



Milan Rezac

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Phi-features and the Modular Architecture of Language



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PHI-FEATURES AND THE MODULAR ARCHITECTURE OF LANGUAGE

by

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Preface

This work uses phi-features to explore the character of syntax as a module both autonomous of the systems with which it interfaces, yet sensitive to their requirements. Three results are developed in the perspective of the Minimalist Program:

- A. *Modularity*: Phi-features and operations over them support the modular organization of language. Syntax, realization at PF, and interpretation at LF involve modules distinct in their computational character and information types, and narrowly restricted in their interaction.
- B. *Phi-features*: Phi-features are among the primitives of syntax, realization, and interpretation, and thus a window on the character and interactions of the modules. In syntax, phi-features and operations over them are distinct from those of both PF and LF.
- C. *Globality*: There exists a mechanism to form syntactic dependencies as a last-resort response to licensing requirements. In the terms of the Minimalist Program, it is an interface operation that adds an uninterpretable feature to the numeration if needed for Full Interpretation. Modular architecture imposes narrow limits on its scope.

Chapter 1 introduces the work. It presents the *modular architecture* of cognition, and the organization of the language faculty into the modules of syntax and its interfacing systems of realization (PF) and interpretation (LF). Phi-features are a common alphabet shared by these systems, permitting investigation of their distinctive character and their interaction. Among the phi-features of syntax, some are illegible to its interfacing systems: the *uninterpretable* phi-features of Agree/Case dependencies. The chapter examines the nature of uninterpretability, agreement, and syntactic versus morphological phi-phenomena. Uninterpretable features are eliminated by forming syntactic dependencies, and underlie the new type of dependency studied in this work: last-resort Agree to repair illegible syntactic structures.

Chapter 2 reviews phi-feature manipulations in realizational morphology, and draws conclusions about the nature of this module. The phenomena include phi-features neutralized in *syncretisms*, deleted or transferred in *opaque cliticization and agreement*, and ineffable in *arbitrary gaps*. They reveal the *modular*

signature of morphology: computation distinct from that of syntax in domains and operations, access to nonsyntactic but not to all syntactic information, and strict invisibility to syntax. This signature is the touchstone for differentiating morphological and syntactic phi-phenomena.

Chapter 3 uses the modular signature of syntax to show that some phi-agreement dependencies belong to syntax rather than to realizational morphology. They are interactions between the transitive subject and object according to their person features, or *person (hierarchy) interactions*, in Algonquian, Mapudungun, and Arizona Tewa. The key finding is that the interactions are visible to syntax and interpretation, unlike the morphological phenomena of Chapter 2. Other aspects of their ‘modular signature’ concur, notably operation across phrase-structurally unbounded domains. The person interaction of Arizona Tewa introduces the syntactic *repair* of a *person (hierarchy) constraint*: the emergence of an otherwise unavailable syntactic structure in response to the impossibility of the regular one by a person constraint. Repairs are the focus of Chapters 4 and 5.

Chapter 4 investigates the person interaction of French known as the *Person Case Constraint*, banning a 1st/2nd/reflexive accusative clitic + a dative, and its *repair* by an otherwise unavailable locative for the dative. First is established the robustly syntactic character of the constraint and the repair on all elements of the modular signature of syntax: computational profile, information accessed, and syntactico-semantic visibility. Next are examined their syntactic properties, in preparation for the theoretical treatment in Chapter 5. A principal result is that the repair cannot fix cliticization problems other than the Person Case Constraint, from morphological to interpretive. The irreparability of such ‘ineffable’ structures proves key to understanding the role of modularity in the theory of the repair.

Chapter 5 develops the *last-resort interface mechanism* $\mathfrak{R}$, in a cross-linguistic study of the repairs of person constraints through otherwise unavailable ergatives, accusatives, PPs, and enriched DPs. They are unified as the minimal enrichment of a syntactic structure that fails Full Interpretation by an Agree/Case dependency, that is, by an uninterpretable phi-feature (probe). $\mathfrak{R}$ extends the role of uninterpretable features in forming syntactic dependencies from features that are lexically fixed to those dynamically inserted for Full Interpretation, developing a proposal of Chomsky (1995 et seq.). Modular architecture restricts the scope of $\mathfrak{R}$ to the interfaces. $\mathfrak{R}$ can detect illegibility at the interfaces of syntax with PF and LF, but not problems within these modules. In response, it can enrich the numeration interface between syntax and the lexicon with an uninterpretable feature, but not modify syntactic computation, nor search the lexicon for interpretable content. $\mathfrak{R}$ is extended to other Full Interpretation failures, notably to the ergative and accusative ‘dependent Case’ of all transitives in response to Case licensing.

Chapter 6 explores the syntax-interpretation interface through *phi-mismatches*: nominals like French *on* ‘we’, with one set of phi-features, 1PL, for interpretation, another, 3SG, uninterpretable, for phenomena such as concord.

The uninterpretable phi-features are shown to play a role in syntax, not in realizational morphology alone. Therefore, the syntactic phi-specifications of some arguments and their dependencies are *autonomous* of interpretation, along with expletives, phi-agreement, Case and A-movement. The person of the person interaction in [Chapter 4](#) is among them. The diachronic sources, syntactic properties, and elimination for interpretability of these uninterpretable phi-features are discussed.

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Conventions and Glosses

Cross-references to sections include chapter number; Section 5.2 is in [Chapter 5](#).

In examples, **bold** is used to draw attention; CAPS for semantic focus; in French examples, italics for clitics and underline for strong pronouns, when relevant.

Case, person, number, gender/class, and other nominal morphology glosses:

Long format for phi-agreement: 3PLF.ERG for 3rd person plural feminine ergative

Short format for Basque, Chinook, Georgian phi-agreement: 3pfE

Short format for nominal case: N, A, D, E for NOM, ABS/ACC, DAT, ERG

ABS, A	absolutive
ACC, A	accusative
ADS	adessive
ALL	allative
ALL	allative
DAT, D	dative
ERG, E	ergative
ESS	essive
GEN	genitive; the unique genitive clitic of Romance
INS	inessive
INSTR	instrumental
LOC	locative; the unique locative clitic of Romance
OBL	oblique
1, 2, 3	person
INCL	inclusive
EXCL	exclusive
DU, du	dual
SG, s	singular
PL, p	plural
AN	animate
INAN	inanimate
F, f	feminine

M, m	masculine
N, n	neuter
CONTR	contrastive
DFLT	default agreement
EMPH	emphatic
EXPL	expletive
OBV	obviative
PROX	proximate
REFL	reflexive
SE	<i>se</i> clitic (Romance and Slavic)
SE(INH)	inherent <i>se</i>
EA	transitive subject (external argument)
O, OBJ	transitive object
S	intransitive (unaccusative) subject
IO	indirect and/or applicative object
SU	subject

Verbal and clausal morphology glosses

AOR	aorist
AUX	auxiliary root (Basque)
CAUS	causative
CJ	conjunct (Algonquian)
COND	conditional
DIR	direct (in person-hierarchy interactions)
FAC	factive
FUT	future
IC	initial change (ablaut in Algonquian conjunct)
IMPV	imperative
INF	infinitive
INV	inverse (in person-hierarchy interactions)
NEG	negation
OBLIG	obligative aspect (Arizona Tewa)
OPT	optative
PASS	passive
PAST	past
PERF	perfect
PROG	progressive
PV	preverb
RED	reduplication (Nahuatl)
REL	relative
RPT	remote past
SRC	source applicative (Mapudungun)

SUBJ	subjunctive
TA	transitive animate verb (Algonquian)
TS	thematic suffix (Georgian)
V, VN, VO	version, neutral version, object version (Georgian)
VNOM	verbal noun

Chapter 1

Modularity, Phi-Features, and Repairs

1.1 Introduction

This work is about the modular architecture of syntax and its adjacent components of realization and interpretation, and the phi-features shared across them. Phi-agreement phenomena in these domains lead to the following conclusions:

- A. *Modularity*: Phi-features and operations over them support the modular organization of language. Syntax, realization at PF, and interpretation at LF involve modules distinct in their computational character and information types, and narrowly restricted in their interaction.
- B. *Phi-features*: Phi-features are among the primitives of syntax, realization, and interpretation, and thus a window on the character and interactions of these modules. In syntax, phi-features and operations over them are distinct from those of both PF and LF.
- C. *Globality*: There exists a mechanism to form syntactic dependencies as a last-resort response to licensing requirements. In the terms of the Minimalist Program, it is an interface operation that adds an uninterpretable feature to the numeration if needed for Full Interpretation. Modular architecture imposes narrow limits on its scope.

This introductory chapter discusses these conclusions A–C one per section, but some of their themes may first be sketched. Consider the French paradigm in (1). An unfocussed pronominal object must ordinarily be a clitic (*italics*), both dative and accusative. The dative clitic *vous* in (1)a cannot be replaced either by a strong pronoun, (1)b, nor by a locative clitic, (1)c. However, when the accusative clitic is 1st/2nd person or the reflexive *se*, a dative clitic is impossible, (2)a. Then and only then, the indirect object may appear as a strong dative pronoun (2)b (underlined), or in some varieties signalled by [¥], as a locative clitic (2)c.

The emergence of a strong pronoun or a locative clitic for a dative clitic is no automatic response to impossible clitic combinations, no coercion into a new function due to the unavailability of an expression. It is reserved to the very specific context (2), which may be described as a [+ person] accusative combining with an applicative dative.

In the dimensions of impossibility, reparability, and irreparability, these French paradigms find analogues elsewhere and will be unified with them in the mechanisms of both constraint and repair. The dialectal Basque paradigm in (4) illustrates the similarity and yet also the differences confronting unification. The subject of the unaccusative psych-verb is absolutive and its experiencer is dative, in both case and agreement. The combination of a dative + 1st/2nd person absolutive is impossible. Just then, the subject becomes ergative. The agreement and case of the clause appears to ‘transitivize’ in order to license 1st/2nd person. That is precisely the analysis it will be given, subsuming both this phenomenon, and the ergative and accusative ‘dependent Case’ of transitives generally. The ergative is unavailable to unaccusative subjects otherwise, even to fix morphological problems superficially similar to (4)b, much as (3) resembles and contrasts with (2).

- (4) a. Irati-ri_i nesk-ak/*ek_k gustatzenzai-zki_k-o_i / *di-o_i-te_k
 Irati-DAT girls-ABS/ERG liking AUX-3pA-3sD / *AUX-3sD-3pE
 Irati likes the girls.
- b. *Irati-ri_i zu_k gustatzenz_k-atzai-zki_k-o_i
 Irati-DAT you.ABS liking 2A-AUX-pA-3sD
- c. Irati-ri_i zu-k_k gustatzen di-o_i-zu_k
 Irati-DAT you-ERG liking AUX-3sD-2E
 Irati likes you.

(Tolosa Basque; Chapter 5)

In (1)/(2) and (4), there takes place an alternation between an unmarked, usual syntactic structure (dative clitic, absolutive subject) and a marked one limited to a context partly defined by phi-features (dative strong pronoun or locative clitic, ergative subject). The marked structure will be analysed as a last-resort response to the failure of the syntactic licensing of person features at the interfaces with external systems, a ‘repair’. It will be an interface algorithm set within a theory of modularity that strongly separates syntax, realization, and interpretation. From modularity will follow the limitations of the repair, among them the invisibility of morpho(phono)logical and interpretive problems that arise within the syntax-external modules, and the narrow bounds of its effect on the module of syntax. In contrast to it will stand the better-known mechanisms that manipulate phi-features within these modules, such Agree in syntax, with a different computational character, access to different information, and blind to interface failures.

These conclusions are developed through the following chapters:

- **Chapter 1:** Introduction to modularity, phi-features and their interpretability, and repair or last-resort mechanisms.
- **Chapter 2:** The modular architecture of syntax and realizational morphology, giving each its ‘modular signature’, and the character of phi-feature phenomena in morphology.
- **Chapter 3:** Phi-features and phi-agreement in syntax, examined through *person hierarchy interactions* in Ojibwa, Mapudungun, and Arizona Tewa.
- **Chapter 4:** The person hierarchy interaction of (1)/(2) in French, or the *Person Case Constraint* and its repair, their syntactic character, and the limitation of the repair to the constraint.
- **Chapter 5:** Theory of the Person Case Constraint and its repairs, subsuming (1)/(2) and (4) as well as the theory of dependent Case (ergative and absolutive), across French, Basque, Chinook, Finnish, and Georgian.
- **Chapter 6:** The autonomy of syntactic from interpretive phi-features.

1.2 Modular Architectures

In syntax and its adjacent modules of realization and interpretation, different mechanisms see and operate on phi-features. Phi-features stand out as an alphabet shared across the modules. Through them, the distinctive character of each module may be discerned in the character of its phi-feature phenomena, and the interpretability of the output of one module to another investigated.

