Mediaeval Catalan linguistic texts*. Oxford: Dolphin Book Co. (miscellaneous short texts from the 11th to the 13th century).

14th century

Eiximenis, Francesc. 1925 [1392]. *Contes i faules*. Barcelona: Barcino.

Metge, Bernat. 2006 [1399]. *Lo somni*. Barcelona: Barcino.

Net, Françoi et al. Ca. 1350-1400. *Cinc lletres privades catalanes del segle XIV*. Corpus Informatitzat del Català Antic, CICA. URL: http://www.cica.cat. Accessed on the 15th December 2017.

Tous, Sereneta de. Ca. 1350-1400. *Cartes d'una catalana del segle XIV al seu marit*. Corpus Informatitzat del Català Antic, CICA. URL: http://www.cica.cat. Accessed on the 15th December 2017.

15th century

Anonymous. 2007. *Curial e Güelfa*. Toulouse: Anacharsis.

Anonymous. 1931 [1462-72]. *La fi del comte d'Urgell*. Barcelona: Barcino.

Cardona, Acart de. 15th century. *Cartes privades del segle XV a l'arxiu de Santa Maria del Mar*. Corpus Informatitzat del Català Antic, CICA. URL: http://www.cica.cat. Accessed on the 15th December 2017.

Gorigos, Aitó de. 1400? *La flor de les histories d'Orient*. Corpus Informatitzat del Català Antic, CICA. URL: http://www.cica.cat. Accessed on the 15th December 2017.

16th century

Despuig, Cristòfor. 1996 [1157]. *Col·loquis de la insigne ciutat de Tortosa*. Barcelona: Curial Edicions Catalanes.

Requesens, Estefania de. 16th century. *Epistolaris*. Corpus Informatitzat del Català Antic, CICA. URL: http://www.cica.cat. Accessed on the 15th December 2017.

Roís de Liori, Hipòlita. 16th century. *Epistolaris*. Corpus Informatitzat del Català Antic, CICA. URL: http://www.cica.cat. Accessed on the 15th December 2017.

17th-19th century

Steinkrüger, Patrick. 2004. *Das Katalanische in der Frühen Neuzeit. Untersuchungen zur Grammatikalisierung von Auxiliaren und Kopulae in Selbstzeugnissen der Epoche*. München: Lincom. (miscellaneous short and long texts from the 17th to the 19th century).