The *modularity hypothesis* in (5) is a proposal about the architecture of human cognition:

- (5) *Modularity hypothesis*: cognition is organized into modules that are characterized by the following properties, their *modular signature*:
- a. partly different **information types (domain specificity)**
(e.g. syntactic vs. phonological features)
 - b. partly different **mechanisms/principles**
(e.g. unbounded hierarchical vs. linearly adjacent dependencies)
 - c. partial **encapsulation** from (inaccessibility to) other modules
(e.g. phonology does not look into syntax and change an intermediate computation or an intermediate representation)

The hypothesis admits a range of executions that differ in the type and degree of uniqueness and autonomy of the modules. It characterizes the way cognition functions, without commitments to the neurological localisability or innate character of modules. It is applicable to a variety of cognitive domains, without asserting the nonexistence of nonmodular systems. The formulation in (5) is suggested by much recent inquiry, notably Chomsky (1980), Marr (1982), Pinker (1994), Jackendoff (2002), Coltheart (1999), Sperber (2002), Barrett

(2005), Barrett and Kurzban (2006), and the articles in Carruthers et al. (2005, 2007). These build on but also differentiate themselves from Fodor's (1983) pioneering proposal where modules are furthermore innately specified, fast-and-automatic, neurologically localisable input transducers. A brief look at modularity in another cognitive domain provides a perspective for its manifestations in language.

Low-level vision has been a paradigm case of modularity. Pylyshyn (1999) presents an overview highlighting its high degree of uniqueness and autonomy from the "central" cognitive system of goals, beliefs, and utilities (cf. also Raftopoulos 2001). These characteristics of vision may be illustrated through visual illusions such as those in Fig. 1.1. In the Kanisza rectangle, interrupted contours are automatically completed to build the percepts of a foregrounded rectangle and four occluded circles, although the image can reflect a scene without corresponding objects. In the Penrose triangle, the spatial relationships between any two bars are locally computed from their joints, and then maintained when the bars are all assembled into a single physically impossible object. In the Müller-Lyer illusion, a line terminating in arrows going inward $>-<$ is perceived as longer than another of equal length delimited by arrows going outward $<->$.

The algorithms responsible for the illusions are dedicated mechanisms of the vision module.¹ They give fast and useful results in the usual human visual environment, their 'ecological niche', but they are thwarted in the unusual context of the illusions. Underlying the Müller-Lyer illusion seems to be an algorithm that allows for the perception of rectangular objects in perspective, such as the floor of a room in Fig. 1.2. In its 2D projection on the retina, the near side $a-b$ parallel to the viewer is longer than the remote side $c-d$, despite having the same length in the real object. To recover the true relationship, the near side $a-b$ must be shorted or the far side $c-d$ lengthened. The sides of the room that meet $a-b$, namely $a-c$ and $b-d$, form the upper half of an outward arrow $<$, and

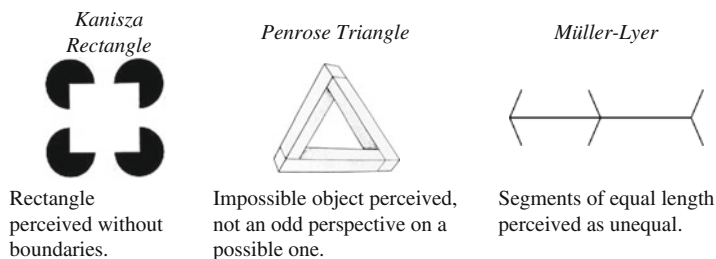


Fig. 1.1 Visual illusions

¹Gregory (1997) reviews this perspective on illusions, including the classical explanation of the Müller-Lyer illusion; see Palmer (1999: 7.1.2), Eagleman (2001) for supplementary and complementary overviews.

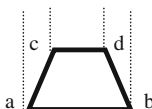


Fig. 1.2 Source of the Müller-Lyer illusion

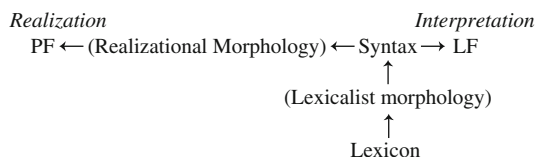
apparently such joints automatically trigger perceptual shortening. Inversely, on meeting the segments $c-d$, $a-c$ and $b-d$ form the lower half of an inward arrow, and such joints trigger lengthening. In the Müller-Lyer illusion, the shortening and lengthening simply occur even when the larger context is absent. The algorithm operates in the local context of the joints.

Strikingly, these algorithms are blind to knowledge outside the vision module. Knowing that the two lines of the Müller-Lyer illusion are of the same length does not affect the illusion. The Penrose triangle is quickly judged impossible, yet perceived. A rather odd real object can be constructed that presents the 2D profile of the Penrose triangle when viewed from a certain angle, by dint of partial occlusions, yet acquaintance with it does not affect the perception of the impossible triangle. It is mandatory. It is not particularly fast, and similar images (Escher drawings) are perceived far more slowly, giving cognition time to eliminate the illusion as impossible – yet it does not. The perceptual mechanisms underlying the illusions are limited to the information in the image (domain-specific) and impenetrable to other mental systems like knowledge of geometry (encapsulation). In Pylyshyn's (1999) review of other evidence, low-level vision is generally encapsulated from external cognitive systems, although there exist narrow channels of control through attention modulation.

Low-level vision is a good example of a highly distinctive and autonomous computational component with narrowly defined input and output pathways, fitting Fodor's (1983) model of modularity. Other proposals have explored weaker models for other cognitive domains (see the citations below (5)), among them the language faculty. The Fodorian modules are containers whose envelope has narrow input and output channels, but otherwise encapsulates its interior from external operations and information. The classical Y/T-model in (6) conceptualizes the modularity of syntax in this manner. Syntax has its own mechanisms or principles (Move, c-command, ...) and information (theta-roles, Case, ...). Its sole input is the lexicon, or the morphology module in lexicalist approaches. It outputs to the external systems of realization, PF, and interpretation, LF, but does not see within them, and they do not affect it. These systems are modules. Syntax and lexicalist morphology might both be generative, recursive, pieces-based assembly systems, but they differ in the information they see such as class features or phonology, in mechanisms such as movement, and in their interaction that is restricted to morphology providing the atoms of syntax (cf. Di Sciullo and Williams 1986). Outside the

systems in (6) are others that use their output, with perhaps quite different properties.²

(6) Y/T-model



This simple model may be enriched in various ways. Modules may be stacked hierarchically, inheriting information and mechanisms from other modules. Syntax and morphology may supervene on a shared computational substrate, yet put it to use and add to it differently (Ackema and Neeleman 2007). In a standard module, its mechanisms only see information from the outside if translated or tagged for or fed to them by an interface at a specific point in their operation. However, the interface may be made continuous, bidirectional, and constituted of transformations complex enough to be modules themselves (Jackendoff 2002, Ackema and Neeleman 2003, 2007). A step up are ‘super-modules’ that take another module as input, rather than shunt object to and from it, and directly affect its internal mechanisms or information or intermediate representations (Barrett 2005; cf. Reinhart 2006 for interpretation affecting syntactic locality).

Interfaces modulate the envelope of a standard modules, rendering visible to its mechanisms information from the outside. Remove the envelope, and the veil between modules falls down, yet may emerge in other ways. In Distributed Morphology, the same computation manipulates objects of both syntactic and morphophonological types, with different results according to the type. The type of an object is preserved by it, so that objects of one type are transformed into others of the same type. This type preservation intrinsically partitions computations into two non-interacting chains of operations, each chain manipulating objects of either syntactic or morphophonological type only, not both. The chains are linked by a translation operation, Vocabulary Insertion, that changes an object from syntactic to morphophonological type (Embick and Noyer 2001, 2007). Type-sensitivity and type-preservation make of each chain a domain-specific, encapsulated module, and the translation is the interface between them. More generally, encapsulation and domain-specificity may be construed as derivatory and nuanceable consequences of interactions due to the

²I speak of PF and LF as two modules. Each may involve discrete modules, for instance realizational morphophonology and phonology at PF, thematic and quantificational components at LF. Similarly left open is their generative or interpretive character. Chapter 2.1 returns to these issues at PF; see further Chomsky (1995: 4.1, 2000a: 3.1), Jackendoff (2002).

information type(s) that an operation takes from and returns to a ‘blackboard’ shared by all operations (see the citations below (5); Bird and Klein 1994; Tseng 2005 on syntax-morphophonology).

Thus what a module is and how it emerges varies within broadly modular architectures, from Fodorian near-black-boxes to patterns of interaction in a common pool of mechanisms and information types. The right theory is partly indicated by the ‘strength’ of modularity on the criteria in (5). The subsystems of Government and Binding syntax, X-bar, θ , Case, binding, bounding, control, and government theories or ‘modules’, are isolable as distinct principles over coherent aspects of syntactic objects, but free to interact and refer to the same information, although aspects of modularity do sometimes emerge (Rezac 2010c). At the coarser grain of the ‘mental organs’ of syntax, PF and LF, modularity is systematic and pervasive, so a stronger theory of it is called for.

A strong modularity is above all evident and agreed on in the relationship of syntax and realization, perhaps because realization is more easily inspected than interpretation, perhaps because syntax is simply more of a module with respect to realization than to certain aspects of meaning. Particularly striking is the contrast of syntax and realizational morphology. It is developed in Chapter 2 in reference to phenomena that refer to and manipulate phi-features. Both syntax and realizational morphology can be viewed as recursively assembling pieces. Yet realizational morphology and not syntax pays attention to phonology (a difference in information types (5)a), ignores syntactic atoms and islands and principles (a difference in mechanisms (5)b), and does not interact with syntax or LF, which are encapsulated from it ((5)c).

Illustrations of these differences are in (7)–(10). The mechanisms that attach *-en* in (7), position *fuckin* in (8), or chose between *-er* and *more* in (8), care about segmental and prosodic phonology, as syntactic movement does not. The infixation in (8) breaks up syntactic atoms, as syntax cannot. The resulting arrangements of items are invisible to syntax and interpretation. The meaning of *fuckin* is the same before the second or third syllable. More strikingly in the ‘bracketing paradox’ (10), the suffix *-er* attaches to *happy*, but the comparative meaning that it expresses scopes over whole adjective *unhappy*. Finally, modularity also prevents any problems in realization from affecting syntax or interpretation. English speakers tend to have no past participle for *stride* (11), but that does not render available otherwise impossible syntactic structures or interpretations.

- (7) a. damp, black, white, red → to damp-en, blacken, white, redden
 b. cool, green, blue, grey → *to cool-en, *greenen, *bluen, *greyen
 (-en after obstruents, Carstairs-McCarthy 1998: 144)
- (8) a. AlabAma → A(*-fuckin-)la(-fuckin-)bAma
 b. DubrOvnik → Du(-fuckin-)brOv(*-fuckin-)nik
 (-fuckin- before stressed syllable, McCarthy 1982)

- (9) Comparative *-er/more* sensitive to phonology:
 a. quick + comparative → quick-*er* / **more* quick ('short' adjectives)
 b. rapid + comparative → *rapid-*er* / *more* rapid ('long' adjectives)
 (see Chapter 2)
- (10) Bracketing paradox: *unhappier*
 a. Meaning: DEG + *unhappy* ('less happy'), *DEG + *happy* (*'not happier').
 b. Morphology: *-er* attaches to short adjective *happy*, not long *unhappy*.
 (see Chapter 2)
- (11) She has walk-ed/*stride + X over the desert for thirty years.
 (see Chapter 2)

These characteristics of the relationship between syntax and realizational morphology are pervasive, and the hypothesis of a syntax distinct from and autonomous of it is widely shared among different approaches and frameworks.

On the meaning side, some aspects of interpretation are also persuasively unrelated to syntax. Chomsky (1995: 237) gives as example the co-construal in (12) that relates *John* and the *fool* with no sensitivity to the constraints on syntactic dependencies.

- (12) As far as John_i is concerned, I doubt that anyone will ever want to talk to the fool_i again.

Opinion is more diverse about the interaction of syntax with other thematic and logical aspects of meaning. The inquiry is the same as for realization, but the evidence less obvious. On the one hand, a great many syntactic dependencies affect and can be motivated by interpretation, such as the movement of a *wh*-word to scope over a question (cf. Brody 1995; Rizzi 1997, 2006, but Culicover and Jackendoff 1999, 2005). On the other hand, A-movement seems to have no such motivation, for it can apply to idiom chunks like *much* in (13), apparently with no content that pronouns, quantification, topicalization, existential assertion or other tools can detect (Chapter 6). Syntax moves elements that are interpretively inert. In the domain of principles or mechanisms, movement and binding seem to share some, such as c-command, and differ on others, such as the island constraints (14). Bracketing paradoxes akin to (10) also have been observed. In (15)a, *occasional* modifies the clause rather than the subject, and in (15)b the main verb may be a modifier of the secondary predicate (Jackendoff 2002). However, the evidence dissolves if such mismatches are only apparent, due to covert syntactic structure and movement. Finally, there will be seen in Chapter 4 interpretive gaps invisible to syntax, but not as many nor as clear as in realization.

- (13) Much_i is expected to be made ____i of the inscription, without much / *it_i / *its_i / *PRO_i being made ___ of the surrounding design.

- (14) a. How many tribes_i were there about which Widsith knew a story that named [both it_i and its_i chieftain]?
 b. *Which tribe_i did Widsith name [both *t_i* and its_i chieftain]]?
 cf. c. Which tribe_i did Widsith name *t_i* [along with its_i chieftain]]?
- (15) a. An occasional sailor walked into the bar.
 b. Clive cooked the pot black. ('Clive made the pot black by cooking')

Phi-features will prove enlightening in contributing mismatches between syntax and interpretation in [Chapter 6](#). Sometimes syntactic phi-features are not interpretive ones. The differences support a syntax autonomous of meaning, along the lines glimpsed in idiom chunk A-movement, but perhaps more robustly.

Thus the linguistic phenomena referring to and manipulating phi-features argue for a strongly modular architecture of grammar, with a syntax distinct from and autonomous of realization in [Chapter 2](#) and interpretation in [Chapter 6](#). The intervening chapters focus on phi-features in the syntax and at its interfaces.

1.3 Phi-features Across Modules

Phi-features appear to be an alphabet shared across the systems of realization, interpretation, and syntax. This is a striking fact about them, if true. Interpretation pays no attention to segmental phonology, nor segmental phonology to theta-roles and scope. Each exists in a module, encapsulated from others.

The fundamental domains in which phi-features are manifest are interpretation and realization. The person, number and gender of an argument affect its interpretation, including binding, co-construal, and entailment in (16). These indicate relationships among phi-features like those in (17), where *I* + *x* bears a relationship to *we* that it does not to *you* or *they*.

- (16) a. Every woman_i turned to the page where her/*his_i judgement was cited.
 b. A woman_i arrived at the campsite. She/*he_i kindled a fire.
 c. A woman_i deciphered the inscription.
 → There is someone such that she_i deciphered the inscription.
 *→ There is someone such that he_i deciphered the inscription.
- (17) a. We know. → I and someone else know.
 b. Because they_i know me_k, Jane considers us/*them/*you_{i+k} friends.

Parallel phi-featural distinctions and relationships are indicated by realization. Pronoun and agreement morphology elaborates the same primitives as needed for interpretation, such as [speaker], [addressee], [plural], in the same relationships. The morphological decomposition of the pronoun for *we* 'I and someone' may include the morpheme dedicated to *I* but not *you*, as in the

Chinese pronoun *wǒ-men* ‘we’, lit. ‘I-PL’, or the Ainu verbal agreement affix *a-* ‘I/we’. On the basis of such systematic correspondences between interpretive and realizational phi-features, it is usually assumed that a *common phi-alphabet* is shared across interpretation, realization, and syntax. Chapter 6 returns to it and some mismatches.

The phi-features of an argument may be cross-coded elsewhere than on it, as in subject-verb agreement (18), and then the question of their interpretation and interpretability arise. A widespread position is that agreement phi-features are not interpreted and indeed uninterpretable. In simple cases like (18), it is hard to tell. Agreement here is not interpreted as a pronoun, because it does not count as an argument, as might be maintained in *pro*-drop languages (Bresnan and Mchombo 1987, Jelinek 1984). It might be thought to have other aspects of pronominal semantics (Chomsky 1995: 4.4.5). However, every tool indicates absence of the interpretable content of even the poorest pronouns, including failure to bind anaphora in (19) and to license floating quantifiers in (20).³

- (18) a. (Some goats)_i seem/seems to be in the wood._i
 b. There seem to be some goats in the wood.
 c. In the wood seem to be some goats.
- (19) a. Some linguists_i seem.PL_i to **each other**_i [_i to have been given good job offers].
 b. *There seem.PL_i to **each other**_i [to have been some linguists given good job offers].
- (Lasnik 1999: 138)
- (20) a. The Niflungs_i had_i (**all**) gathered around Gunnar.
 b. Around Gunnar had (***all**) gathered (all) the Niflungs.

Instead of being pronoun-like, agreement might have just the interpretation of phi-features, for instance to introduce presuppositions about the argument on which they occur (cf. Bresnan and Mchombo 1987, Barlow 1988, Wechsler and Zlatić 2000, Winter 2002). The [feminine] gender of *girl* introduces the presupposition that the argument of the predicate *girl* in *a/the girl* is feminine,

³Inertness of agreement for binding has been shown for English (Den Dikken 1995a; Lasnik 1999), Icelandic (Jónsson 1996: 206), Italian (Cardinaletti 1997: 526 note 7; Chomsky 2000a: 147 note 71), and Tsez (Polinsky and Potsdam 2001: 620, 2006: 178), which differ in *pro*-drop, expletives, and the definiteness effect. A similarly wide swath is cut by the invisibility of agreement for floating quantifiers (Rezac 2010b). Chomsky (1995: 272–276) and Cardinaletti (1997) had proposed that agreement suffices to control PRO, but the correlation has not held up in the core languages for which it was claimed, e.g. Lasnik (1999), Lasnik and Hendrick (2003) for English, Perlmutter (1983: 143–150) for Italian and Northern Italian dialects, Legendre (1990: 116–124) for French (see Rezac 2004a: 226–228 for an overview). From the behaviour of agreement must be sharply distinguished the behaviour of the silent pronouns of *pro*-drop systems, whose agreement can be only examined as such when the position of *pro* is known.

and likewise the [feminine] agreement of *přišl-a* ‘came-3SGF’ in Czech would presuppose that its argument is feminine. This simple story will fail for agreement with non-arguments, such as that of raising verbs in (19) and (21). The semantics can be made to come out right by ensuring that agreement contributes its phi-features to the right discourse referent, but then the parallelism between how phi-features are interpreted in agreement and on arguments vanishes. More egregious are (22), where the phi-features of the absolutive *bread* appear also on the adverb and the indirect object, and (23), where verbs agree with the *wh*-word that crosses them.

- (21) a. There **tend_i** [to be **tabs_i** kept on celebrities by the FBI].
 b. There **look_i**/*looks as if there **are_i problems_i** with this analysis.
 ((a) cf. Bresnan 1982: 77, (b) Groat 1997: 122)
- (22) buwa-mu b-ez diṭa-b-u **ṣ_oalli** a-b-u
 mother(II)-ERG **III**-me.DAT quickly-**III**-SG bread(**III**).ABS baked-**III**-SG
 Mother (A) baked me (Ad) the bread (Fa) quickly.
 (Archi, Kibrik 1979: 68)
- (23) a. Lucie knows the **people_i** who_i John_k **think_i**/thinks_k *t_i* it is surprising to *t_i*
 that Bill_z makes_z/*make_i money.
 b. Where are the **boys_i** who_i Tom **think(s)** *t_i* Dick believe(s) *t_i* Harry
expect(s) *t_i* to be late?
 (Boston English, Kimball and Aissen 1971: 246)

The issues raised by agreement with the target’s nonarguments are brought to a point by (24), discussed in Chapter 2. In Spanish, the 3rd person masculine accusative clitic is singular *lo* and plural *los*, and the 3rd person dative clitic is singular *le* and plural *les*. However when 3PL.DAT and 3SG.ACC are combined in the same clitic cluster, the result is not the transparent *les lo*. Rather, *les* is replaced by the default clitic *se*, and in certain varieties its phi-features surface on the accusative clitic, so that *los* appears in place of *lo*. If this is the right view of things, the phi-features of the surface form *los* are *uninterpreted*, since *los* remains singular for all interpretive purposes. Under the further assumption that an argument’s interpretable phi-features are not deleted or contradicted by others, the phi-features of the dative are simply *uninterpretable* on the accusative.

- (24) El libro, a ellos, ¿quién **se los** prestó?
 the book, to them, who SE 3PL.ACC lent.3SG
 The book, who lent it (3SGM.ACC *lo*) to **them** (3PL.DAT *les*).
 (Spanish, Bonet 1995: 634)

All these examples belong to the broad domain of *phi-agreement* (Moravcik 1978, Barlow 1988, Wechsler and Zlatić 2000, Corbett 2003). It is the cross-coding of an argument’s phi-features on another element, (25):

- (25) *Phi-agreement (general)*: the structure, form, or position of α that obtains in virtue of the phi-features of an argument β .

Under (25) fall cross-codings of the same abstract character as subject-verb agreement, but very different in appearance. In canonical subject-verb agreement, the phi-features of the subject are cross-coded outside the subject on an agreement target like T + V, and there they surface through morphology dedicated to expressing phi-features. In the repair paradigm (1)/(2), the person of the direct object determines whether the indirect object is a dative clitic or a strong pronoun in a PP headed by *à*. The expression of the indirect object thus cross-codes the person of the direct object. This differs from more canonical agreement because the direct object's phi-features do not control morphology dedicated to phi-features, but it is nevertheless agreement of the form, structure and/or position of an element (the indirect object) with the person of an argument (the direct object). Naturally, the underlying mechanism might pass through other elements, say a clausal functional head (probe) that drives cliticization. These must still refer to and thus agree with the person of the direct object.⁴ In phi-agreement then, the phi-features of an argument are cross-referenced somewhere outside it, where they appear not to be interpreted or interpretable. They are uninterpretable occurrences of phi-features.

Uninterpretable phenomena should not occur at LF. At PF, they are pervasive (cf. (7)–(11)). On the modular architecture of the Y/T- and related models, PF is invisible to syntax and interpretation. Phi-agreement there is by definition uninterpretable. On the seminal analysis of Bonet (1991), the agreement in (24) of the accusative clitic with the dative clitic occurs at PF, and other work on similar phenomena concurs. It proposes PF mechanisms that manipulate phi-features. Chapter 2 studies their properties and develops the key differences with the phi-manipulation expected of syntax.

In syntax, the existence of neither uninterpretable nor uninterpreted phenomena is a given. Frameworks within the broad sweep of the Minimalist Program develop both the position that syntactic dependencies always subserve interpretive needs (Brody 1995, cf. Rizzi 2006), and its contrary of a syntax wholly autonomous of interpretation (Culicover and Jackendoff 1999, 2005, Jackendoff 2002). Among the syntactic dependencies more clearly not driven by interpretive needs is the A-movement discussed for (13). Its trigger ought not to belong to interpretation, and so is uninterpretable at LF.

The Minimalist Program of Chomsky (2000a, 2001 et seq.) supposes that phi-agreement of the verb and subject in English is syntactic but uninterpretable in this sense, for the reasons discussed from (18)–(23) above. T has as part of its lexically specified content a set of unvalued phi-features, illegible to interpretation both in virtue of the absence of values and their presence on a non-nominal.

⁴The mechanism that does so in Chapter 5 will be phi-feature relativized locality.

The operation Agree values them from the interpretable phi-features of a nominal, and deletes them. They never reach LF. The same treatment is accorded to structural Case. In (26), the case morphology of *several boats* alternates between nominative and accusative in virtue of the active or passive voice of the verb in the higher clause, and so cross-codes or agrees with its voice: accusative reflects v_{active} , nominative absence of v_{active} and agreement with T. These relationships have no interpretive correlates. Thematic meaning, scope, binding, all are the same for both nominative and accusative, when movement is controlled for, as far as may be told. This is necessarily so for contentless idiom chunks that yet obligatorily participate in both agreement and Case assignment. Case is an unvalued feature valued by Agree and deleted prior to LF. (Chapter 5).⁵

- (26) a. Hún taldi [hafa verið keypta
 she believed.3SG to.have been bought.MPL.ACC
einhverjir báta].
 several boats(M).PL.ACC
- b. Það voru taldir [hafa verið keyptir
 there were.3PL believed.MPL.NOM to.have been bought.MPL.NOM
einhverjir bátar].
 several boats(M).PL.NOM
- (Icelandic, Sigurðsson 1991: 355f.)

This proposal posits uninterpretable requirements behind phi-agreement and Case that need have no interpretable consequences. In Chomsky (1995), it was not so. Phi-agreement and Case were also established through uninterpretable phi-features on T/ v and Case features on nominals. However, the interpretable phi-features of a nominal were moved to T/ v to license the deletion of the uninterpretable ones. One factor in the reconstrual of the mechanism through uninterpretable features alone is the absence of detectable consequences to agreement, as in (19) (Chomsky 2000a: 119, 146 note 71). Phi-agreement and Case are interpretively inert, unless accompanied by movement of interpretable material.

Chomsky's work lays bare the ontological strangeness of such uninterpretable features and dependencies of syntax in the Minimalist Program (e.g. Chomsky 2000a, b). The program proposes that the content of lexical items is motivated by their role in the syntax-external systems of interpretation at LF and realization at PF, the *Interpretability Condition* (27)a, and that syntax arranges lexical items into structures to meet the legibility requirements of these systems, *Full Interpretation* (27)b, without introducing features of its own, (27)c (see Section 5.4).

⁵As with agreement, the issue is not the possibility of a semantics for case that happens to have no detectable consequences, for instance as arity-reducers, combined with a suitable semantics for raising and ECM verbs (see Gutierrez-Rexach 2000).

- (27) a. *Full Interpretation*: Objects submitted by syntax to external systems must be fully legible to them, both features and their arrangements.
 b. *Interpretability Condition*: Lexical items have no features other than those interpreted at the interfaces, properties of sound and meaning.
 c. *Inclusiveness Condition*: Syntax does not introduce new features like indices or deletion marks.

Uninterpretable features are a purely syntax-internal device beyond these proposals. Phi-agreement and Case assignment do not occur to meet interpretive needs, nor need they be realized (as on nouns and past tense verbs in English). Yet they appear to be syntactic dependencies. Their character is that of phrase-structurally unbounded dependencies subject to syntactic constraints like locality, illustrated in the remote agreement in (28) (and (19), (21)). They are also part of the licensing conditions on syntactic structures. In (29), the need of DPs to bear Case rules out *five and seven* when another DP, *her*, is closer to the matrix Case assigner and absorbs the only available Case (see Section 5.4, 5.9).

- (28) a. There seem_i/*seems_j to have been several students_i awarded a book_j.
 b. There seems_i/*seem_j to have been one student_i awarded several books_j.
 c. There seems_i/*seem_j [to the watchers_j] to have been a fish_i caught.
 d. In the lake_j were_i/*was_j caught several fish_i.
 (29) a. They showed her that **five and seven** are primes.
 b. They showed (*her) **five and seven** to be primes.
 c. **Five and seven** were shown (*her) *t* to be primes.
 d. There were shown (*her) to be **five and seven** among the primes.

The oddity of phi-agreement and Case would vanish if they belonged to PF. Their uninterpretability is a consequence of modular architecture. Marantz (2000) proposes to eliminate phi-agreement and Case from syntax, and implements them in a post-syntactic realizational morphology (cf. Bobaljik 2008, Kratzer 2009). To this move accrues the commitment to enrich realizational morphology with certain core properties of syntax. Among them are those seen in (28): dependencies across phrase-structurally unbounded domains, sensitive to c-command among noncontiguous constituents, and syntax-like locality conditions. These properties are among the touchstones that place phi-agreement and Case in syntax, for they characterize also movement, which is visible to interpretation. They are not the properties of realizational morphology, as will be seen in Chapter 2 through morphological phi-phenomena like that in (24). The postulation of a morphology component with the necessary syntax-like character would lift powerful explanatory constraints. It is to be countenanced only if it has a powerful explanatory recompense. The correct prediction of syntactic and interpretive inertness for all phi-agreement and

Case might suffice, if they and their uninterpretable features can thereby be eliminated from syntax, and the tension they bring to the Minimalist Program resolved.⁶

However, an extra-syntactic theory of phi-agreement and Case is belied by cases where they do have consequences for syntax and interpretation, despite their uninterpretability. Chapters 3 and 4 develop the argument. It comes from interactions between two DPs according to each other's person features, first between the transitive subject and object in Ojibwa, Mapudungun, and Arizona Tewa, then from the Person Case Constraint of (1)/(2) in French. Such 'person hierarchy' interactions involve phi-agreement in the sense of (25): the form or position of an element – agreement prefix, case-marking, clitic/strong form – depends on phi-features outside itself and uninterpretable on it, yet affects syntax and interpretation, often in minimal contrast with superficially similar phenomena in morphology. Thus uninterpretable phi-features are among syntactic primitives and participate in the formation of syntactic dependencies.⁷

The Minimalist tension then remains. There are syntactic features and their dependencies illegible to interpretation at LF, and arguably realization at PF. The program proposes that uninterpretable features form syntactic dependencies because they need to be eliminated for Full Interpretation:⁸

⁶Marantz's (2000) proposal is made principally on grounds other than the interpretive inertness of phi-agreement and Case, although it follows, and is picked up on by work such as Bobaljik (2008), Kratzer (2009). These grounds are rather the apparent divorce of A-movement and subject licensing from phi-agreement and Case (Sigurðsson 1991, 2002, Freidin and Sprouse 1991, Schütze 1993, 1997, Frampton and Gutmann 1999, Chomsky 2000a, Harley 1995), and the character of 'dependent' Case that appears not to fit the profile of syntactic dependencies (see Section 5.5). Marantz's distinctively nonsyntactic morphology is not to be identified with the possibility that *regular* syntactic computation continues after the spell-out to LF, before or after Vocabulary Insertion (Sauerland and Elbourne 2002; Embick and Noyer 2001, 2007).

⁷Recent work already suggests that phi-Agree may matter for the syntactic licensing of *sig/se*-type anaphora, in contrast to the interpretive licensing needed in (19), (20) (Reuland 2006, Chomsky 2008: 142, section 6.3; cf. perhaps Lavine and Freidin 2002: 280 note 33, Bailyn 2004: 18–22 esp. note 22). Other apparent effects of agreement are presently formulable in terms of associated overt or covert movement, which is not to say that it is the right analysis; e.g. the suspension of anti-agreement for anaphora binding (Richards 2001: 147ff.), the correlation of participle agreement with old-new information (Adger 1994; Déprez 1998).

⁸The account is that of Chomsky (2000a, 2001: 3–5, et seq.), but little changed from Chomsky (1995), save for absence of movement of interpretable content to check uninterpretable features, and the construal of uninterpretable features as unvalued, which renders them illegible to PF as well as LF. Chomsky uses *interpretability* in the sense of both *legibility to PF/LF* (2000a: 95) and *legibility to LF* specifically (2000a: 102, 2001: 3). I have passed lightly over the possible motivation of phi-agreement and Case at PF; Section 5.9 returns to it.

- (30) *Full Interpretation*: Objects submitted by syntax to external modules must be fully legible by them.

An uninterpretable feature on a lexical item enters syntax as a feature-type with no value, for instance [phi:] on T. As such, it is not legible to either realization or interpretation. The operation Agree values it from a matching but valued interpretable feature type, for instance [phi: IPL] on a pronoun. The valued feature can now be realized, but still not interpreted, for it remains a phi-feature on T rather than on a nominal. Valuation is thus accompanied by deletion from the syntactic computation to LF. The failure of an unvalued feature to Agree results in an illegible syntactic object. Chomsky (2000a et seq.) proposes that the mechanism extends to all syntactic dependencies, even those motivatable by interpretation. If so, syntactic dependencies are the means to eliminate the uninterpretable features of lexical items for Full Interpretation, but uninterpretable features are a means, perhaps the means, to form dependencies that, in some cases, the syntax-external systems require. This view is extended in Chapter 5 beyond uninterpretable features on lexical items to others that arise as a dynamic response to satisfy Full Interpretation, acting to repair otherwise illegible syntactic structures.

The fixed uninterpretable phi-features of lexical items like T/V often have comprehensible sources outside the synchronic systems of realization and interpretation. The clearest are the diachronic residues of earlier interpretable states of affairs, for instances pronouns that remained as agreement markers when their pronominal status was lost and taken over by other elements (see Fuß 2005). It need not have been the case that diachronic residue is acquirable as uninterpretable features visible to syntax, as phi-probes in this case, and in other cases even as the phi-features of arguments in the ‘mismatches’ studied in Chapter 6. It is so however, perhaps as consequence of the same procedure that acquires interpretable features, and ultimately explicable in such terms (cf. Bever 2009 on the uninterpretable EPP requirement).

There are other sources of uninterpretable phi-features. Some may lie outside the linguistic systems considered here. These must be kept in mind, even if only as background and contrast. Outside the ‘core’ of syntax, PF, and LF, the systems of ‘performance’ put their output to use. Sometimes these have an unmistakeable profile, as when meaning and phonology interact to give slips of the tongue like *compensation prize* for *consolation prize* (Dell and Reich 1981, Griffin and Ferreira 2006). Sometimes they passably mimic the core, as when production creates ungrammatical ‘intrusive’ resumptive pronouns in (31) (Ferreira and Swets 2005, Alexopoulou and Keller 2007, but cf. Safir 1984, 1986), or when prescriptive rules impose *whom* for *who* in (32) (Lasnik and Sobin 2000, but cf. Kayne 1984).

- (31) [[Any fact]_i [which Mary didn’t like **its**_i consequences]] she would ignore.
 (32) The man who_i/**whom**_i I believe *t*_i has left.

Phi-features are accessed and manipulated by the performance systems, it seems, like many other aspects of linguistic structure. Phillips, Wagers, and Lau (forthcoming) review ‘grammatical illusions’, ungrammatical but regularly produced structures. Among them are ‘attractions’ of the phi-features of the verb to the underlined controllers in (33). However, (33)a has also been argued to belong to syntax from consequences for scope (Den Dikken 2001). Surely (33)b does so for some, to go by grammaticality judgments, locality constraints (Kimball and Aissen 1971, Kayne 2000: 190, Baker 2008: 75 f.), and cross-linguistic parallels (Bruening 2001). One analysis does not exclude the other. One generation’s performance errors might be acquired as phi-features for the core system of the next. Each system should impose its modular profile, its computational, informational, and interactional signature, by which it may be detected.

- (33) a. (*)[The key to the **cabinets**_{PL}]_{SG} **are**_{PL} on the table.
 b. (*)the **runners**_{PL} [who_{PL} the doctor_{SG} **see**_{PL} each morning *t*_{who} always wave.]

Similar remarks hold for other phi-related aspects of the performance systems, such as the pragmatic salience of 1st/2nd person (Tasmowski 1985, García 2001), or the prescriptive-politeness code that requires that 1st person come last in English coordinations (Kuno 2005; cf. Brown and Levinson 1987, Levinson 2005, Stivers et al. 2007). Both types of phenomena have been proposed as sources of the person hierarchy interactions discussed in Chapters 3 and 4 (cf. Heath 1991, 1998, Beck 2003). That may well be. Synchronically, the system underlying a phi-feature phenomenon is expected to impose its properties. These will place the phenomena of the following chapters into the core systems, and within them, into the distinctive modules of syntax, PF, or LF, or at their interfaces.

1.4 Repairs at the Interface

By and large, the well-formedness of a syntactic structure is decided by the fixed content of lexical items. In the Minimalist Program, syntactic well-formedness is determined by the possible ways of assembling and relating lexical items in the syntax, and by the Full Interpretation requirements imposed on the outcome. These two sources comprise the licensing conditions of other frameworks, such as the X-bar and Case theory of Government and Binding. In syntax it seems particularly clear that in the general case, well-formedness is not relativizable to a given choice of lexical items or to a given target meaning, but absolute. Syntactic structures may fail in many ways, and usually there is available neither a *repair* that presses into service otherwise unavailable structures or interpretations, nor a *violation* that suspends a well-formedness condition. Syntactic examples the Coordinate Structure Constraint (34) and the Case Filter (35); extra-syntactic ones come from a prosodic (36) and a binding

constraint on pronouns (37). Violations of the constraints are impossible; the potential repairs (in bold) do not help.

- (34) a. Who set out for Pohjola __ along with Niera's son?
 b. *Who set out for Pohjola __/**he** and Niera's son?
(Coordinate Structure Constraint)
- (35) a. They showed seven_{ACC} to be a prime.
 b. *They showed her_{ACC} (***for**) seven to be a prime.
(Case Filter, (Section 5.9))
- (36) a. We bet (Kate) our book collection (*to/*for Kate).
 b. We bet (*Kate) it (***to/*for Kate**).
(Prosodic constraint on pronouns, Section 2.1)
- (37) a. Bill_i and Mary must be ashamed of him_{*i} / *himself_i / his_i behaviour.
 b. If we_{i+x} each voted for *me_i / *myself_i / ***him_i**, how come we lost?
 c. Nienor_i described them_{*i+j} / *themselves / their_{i+j} meeting to Turin_j.
 d. You_i introduced me_j to ?*us_{i+j}/*ourselves_{i+j}/***them_{i+j}**/our_{i+j} group.
(Condition B in overlapping reference, Section 4.4)

Such 'hard' ungrammaticality is the problem of unspeakable, 'ineffable' arrangements of lexical items. It suggests that syntactic well-formedness involves inviolable constraints and fixed properties of lexical items, not violable constraints or modifiable lexical properties. That is the usual perspective on syntax, shared by the core approaches of frameworks as diverse as Government and Binding, Relational Grammar, and Head-driven Phrase Structure Grammar. It is not the only perspective. Optimality Theory is a system specifically designed to permit constraint violations. Early work in the Minimalist Program entertained limited violable economy principles over both content and form, favoring most economical structures or derivations when possible, but permitting less economical ones as last resort (Chomsky 1995, Cardinaletti and Starke 1999, Krifka 1998). Subsequent inquiry revealed that some were unnecessary, incorrect, or the wrong way of looking at a phenomenon (Reinhart 1995, 2006, Chomsky 1995, 2000a, Collins 1997, Yang 1997, Jacobson 1997, Frampton and Gutmann 1999, Johnson and Lappin 1999, Potts 2002), some outside narrow syntax in realization (Pesetsky 1998), or in interpretation (Kim and Peters 1998, Fox 2000, Reinhart 2006).

Chapter 5 proposes that there is nevertheless a mechanism by which syntax may respond to the needs of Full Interpretation. Evidence for it comes from a robust cross-linguistic paradigm of repairs for phi-featural licensing requirements, including French (1)/(2) and Basque (4). In both, the usual coding of arguments is impossible in the presence of a 1st/2nd person with structural Case. In both, an otherwise impossible structure then emerges, a *repair*: a nonclitic PP for a clitic dative in (1), an ergative for an absolutive in (4), an accusative for nominative, and others still. These repairs will be analysed as the

last-resort activation of the potential phi-Agree/Case capacity of a structure, fortifying a defective to a full PP, an unaccusative to a transitive. Under it, all ‘dependent Case’, accusative and ergative, will be proposed to fall, along with other last-resort repairs.

The mechanism starts from Chomsky’s (1995, 2000a, 2001) proposals for last-resort successive-cyclic movement, and is explored under the formulation in (38).

- (38) $\Re$: An uninterpretable feature may enter the numeration only if needed for Full Interpretation of the syntactic structure built from it.

$\Re$ is a relativization of the idea that some of the content of a syntactic structure is licensed only if it has an effect on output (Chomsky 1995: 234). Modularity restricts $\Re$ to the input/output interfaces of syntax and external systems. It is an interface algorithm that can respond to illegibility at the interfaces of syntax by changing the numeration. It cannot see problems within or outside the external modules, for instance failures in the morphophonological realization of clitics or agreement, or binding conditions. It cannot affect syntactic computation itself, to add operations, relax principles, change intermediate representations, for syntax also is a closed module to it. The study of the repairs will also indicate that they are conservative of interpretable content. $\Re$ cannot add or delete it, respecting the modular inaccessibility of the lexicon. $\Re$ can only add uninterpretable features to the numeration, permitting new syntactic dependencies to form. New derivational paths may thus become available, but the ‘basic’ meaning and realization are preserved, insofar as they derive from the fixed interpretable content of lexical items and the combinatorial possibilities inherent in it. Uninterpretable features are the mechanism by which syntax can dynamically respond to the needs of Full Interpretation, while remaining autonomous of the external systems, (39):

- (39) (Some) uninterpretable features are the response of an autonomous syntax to meet Full Interpretation at the interfaces with external systems.

References

- Ackema, Peter, and Ad Neeleman. 2003. Context-sensitive spell-out. *Natural Language and Linguistic Theory* 21: 681–735.
- Ackema, Peter, and Ad Neeleman. 2007. Morphology $\neq$ syntax. In *The Oxford handbook of linguistic interfaces*, ed. Gillian Ramchand and Charles Reiss, 325–352. Oxford: Oxford University Press.
- Adger, David. 1994. Functional heads and interpretation. Doctoral dissertation, Edinburgh: University of Edinburgh.
- Alexopoulou, Theodora, and Frank Keller. 2007. Locality, cyclicity, and resumption: At the interface between the grammar and the human sentence processor. *Language* 83: 110–160.

- Bailyn, John Frederick. 2004. Generalized inversion. *Natural Language and Linguistic Theory* 22: 1–49.
- Baker, Mark. 2008. *The syntax of agreement and concord*. Cambridge: Cambridge University Press.
- Barlow, Michael. 1988. A situated theory of agreement. Doctoral dissertation, Stanford, CA: Stanford University.
- Barrett, H. Clark. 2005. Enzymatic computation and cognitive modularity. *Mind and Language* 20: 259–287.
- Barrett, H. Clark, and Robert Kurzban. 2006. Modularity in cognition: Framing the debate. *Psychological Review* 113: 628–647.
- Beck, David. 2003. Person-hierarchies and the origin of asymmetries in Totonac verbal paradigms. *Linguistic Atlantica* 23: 35–68.
- Bever, Thomas G. 2009. Remarks on the individual basis for linguistic structures. In *Of minds and language*, ed. Massimo Piattelli-Palmarini, Juan Uriagereka, and Pello Salaburu, 278–298. Oxford: Oxford University Press.
- Bird, Steven, and Ewan E. Klein. 1994. Phonological analysis in typed feature systems. *Computational Linguistics* 20: 455–491.
- Bobaljik, Jonathan David. 2008. Where's phi? In *Phi theory*, ed. Daniel Harbour, David Adger, and Susana Béjar, 295–328. Oxford: Oxford University Press.
- Bonet, Eulàlia. 1991. Morphology after syntax: Pronominal clitics in Romance. Doctoral dissertation, Cambridge, MA: MIT Press.
- Bresnan, Joan. 1982. The passive in lexical theory. In *The mental representation of grammatical relations*, ed. Joan Bresnan, 3–86. Cambridge, MA: MIT Press.
- Bresnan Joan, and Sam A. Mchombo. 1987. Topic, pronoun, and agreement in Chichewa. *Language* 63: 741–782.
- Brody, Michael. 1995. *Lexico-logical form*. Cambridge, MA: MIT Press.
- Brown, Penelope, and Stephen C. Levinson. 1987. *Politeness: Some universals in language usage*. Cambridge: Cambridge University Press.
- Bruening, Benjamin. 2001. Syntax at the edge: Cross-clausal phenomena and the syntax of Passamaquoddy. Doctoral dissertation, Cambridge, MA: MIT Press.
- Cardinaletti, Anna. 1997. Agreement and control in expletive constructions. *Linguistic Inquiry* 28: 521–533.
- Cardinaletti, Anna, and Michael Starke. 1999. The typology of structural deficiency. In *Clitics in the languages of Europe*, ed. Henk van Riemsdijk, 145–233. Berlin: Mouton de Gruyter.
- Carruthers, Peter, Stephen Laurence, and Stephen Stich, ed. 2005. *The innate mind*, vol. 1: *Structure and contents*. Oxford: Oxford University Press.
- Carruthers, Peter, Stephen Laurence, and Stephen Stich, ed. 2007. *The innate mind*, vol. 3: *Foundations and the future*. Oxford: Oxford University Press.
- Carstairs-McCarthy, Andrew. 1998. Phonological constraints on morphological rules. In *The handbook of morphology*, ed. Andrew Spencer and Arnold M. Zwicky, 144–148. Oxford: Blackwell.
- Chomsky, Noam. 1980. *Rules and representations*. New York: Columbia University Press.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000a. Minimalist inquiries: The framework. In *Step by step*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89–156. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000b. *New horizons in the study of language and mind*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory*, ed. Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133–166. Cambridge, MA: MIT Press.

- Collins, Christopher. 1997. *Local economy*. Cambridge, MA: MIT Press.
- Coltheart, Max. 1999. Modularity and cognition. *Trends in Cognitive Sciences* 3: 115–120.
- Corbett, Greville. 2003. Agreement. *Transactions of the Philological Society* 101: 155–202.
- Culicover, Peter W., and Ray Jackendoff. 1999. The view from the periphery: The English comparative correlative. *Linguistic Inquiry* 30: 543–571.
- Culicover, Peter W., and Ray Jackendoff. 2005. *Simpler syntax*. Oxford: Oxford University Press.
- Dell, Gary. S., and Reich, Peter A. 1981. Stages in sentence production: An analysis of speech error data. *Journal of Verbal Learning and Verbal Behavior* 20: 611–629.
- Den Dikken, Marcel. 1995a. Binding, expletives, and levels. *Linguistic Inquiry* 26: 347–354.
- Den Dikken, Marcel. 2001. ‘Pluringulars’, pronouns and quirky agreement. In *The Linguistic Review* 18: 19–41.
- Déprez, Viviane. 1998. Semantic effects of agreement: The case of French past participle agreement. *Probus* 10: 1–65.
- Di Sciullo, Anna Maria, and Edwin Williams. 1986. *On the definition of word*. Cambridge, MA: MIT Press.
- Eagleman, David M. 2001. Visual illusions and neurobiology. *Nature Reviews Neuroscience* 2: 920–926.
- Embick, David, and Rolf Noyer. 2001. Movement operations after syntax. *Linguistic Inquiry* 32: 555–595.
- Embick, David, and Rolf Noyer. 2007. Distributed Morphology and the syntax-morphology interface. In *The Oxford handbook of linguistic interfaces*, ed. Gillian Ramchand and Charles Reiss, 289–324. Oxford: Oxford University Press.
- Ferreira, Fernanda, and Benjamin Swets. 2005. The production and comprehension of resumptive pronouns in relative clause ‘island’ contexts. In *Twenty-first century psycholinguistics*, ed. Anne Cutler, 263–278. Mahwah: Lawrence Erlbaum.
- Fodor, Jerry A. 1983. *The modularity of mind*. Cambridge, MA: MIT Press.
- Fox, Danny. 2000. *Economy and semantic interpretation*. Cambridge, MA: MIT Press.
- Frampton, John, and Sam Gutmann. 1999. Cyclic computation, a computationally efficient minimalist syntax. *Syntax* 2: 1–27.
- Freidin, Robert and Rex A. Sprouse. 1991. Lexical case phenomena. In *Principles and parameters in comparative grammar*, ed. Robert Freidin, 392–416. Cambridge, MA: MIT Press.
- Fuß, Eric. 2005. *The rise of agreement*. Amsterdam: Benjamins.
- García, Erica C. 2001. The cognitive implications of unlike grammars: variable clitic-clustering in Spanish vs. Italian. *Neuphilologische Mitteilungen* 102: 389–417.
- Gregory, Richard. Knowledge in perception and illusion. *Philosophical Transactions of the Royal Society of London B* 352: 1121–1127.
- Griffin, Zenzi M., and Victor S. Ferreira. 2006. Properties of spoken language production. In *Handbook of psycholinguistics*, ed. Matthew J. Traxler and Morton A. Gernsbacher, 21–60. Oxford: Elsevier.
- Groat, Erich. 1997. A derivational program for syntactic theory. Doctoral dissertation, Cambridge, MA: Harvard University.
- Gutierrez-Rexach, Javier. 2000. The formal semantics of clitic doubling. *Journal of Semantics* 16: 315–380.
- Harley, Heidi. 1995. *Subjects, events, and licensing*. Doctoral dissertation, Cambridge, MA: MIT Press.
- Heath, Jeffrey. 1991. Pragmatic disguise in pronominal-affix paradigms. In *Paradigms: The economy of inflection*, ed. Frans Plank, 75–89. Berlin: Mouton de Gruyter.
- Heath, Jeffrey. 1998. Pragmatic skewing in 1↔2 pronominal combinations in Native American languages. *International Journal of American Linguistics* 64: 83–104.
- Jackendoff, Ray. 2002. *Foundations of language*. Cambridge, MA: MIT Press.
- Jacobson, Pauline. 1997. Where (if anywhere) is transderivationality located? In *The limits of syntax*, ed. Peter Culicover and Louise McNally, 303–336. New York: Academic.

- Jelinek, Eloise. 1984. Empty categories, Case, and configurationality. *Natural Language and Linguistic Theory* 2: 39–76.
- Johnson, David E. and Shalom Lappin. 1999. *Local constraints vs. economy*. Stanford, CA: CSLI.
- Jónsson, Johannes Gísli. 1996. Clausal architecture and case in Icelandic. Doctoral dissertation, Amherst: University of Massachusetts.
- Kayne, Richard. 1984. *Connectedness and binary branching*. Dordrecht: Foris.
- Kayne, Richard. 2000. *Parameters and universals*. Oxford: Oxford University Press.
- Kibrik, Aleksandr E. 1979. Canonical ergativity and Daghestan languages. In *Ergativity: Towards a theory of grammatical relations*, ed. Frans Plank, 61–77. London: Academic.
- Kim, Yookyung, and Stanley Peters. 1998. Semantic and pragmatic context-dependence: The case of reciprocals. In *Is the best good enough?*, ed. Pilar Barbosa, Danny Fox, Paul Hagstrom, Martha McGinnis, and David Pesetsky, 221–249. Cambridge, MA: MIT Press.
- Kimball, John, and Judith Aissen. 1971. I think, you think, he think. *Linguistic Inquiry* 2: 241–246.
- Kratzer, Angelika. 2009. Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40: 187–237.
- Krifka, Manfred. 1998. Scope inversion under the rise-fall contour in German. *Linguistic Inquiry* 29: 75–112.
- Kuno, Susumu. 2005. Empathy and direct discourse perspectives. In *The handbook of pragmatics*, ed. Laurence R. Horn and Gregory Ward, 315–343. Oxford: Blackwell.
- Lasnik, Howard. 1999. *Minimalist analysis*. Blackwell.
- Lasnik, Howard, and Randall Hendrick. 2003. Steps toward a minimal theory of anaphora. In *Minimal syntax*, ed. Randall Hendrick, 124–151. Oxford: Blackwell.
- Lasnik, Howard, and Nicholas Sobin. 2000. The *who/whom* puzzle: On the preservation of an archaic feature. *Natural Language and Linguistic Theory* 18: 343–371.
- Lavine, James and Robert Freidin. 2002. The subject of defective Tense in Russian. *Journal of Slavic Linguistics* 9: 253–290.
- Legendre, Geraldine. 1990. Inversion with certain French experiencer verbs. *Language* 65: 752–782.
- Levinson, Stephen C. 2005. Deixis. In *The handbook of pragmatics*, ed. Laurence R. Horn and Gregory Ward, 97–121. Oxford: Blackwell.
- Marantz, Alec. 2000 [1991]. Case and licensing. In *Arguments and Case*, ed. Eric Reuland, 11–30. Amsterdam: Benjamins.
- Marr, David. 1982. *Vision*. San Francisco: W.H. Freeman.
- McCarthy, John J. 1982. Prosodic structure and expletive infixation. *Language* 58: 574–590.
- Moravcsik, Edith A. 1978. Agreement. In *Universals of human language*, vol. 4: *Syntax*, in Joseph H. Greenberg, Charles A. Ferguson and Edith A. Moravcsik, 331–374. Stanford, CA: Stanford University Press.
- Palmer, Stephen E. 1999. *Vision science*. Cambridge, MA: MIT Press.
- Perlmutter, David M. 1983. Personal vs. impersonal constructions. *Natural Language and Linguistic Theory* 1: 141–200.
- Pesetsky, David. 1998. Some optimality principles of sentence pronunciation. In *Is the best good enough?*, ed. Pilar Barbosa, Danny Fox, Paul Hagstrom, Martha McGinnis, and David Pesetsky, 337–384. Cambridge, MA: MIT Press.
- Phillips, Colin, Matt Wagers, and Ellen Lau. forthcoming. Grammatical illusions and selective fallibility in real-time comprehension. In *Language and linguistics compass*. On-line: www.blackwell-compass.com/subject/linguistics/.
- Pinker, Steven. 1994. *The language instinct*. New York: Morrow.
- Polinsky, Maria, and Eric Potsdam. 2001. Long-distance agreement and topic in Tsez. *Natural Language and Linguistic Theory* 19: 583–646.

- Potts, Christopher. 2002. Comparative economy conditions in natural language syntax. Paper presented at the North American Summer School in Logic, Language, and Information, Workshop on Model-Theoretic Syntax, Stanford, CA: Stanford University, June 28, 2002.
- Pylyshyn, Zenon. 1999. Is vision continuous with cognition? *Behavioral and Brain Sciences* 22: 341–365.
- Raftopoulos, Athanasios. 2001. Is perception informationally encapsulated? The issue of the theory-ladenness of perception. *Cognitive Science* 25: 423–451.
- Reinhart, Tanya. 1995. Interface strategies. *OTS Working Papers TL-95-002*. Utrecht: Utrecht University/OTS.
- Reinhart, Tanya. 2006. *Interface strategies*. Cambridge, MA: MIT Press.
- Rezac, Milan. 2004a. Elements of cyclic syntax. Doctoral dissertation, Toronto, ON: University of Toronto.
- Rezac, Milan. 2010b. Phi-Agree vs. movement: Evidence from floating quantifiers. *Linguistic Inquiry* 41: 496–508.
- Rezac, Milan. 2010c. Dative-locative syncretisms in Romance clitics and the relationship between syntax and morphology. Ms., UMR 7023 CNRS Université de Paris 8.
- Richards, Norvin. 2001. *Movement in language: Interactions and architecture*. Oxford: Oxford University Press.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar*, ed. Liliane Haegeman, 281–337. Dordrecht: Kluwer.
- Rizzi, Luigi. 2006. On the form of chains: Criterial positions and ECP effects. In *Wh-movement: Moving on*, ed. Lisa Cheng and Norbert Corver, 97–134. Cambridge, MA: MIT Press.
- Safir, Kenneth. 1984. Multiple variable binding. *Linguistic Inquiry* 15: 603–638.
- Safir, Kenneth. 1986. Relative clauses in a theory of binding and levels. *Linguistic Inquiry* 17: 663–689.
- Sauerland, Uli, and Paul Elbourne. 2002. Total reconstruction, PF movement, and derivational order. *Linguistic Inquiry* 33: 283–319.
- Schütze, Carson T. 1993. Towards a Minimalist account of quirky Case and licensing in Icelandic. In *Papers on Case and agreement 2, MIT Working Papers in Linguistics 19*, 321–375. Cambridge, MA: MITWPL.
- Schütze, Carson T. 1997. INFL in child and adult language: Agreement, Case, and licensing. Doctoral dissertation, Cambridge, MA: MIT Press.
- Sigurðsson, Halldór Ármann. 1991. Icelandic Case-marked PRO and the licensing of lexical arguments. *Natural Language and Linguistic Theory* 9: 327–363.
- Sigurðsson, Halldór Ármann. 2002. To be an oblique subject: Icelandic vs. Russian. *Natural Language and Linguistic Theory* 20: 691–724.
- Sperber, Dan. 2002. In defense of massive modularity. In *Language, brain and cognitive development*, ed. Emmanuel Dupoux, 47–57. Cambridge, MA: MIT Press.
- Stivers, Tanya, N. J. Enfield, and Stephen C. Levinson (ed). 2007. *Person reference in interaction*. Cambridge: Cambridge University Press.
- Tasmowski, Liliane. 1985. *Faire* infinitif. In *Les constructions de la phrase française*, ed. Ludo Melis, Liliane Tasmowski, Paul Verluyten, and Dominique Willems, 223–365. Gent: Communication and Cognition.
- Tseng, Jesse. 2005. Prepositions and complement selection. In *Proceedings of the 2nd ACL-SIGSEM Workshop on the linguistic dimensions of prepositions and their use in computational linguistics formalisms and applications*, ed. Aline Villavicencio and Valia Kordoni, 11–19. University of Essex.
- Wechsler, Stephen, and Larisa Zlatić. 2000. A theory of agreement and its application to Serbo-Croatian. *Language* 76: 799–832.
- Winter, Yoad. 2002. Atoms and sets: A characterization of semantic number. *Linguistic Inquiry* 33: 493–505.
- Yang, Charles. 1997. Minimal computation. M.Sc. thesis, Cambridge, MA: MIT Press.

Chapter 2

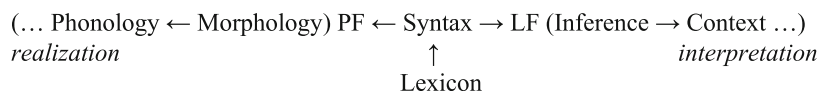
Phi-Features in Realizational Morphology

2.1 Modularity, Morphology, and Phi-features

In this chapter three themes are introduced through the investigation of a class of phi-agreement phenomena: modular architectures; phi-feature manipulations in realizational morphology; and its limits, which let some phi-agreement be ascribed to syntax. This first section returns to modular architecture from [Chapter 1](#), in the syntax-morphology relationship and phi-features. Next are set out two phenomena in morphology that manipulate phi-features, constituting phi-agreement in the sense of [Chapter 1](#): syncretisms in clitic and agreement systems in [2.2](#) and synthetic-analytic alternations in [2.3](#). Through contrast with them, the following chapters will put superficially similar phenomena squarely into the syntax.

The basic models of modularity in linguistic, and in cognitive science, have been in the image of Fodor's (1983) 'input transducers': computational components encapsulated from the outside, save for strictly one-way information flow from their input module(s) and to necessarily distinct output module(s), and partly differing from each other in their computation and information. The Y/T-model of generative grammar in (1) has these properties. The syntax module receives as its sole input material from the lexicon, via the numeration interface, and its output interfaces translate it to the external PF and LF modules with no communication from them back into syntax. Consistent with this view of modularity is the articulation of PF and LF into further modules as indicated, as well as further one-way channels of communication between LF to PF other than syntax.

(1) The Y/T-model



A model of modularity attributes to each module a constellation of distinctive characteristics defining its interaction, information, and mechanisms.

It may be called its *modular signature*. The Y/T-model makes for signatures like (2).

- (2) Modular signatures characterizing the Y/T-model
 - a. *Interaction*: partial encapsulation from (inaccessibility to) other modules
Syntax: visible to syntax and LF.
Phonology, Morphology: invisible to syntax and LF.
 - b. *Information*: partly distinctive information types (domain specificity)
Syntax: syntactic but not properly phonological or morphological information types (vowel height, declension class, ...).
Phonology, Morphology: (a mapping of) syntactic information, and properly phonological, morpho(phono)logical information.
 - c. *Computation*: partly distinctive mechanisms/principles
Syntax: e.g. phrase-structurally unbounded domains, c-command, etc.
Phonology, Morphology: e.g. bounded domains, adjacency, etc.

Chapter 1 has mentioned a variety of ways in which modularity might be implemented. Among them are weaker models than the Fodorian one, and some will come to the fore in examining the relationship of syntax and realizational morphology. The *strength* of a modular signature depends on the uniqueness of mechanisms and information types across modules, and the constraints on their interaction. In Distributed Morphology, syntax and morphology share a single computational system. However, there is a strict segregation of information types, and a strictly one-way syntax-to-morphology/phonology information flow, and thus a strong modular signature (see below; cf. Ackema and Neeleman 2007 for another modular way to share mechanisms). Lexicalist early insertion models posit distinct computational systems, but give syntax an often restricted access to the morphological and phonological effect of terminals. Provisions may be made for limited feedback from the output of a module to its input, for instance to syntax about prosodic well-formedness. Each of these views and others may maintain a strong modular signature, weaken it, or eliminate it.

In investigating the modular relationship between realizational morphology and syntax, phonology makes for a good guide. The autonomy of syntax from phonology in (3) is among the most robust and widely accepted aspects of the modular architecture of language (Zwicky 1969, 1992, Zwicky and Pullum 1983, 1986, Pullum and Zwicky 1986, 1988, Miller, Pullum and Zwicky 1997).

- (3) **Phonology-free syntax**: Syntax and its interpretation are autonomous of phonological properties and operations.

By this thesis, movement, selection, binding, scope, ought pay no attention to the differences between words that begin with /w/ and those that do not, monosyllables and polysyllables, overt and null constituents. Counterexamples

have been presented, some refuted in the literature cited (Miller, Pullum and Zwicky 1997), some under debate, particularly the PF-LF interaction in information packaging (topic and focus, Reinhart 2006, Zubizarretta 1998, Szendrői 2004, 2005, Irurtzun 2007; Heavy NP Shift, Inkelas and Zec 1990, Jackendoff 2002: 121f., Phillips and Lau 2004, Williams 2003: 34, Bobaljik and Wurmbrand 2008). Yet (3) is pervasive and systematic, not jeopardized by narrowly-defined exceptions, and demands a principled explanation.¹

The example in (4) illustrates both phonology-free syntax, and the essential difference between breaches of strong modularity and the simple cumulation of processing by multiple modules. A phonology-free syntax cannot access phonological information or operations, and phonology in turn cannot manipulate syntax. However, phonology may filter the output of syntax by failing to realize it. English ditransitives like *give* have two constructions available to them, double object one in (4)a and the prepositional one in (4)b, preferring one or the other according to various factors (Krifka 2004, Levin and Rappaport Hovav 2005: 7.3, Bresnan and Nikitina forthcoming, Bruening 2010). English weak pronoun have a prosodic requirement that prevents their being separated from the verb (Williams 1974: 69f., Zwicky 1986, Dowty 1995). In (4)a, this requirement renders the double object construction unavailable, suspending all preferences (cf. Costa 2003: 266). Verbs like *bet* or *envy* only allow the double object construction, (4)c (Emonds and Whitney 2005). This limitation comes into conflict with the prosodic requirements of weak pronouns in (4)c. The conflict cannot be ‘repaired’ in (4)d by the sudden emergence of the prepositional construction, nor of another otherwise impossible structure such as theme + bare goal. The prosodic requirement renders the syntax of these ditransitives unrealizable or *ineffable*, and does not affect syntax to license an otherwise unavailable structure. This is particularly revealing because prosody does play a role in the above-mentioned preferences for using one or the other construction – but only when both are available (Williams 1974: 71f.).²

- (4) a. We gave Kate the book/*it.
 b. We gave the book/it to Kate.
 c. We envied/bet Kate the book/*it.
 d. *We envied/bet the book/it (to) Kate.

So it should be in the Y/T model for all the modules downstream from syntax. They may filter syntactic output by rendering some structures

¹Many exceptions are too relative to particular assumptions to be generally persuasive: cf. Chomsky (2001: 23ff.) on the sensitivity of movement to the presence of phonological content, Bobaljik (2002: 251–3) on that of scope to the linear position of copies, Tseng (2005) on that of selection to phonological properties.

²English varieties with theme-goal double object structures allow *envy it Kate* (Haddican 2010).

impossible, they may impose their own preferences, but they cannot affect syntax. Weaker models may add well-defined exceptions yet retain the generalization.

For morphology, the thesis corresponding to (3) is (5) (Zwicky 1996: 301, Miller, Pullum and Zwicky 1997: 68; Corbett and Baerman 2006; Halle and Marantz 1993, Embick 2000).

- (5) **Morphology-Free Syntax:** Syntax and its interpretation are autonomous of the realizational aspects of morphology.

The thesis is about morphological *realization* or realizational morphology, and this is how the term *morphology* is used henceforth. It is a cover-term that subsumes the system(s) responsible for those aspects of the form and arrangement of morphemes that do not follow from syntax or interpretation. It excludes *word-syntax*, the other domain to which the term morphology is applied, but not here. An example is the allomorphy of the English perfect-passive participle in (6). The choice of formation cannot be reduced to any syntactic, semantic, or purely phonological property of the verb stem. It is the province of realizational morphology.

- (6) a. heav-**ed** b. lef-**t** c. clov-**en** d. spat e. **though-t** f. cast
(heave) (leave) (cleave) (spit) (think) (cast)

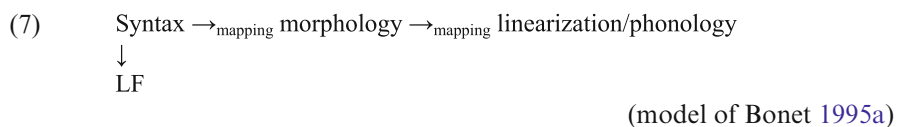
Morphology-free syntax claims that verbs do not participate in different syntactic constructions like OV vs. VO according to their inflectional paradigm class (Corbett and Baerman 2006) or that syntactically arbitrary inflectional gaps like the absence of the past of *forgo* do not license otherwise unavailable syntactic structures like *did forgo* (Embick and Marantz 2008). This chapter suggests that the thesis is robust in the domain of phi-feature realization.

A realizational morphology with a modular signature distinct from syntax is proposed by approaches that span the gamut of other architectural options, including Sproat (1985, 1998); Aronoff (1994); Stump (1991, 1993, 2001); Bonet (1991), Noyer (1992), Halle and Marantz (1993), Harley and Noyer (1999), Embick and Noyer (2001, 2007); Ackema and Neeleman (2003, 2007). They share the theses of phonology and morphology-free syntax, and differentiate between morphosyntactic features and their morphophonological exponents (the *Separation Hypothesis*, Beard 1995, Embick 2000: 188).³ Two approaches will illustrate positions at the opposite extremes of modular architecture: that of Bonet (1995a) and that of Embick and Noyer (2001, 2007).

Bonet's model in (7) is characterized by a very strong modular signature for syntax and morphology. *Interaction* is limited to strictly one-way information

³Overviews of the theoretical gamut of morphology, as word syntax vs. its realization, pieces-based vs. inferential, 'contiguous' with narrow syntax vs. wholly unlike, are in Aronoff (1994: 12–29), Harley and Noyer (1999), Stump (2001: 9–12), Ackema and Neeleman (2007).

flow from syntax to morphology, and morphology has no mechanisms to affect syntax. Morphology is thus *inert* both for syntax and for those matters of interpretation that depend on syntax, LF. The *information* used by morphology is distinct from that of syntax, because the mapping from syntax need not preserve syntactic structures or features, and information may be added, including perhaps nonsyntactic features such as inflection class diacritics. The *mechanisms* of morphology are not those of syntax and bear it little resemblance: insertion, delinking, and (re)linking of features in a featurally arbitrary, local contexts, like (8)b for (8)a. The relationship that morphology bears to syntax, phonology bears to morphology on Bonet's model, but that is not of importance here, and other theories allow morphology access to phonological information (e.g. Aronoff 1994, Embick and Noyer 2001, Ackema and Neeleman 2003).



- (8) a. 3SG/PL.DAT clitic *le/les* → SE *se* / 3.ACC clitic *lo/la/los/les*
 b. Delink [3RD] in [CL[ARG([pl])][3RD[OBL]]] / [CL[[ARG][3RD]]]
 (Spanish Spurious *se* rule; see (15) below)

Bonet's model enforces the strongest modular separation of syntax from morphology. Other approaches attenuate it without losing modularity, of which the Distributed Morphology (9) of Embick and Noyer (2001, 2007) is a good example. Syntactic and morphological computations use the same computational system. However, the character of the computations depends on the type of information to which they apply, and partitions their applications into noninteracting chains. Consider the concatenation operation *Merger*. At first only syntactic information is present in the computation, all the way up to the mapping to LF. *Merger* up to this point operates on the information type that defines syntactic structures, sisterhood and dominance. In (10)a, it right-adjoins a head X° to the head Y° of the YP *sister* of X° , ignoring adjuncts and specifiers of YP because they are not visible for the syntactic relation between X° -(YP)- Y° . Only subsequently are syntactic objects translated to morphophonological ones by Vocabulary Insertion, replacing syntactic relationships with linear order. *Merger* then operates on the result. In (10)b, it right-attaches the exponent of X' of X° to the *linearly adjacent* exponent Z' . Z' need not have any given syntactic relation to X° and may be in a syntactically impenetrable island, but it cannot skip any linearly intervening material. At this point *Merger* can no longer see and affect the earlier syntactic information, and so does not interact with occurrences of *Merger* that change sisterhood and dominance. Vocabulary Insertion is the interface that partitions occurrences of *Merger* into two groups with different input/output information types and no potential for interaction.

The timing of Vocabulary Insertion ensures that only syntactic Merger is potentially visible to LF.

- (9)
- | | | | |
|---------|------------------------|----------------------|--------------------------|
| | LF | Vocabulary Insertion | |
| | ↑ | / | |
| lexicon | -----> | | PF |
| | syntax/morphophonology | | |
| | | | (Distributed Morphology) |
- (10)
- | | | |
|--|-------------------|--|
| | a. Syntactic: | $[X^\circ [_{YP} [_{ZP} Z^\circ] Y^\circ] \rightarrow [t_{X^\circ} [_{YP} [_{ZP} Z^\circ] Y^\circ] + X^\circ$ |
| | Example: | The fire $t_T [_{vP} \text{quickly} [_{vP} \text{die}_{v+V} + -d_T]]$ |
| | b. Postsyntactic: | $[X' [Z' Y']] \rightarrow [t' [[Z' X'] Y']]$ |
| | Example: | [[boni [^] pueri] [^] [t _{que} [^] [bonae [^] que [^] puellae]] (<i>Latin</i>) |
| | | good boys good and girls |
| | | (examples of <i>Merger</i> ; [^] is linear adjacency) |

In Distributed Morphology then, the sharing of a computational system by syntax and morphology leaves intact the strong modular signature of morphology: its syntactic and interpretive inertness, its distinct information types, and the consequent distinctive character of its applications of the shared mechanisms. The shared computation leads to a more austere conceptualization of the systems of realization than in Bonet's model, closer to the 'bare output conditions' of the unitary, interpretive PF of Chomsky (1995: 4.1, 2001a: 3.1). The computational system of morphology is part of the syntactic computation, and there are no operations or filters distinct from those of syntax. Only the information type changes mid-stream, giving the remainder of the computation a distinctive modular signature. Morphological operations such as the fission, transfer, or deletion of features are consequences either of the Vocabulary Insertion interface operation itself, or of the syntactic computation applying to the arbitrary morphophonological properties of lexical items, which are part of bare output conditions. The end-point is morphophonological representations that serve as input to phonology or phonetics. Bonet's (1991, 1995a) morphology is a computational component wholly distinct from syntax, transforming syntactic structures in a unique way. Most work on morphology belongs with it, some going farther in the distinctiveness of the computation (Aronoff 1994), some in its generative autonomy from syntax (Ackema and Neeleman 2007). The same issues arise on the interpretive side.⁴

⁴This sketch of Distributed Morphology omits essential architectural issues: whether post-LF operations like 'dissociated' morpheme insertion and fission belong to Vocabulary Insertion in a uniform computational system, or become available at a certain point and so partition the computation (cf. Noyer 1992, Halle 1997, Williams 2007); whether there is a space between transfer to LF and Vocabulary Insertion for uninterpreted phrasal syntax (Sauerland and Elbourne 2002, Zubizarreta 1998: 3.5.2–3); whether Vocabulary Insertion cyclically replaces syntactic information or only 'discharges' it (Bobaljik 2000, Embick and Noyer 2007).

All the above-cited models of morphology allow it to manipulate certain syntactic features, including phi-features, often in ways that can be thought of as displacement, insertion, and deletion, broadly resembling syntactic mechanisms.⁵ Modularity would be strengthened if a given feature-type and mechanism-type were restricted to a single module (cf. Ackema and Neeleman 2007: 327f. citing Starke 2002, Julien 2002: Chapter 6). Yet this guideline cannot be pressed too far. The English participle allomorphy in (6) is outside syntax both because it refers to nonsyntactic information and because there are no syntactic devices that could relate the allomorphs /əd/, /ən/, /t/, and umlaut. In (11) on the other hand *t* oscillates between prefix and suffix, recalling syntactic movement. However, the position is conditioned by vowel height, and so occurs outside syntax by the principle of phonology-free syntax.⁶

- (11) a. **t**-okm-è b. ab-**t**-é c. Rule: *t*- ___{[stem [-low V]]}, else -*t*
 2-eat-PERF do-2-PERF
 you ate you did
- (Afar, Noyer 1992: 228f.)

Reference to segmental phonology is a clear giveaway of a nonsyntactic mechanism, but it is not the only one. Aronoff (1994: 24f.) presents an eloquent exposition of the logic that puts certain manipulations of syntactic features into the morphology rather than syntax. Below it is extended to phi-features. His example is the English use of the participle in (6) in both the perfect and the passive: *She has **heaved** it up, **left** it, **cloven** it asunder* and *It was **heaved** up, **left**, **cloven** asunder*, from *heave*, *leave*, *cleave*. The use of the same form in the two periphrases cannot be an *accidental syncretism*, where two syntactic structures happen to have the same realization, as English *en* for

⁵More properly, morphology manipulates its translations of syntactic features. They are ‘syntactic’ in the sense that the translation regularly relates elements of the syntactic alphabet to the morphological one (a homomorphism). This is not so for the syntax-phonology translation, although phonology too may be seen as having syntax-like mechanisms (Chomsky 2000a: 147 note 79, Frampton 2004). On phi-alphabets, see further Chapter 6.

⁶Similar phenomena are rarer than (6) but robust, such as enclisis vs. circumclisis based on the stress host prosody in Franco-Provençal (Morin 1979a: 304f. note 5), and the synthetic-analytic alternations of the English comparative in Section 2.3. Their reference to phonology matches their flagrant violation of syntactic atoms in (11), and syntactic islands in Latin (10)b where the enclitic *que* ‘and’ inserts after the P of the second conjunct if monosyllabic (Anderson 1992: 201f., Embick and Noyer 2001: 575f.). For some intra-morpheme/constituent placement may be invoked prosodic phonology, as in root-and-pattern morphology (cf. Ussishkin 2007); see Luis and Spencer (2004) vs. Harris (2002) on the tradeoffs for Udi root-internal clitic placement. In either case, some extra-syntactic system superficially appears to duplicate movement; cf. also Frampton (2004) on analogy between movement and metathesis. Clearly morphological is also Noyer’s (1992), Halle’s (1997) feeding/bleeding between discontinuous exponents according to their arbitrary feature content; syntactic exploration through separate heads has restricted itself to the far simpler case of circumfixes with fixed content across exponents (Julien 2002: 6.2).

plural in *ox-en* and for past participle in *beat-en*. This would require us to stipulate accidental identity for perfect and passive verbs across all the distinct formations in (6): $V + ed$ for *heave*, $V + ablaut + en$ for *cleave*, $V + ablaut + t$ for *leave*. Rather there is a single abstract entity shared by the perfect and the passive across these various formations, the participle, in a *metaparadigmatic syncretism*. The question is whether the participle represents a syntactic entity or not. If it does, the perfect and the passive must share some common syntactic core that the participle realizes, for instance $V^\circ + Asp^\circ$. If there is not one, it is necessary to posit a morphological component that maps the syntactic features of $V + \text{perfect}$ and $V + \text{passive}$ to the participle entity that exists only in morphology. Morphology then realizes the participle through the different formations in (6).

In Aronoff's example, it may be easy to think of a syntactic core shared between the perfect and passive for the participle to realize. Other metaparadigmatic syncretisms are more difficult, and syntax may be excluded as the source of the syncretism if inflection class or phonological information enters into defining the syncretism (see Embick 2000, Stump 2001 for examples). Phi-features are a domain where there are robust reasons to put some metaparadigmatic syncretisms outside syntax. These syncretisms make a good introduction to the morphological manipulation of phi-features and its modular signature.

Consider first accidental syncretisms in the realization of phi-features. The English word *sheep* is syncretic for singular or plural, while *fox* and *dog* are distinct. The syncretism has no generality in English; plural in the context of *sheep* happens to be expressed by $\emptyset$, *en* in the context of *ox*, *ren* of *child*, *s* most of the time. Only the morphophonological realization of plural is affected. By the thesis of morpho/phonology-free syntax, no phenomenon sensitive to syntactic plurality sees the syncretism. (12) shows that it is indeed invisible for the phi-agreement of determiners and pronouns (cf. Zwicky 1992: 355).

- (12) a group of these_i/*this_i sheep_i/foxes_i/dogs_i and of their_i/*its_i companions

This is commonplace yet not trivial, for language could easily have been otherwise. There are other 'arbitrary' facts about words that do matter to determiners and anaphora, such as [feminine] gender shared by French *lampe* 'lamp' and *fille* 'girl' and *sentinelle* 'guard'. The systems that put language to use do superficially let sound influence meaning and vice versa, for instance in slips of the tongue like *compensation prize* for *consolation prize* (Dell and Reich 1981, Griffin and Ferreira 2006). It is a testament to the sweep of phonology-free syntax, and the modular architecture that derives it, that accidental syncretisms are inert to syntax.

The same inertness is found for phi-feature syncretisms that are metaparadigmatic rather than accidental. In French, gender is neutralized in 3PL non-nominative/strong pronouns: plural strong 3PLM *eux*, 3PLF *elles*, weak nominative *ils*, *elles*, but accusative *les*, dative *leur*, genitive *leur-*. To state the

syncretism across these different forms, phi-features themselves must be manipulated, deleting the marked [feminine] in the context of {[oblique], ...}. This syncretism as well has no syntactic or interpretive consequences, as seen in (13) for the phi-agreement of participles, reflexives, and bound pronouns with the feminine gender of *les*, despite its syncretism with the masculine.

- (13) Les cuillères_i, je *les*_i ai mis-es_i là où elles_i/*ils_i étaient.
the spoons(PLF) I them.ACC have put-PLF where they(F/*M) were
(French)

This is again commonplace, yet profoundly telling. A syntactic approach to phi-syncretisms is easy to conceive of, for instance as the bundling of phi-features on a single complex head by movement, but the syntactico-semantic inertness is then to be explained. A deep principle is needed to explain that phi-syncretisms like (13) never affect the phi-features of linked pronouns, if true. It follows from morphology-free syntax if they occur in the morphology, but then morphology must manipulate phi-features, an information primitive it shares with syntax.

More complex phi-syncretisms afford stronger evidence in their reference to nonsyntactic properties (cf. also Stump 1993, 2001, Bobaljik 2002, Baerman 2004, Baerman et al. 2005). Consider the paradigms of Czech masculine and neuter inanimate nouns in Table 2.1. Genitive, dative, locative, and instrumental are syncretic (shaded) across different exponents. The syncretisms are specific to masculine and neuter inanimates, and within them depend on number but also on arbitrary noun classes, a nonsyntactic property. The genders are syncretic in the locative singular across its exponents *u*, *e*, *i*, whose choice depends on arbitrary noun classes, and in the locative plural *ech*.⁷ There is nearly as much syncretism in the genitive singular across *a* and *e*, but it excludes the noun-class exemplified by *díl* and the plural. (14) shows that the syncretisms are all invisible to the phi-features of linked elements, as in (12) and (13).⁸

⁷The hard/soft-stem distinction is not synchronically phonological.

⁸Phi-syncretisms also give eloquent testimony as to the reality of metaparadigmatic syncretisms. A nice example is Slovene ‘man, person’ in (Corbett 2007: 30). In Slovene noun morphology, there is a dual-plural syncretism in the genitive and locative cases. It interacts with suppletion in the roots for ‘man, person’, plural *ljudi*-, elsewhere *človek*-. Most of the dual forms are thus based on *človek*-, because dual is not plural: nominative-accusative dual *človek-a*. However, the genitive and locative dual obey the dual-plural syncretism and thus use *ljudi*-, as in genitive dual *ljudi-i*. The phi-syncretism must feed root insertion. The reality of syncretisms in phi and case features is eloquently attested to by their visibility in resolving conflicts in spell-out, discussed by McCreight (1988), Zwicky (1991), Franks (1995: 62f., 79f.).

Table 2.1 Czech masculine inanimate nouns

Hard Stems		Soft Stems			
	M (inan.)		N	M (inan.)	N
	'mine' 'stake'	'church' 'january'	'wheel' 'morning'	'knife'	'bed' 'airport'
N/A	důl	kostel	kol-o	nůž	lož-e
V	dol-e	kostel-e	kol-o	nož-i	lož-e
G	dol-u	kostel-a	kol-a	nož-e	lož-e
D	dol-u	kostel-u	kol-u	nož-i	lož-i
L	dol-e kůl-u	kostel-e leden-u	kol-e rán-u	nož-i	lož-i
I	dol-em	kostel-em	kol-em	nož-em	lož-em
N/A/V	dol-y	kostel-y	kol-a	nož-e	lož-e
G	dol-ů	kostel-ů	kol	nož-ů	lož-í letišt'
D	dol-ům	kostel-ům	kol-ům	nož-ům	lož-ím
L	dol-ech	kostel-ech	kol-ech	nož-ích	lož-ích
I	dol-y	kostel-y	kol-y	nož-i	lož-i

- (14) v dole_a/zákonu_b/kole_c/mále_a/noži_c/loži_f který_{abe}/které_{cdf} zbyl_{abe}/zbylo_{cdf}
 in mine/law/wheel/little/knife/bed.LOC that.SGM/N remained.SGM/N
 (Czech)

Metaparadigmatic phi-syncretisms illustrate the three elements of the modular signature of morphology. They are inert for syntax and its interpretation because they do not feed syntax. They may refer to nonsyntactic information like arbitrary noun-classes. And the case could be made that nonsyntactic mechanisms are needed, if there are distinctive powers or limits needed for the mechanism of phi-syncretisms. One is locality. Phi-syncretisms never seem to refer to the surrounding syntactic structure, beyond a small window of the extended word and its edges, while syntactic dependencies span phrase-structurally unbounded domains. Another is arbitrariness, if the coupling between the features syncretised and those of the context is more arbitrary than in syntactic dependencies, as when gender syncretism occurs for the locative and genitive in the singular but only for the locative in the plural.

These are all matters taken up in the next two sections for phi-conditioned clitic and agreement syncretisms and synthetic-analytic alternations. Beyond indicating what powers morphology ought to have, they reveal its limits, and thus the criteria that put a phi-feature phenomenon into the syntax. Both the syncretisms and the alternations will prove important through the following chapters. As much as they have a morphological signature, superficially similar phenomena in the next two chapters will have a syntactic one, permitting a minimal contrast.

2.2 Opaque Cliticization and Agreement

‘Opaque’ combinations of clitics and agreement affixes are a potent source of evidence about modularity. In *opaque cliticization* in Romance, a clitic, in a context defined by other clitics, is realized by one or more *exponent(s)* different from or in addition to the one it has independently (Bonet 1991, 1993, 1995a, 1995b, Manzini and Savoia 2002, 2005, 2008, 2010, Pescarini 2010, Rezac 2010a, 2010c). These opaque exponents may be parts of the clitics involved or null. In Old and Middle French, the 3PL.ACC clitic *les* and the 1SG.DAT *me*, 2SG.DAT *te*, 3SG.DAT *li* could combine *transparently* as *les me/te/li*. However, they could also give rise to *opaque* combinations where 3PL.ACC appears as 3SG.ACC *le*, or disappears, and may or may not contribute *-s* to the following clitic, under specific conditions. For *les me/te* appears *mes/tes*, or *le mes/tes*, rarely *les mes/tes*, but not $\emptyset$ *me/te*; inversely for *les li*, there is frequently $\emptyset$ *li* but not *lis* (Zink 1997: 245f., de Kok 1985: 277ff.). The opaque exponents may also be distinct clitics and even unique. In Ruffieu-en-Valrôme Occitan, 3PLM/F.ACC *loz*, *lez* combining with 3SGM/F.DAT *lo/la* gives *loz/lez-i*, where *i* is independently the dative clitic, but combining with 3PLM/F.DAT *loz/lez*, the result is *loz/lez-au*, where *au* does not otherwise occur in the clitic system (Ahlborn 1964, Rezac 2010c). The context conditioning opaque cliticization can itself undergo it to give a fully opaque output. In Barceloní Catalan, neuter /u/ + locative /i/ gives /li/, identical to 3SGM.ACC /l/ + LOC /i/ (Bonet 1995a: 620). Multiple exponence may occur, as in *le-s me-s*.

On the seminal analysis of Bonet (1991, 1995a), opaque cliticization occurs in the morphology component (7) between syntax and phonology. It takes the form of contextual insertion, deletion, and relinking of features that constitute a clitic, such as [plural] and [locative], to yield a feature content (often) identical to another clitic, or $\emptyset$. It is not phonological, because it manipulates morphosyntactic features rather than change phonology (Bonet 1995a: 612). It is not syntactic because it coherently differs from syntax on the three elements of a modular signature, interaction, information, and mechanism. It is inert for syntax and its interpretation. The information to which it refers is systematically distinct from syntax. Its mechanisms seem both beyond the limits of syntax, in the feature-context variation they allow (Bonet 1991: 64–75, 1995a: 645, 1995b), and at the same time more constrained, in locality. These properties are examined in this section for both opaque cliticization and opaque agreement.

The first element of the modular signature of morphology is syntactico-semantic inertness dictated by the principle of morphology-free syntax, whether in architectures like (7) or like (9). Inertness is striking in opaque cliticization, because an opaque clitic is typically syncretic with a clitic that has its own independent syntactico-semantic life, so the two can be compared. In morphological opaque cliticization, a clitic seems to gain or lose no properties in virtue of its syncretism with another. Not so when clitic alternations are due to syntax: object drop leads to alternations between overt clitics that are referential and

silent ones that are nonreferential, binding between disjoint and reflexive clitics, argument structure between dative clitics for recipients and locative clitics for locations.

Spanish Spurious *se* in (15), (16) illustrates the inertness of opaque cliticization. In Iberian Spanish, the dative of 3.DAT 3.ACC clitic clusters is replaced by the clitic *se*, syncretic with SE *se* that serves as the dative / accusative reflexive as well as in other functions. In some American Spanish dialects, the plurality of 3PL.DAT additionally surfaces on the 3SG.ACC clitics, which become syncretic with 3PL.ACC (Bonet 1995a, Belloro 2004: 24f., 32, Kailuweit 2008: 191f., 196). The cluster *se los* of (16) is thus the opaque realization of 3PL.DAT *les* + 3SGM.ACC *lo*, but also the transparent realization of reflexive SE *se* + 3PLM.ACC *los* ‘Who lent them (*los*) to himself (herself, themselves) (*se*)?’. It is not however the opaque realization of a *plural* reflexive SE *se* + 3SGM.ACC *lo*, ‘*Who lent it (*los*) to themselves (*se*)’, for reflexive *se* neither distinguishes plurality in form, nor contributes it to the accusative clitic. Some dialects also transfer the feminine gender from the dative to the accusative clitic, (17), although dative clitics do not mark gender (Bonet 1995a: 636). All these dialects have the same inventory of clitic exponents in (15)a. Orthogonally to this shared inventory, they differ in the phi-features that they transfer from the dative to the accusative.

(15) Spanish Spurious *se*:

a. 3SG/PL.DAT *le/les* + 3SGM/3SGF/3PLM/3PLF *lo/la/los/las* → *se lo/la/los/las*
(Iberian Spanish)

b. 3PL.DAT *les* + 3SGM/3SGF.ACC *lo/la* *lo/la* → *se los/las*
(additionally in some American Spanish dialects)

c. 3SG/PLF.DAT *le/les* + 3SG/PLM.ACC *lo* → *se la/las*
(additionally in some American Spanish dialects)

(16) El libro_i, a ellos_j, ¿quién *se*_j *los*_i prestó?
the book, to them, who SE 3PLM.ACC lent
The book, who lent it (*lo* > *los*) to them (*les* > *se*)?
(American Spanish, Bonet 1995a: 634)

(17) Si ellas_i me quieren comprar el caballo_j yo *se*_i *las*_j venderé.
If they(F) me wish buy the horse(M) I SE 3PLF.ACC will.sell
If they want to buy my horse, I will sell it (*lo* > *las*) to them (*les* > *se*)
(American Spanish, Bonet 1995a: 636)

This opaque cliticization creates syncretisms conditioned by the phi-features of other arguments, and thus a type of phi-agreement. In particular, the use of 3PL.ACC for 3SG.ACC clitics is agreement with the plurality of nonreflexive 3PL.DAT. Yet neither syntax nor interpretation are affected by this transfer of phi-features. It does not force a plural reading of *los*, nor does it permit an interpretively singular left-dislocated pronoun linked to *los* to be morphological plural. Similarly, the opaque use of *se* for 3PL.DAT does not confer on it any reflexive or other properties that *se* has independently.

[illegible]

- The reverse situation is easy to imagine, and indeed Catalan offers a minimal contrast. It has another contextual dative-locative syncretism, (19)b. This is a repair of the Person Case Constraint or PCC (20), introduced in [Chapter 1](#) and studied for French in [Chapter 4](#). When the dative becomes a locative here, it adopts the locative's nondoubling syntax, (19)c. Every other property of it below will likewise concur that it is syntactic, in contrast to (19)a. These two dative-locative alternations will then differ on all the elements of a modular signature, which cohere in each and betray the module where it occurs, morphology or syntax. This is the situation expected under a strong modular architecture.

- ⁹The generalization that an opaque clitic does not adopt the syntax of its other uses is independent of the possibility of clitics having special properties in virtue of occurring in a cluster. Italian 3.ACC + 3.DAT clitic clusters permit 3.DAT to double DPs, while 3.DAT in isolation cannot (Cinque 1990: 178 note 4, Benincà and Poletto 2005: 232, Kayne 2008; not so in French). This is unrelated to opaque cliticization, because there is none, only a phonological vowel lowering, e.g. 3SGM.DAT *gli* [xi], 3SGM.DAT + 3SGM.ACC *gli lo* [xelo] (Rusi 2008: 4.3). One possible explanation of these facts indicates how morphology can appear to have an effect on syntax by realizing it. Doubling may require particularly poor clitics and Italian clitics may be closer to weak pronouns in this respect (García 2001: 412–4; Section 4.6). However, clitics in the clusters with the vowel lowering mentioned above have been argued to fuse into units similar to a single clitic (Laenzlinger 1993, Cardinaletti 2008). 3.DAT clitics in clusters should then be poorer than when independent, permitting doubling. The richer 3.DAT can only be spelled out by the independent *gli*, the poorer 3.DAT only by the fusional *glie* in a clusters.

(24) a. L' *hi* va recomanar/pintar. (*opaque cliticization*)
 b. M' *hi* va recomanar/*pintar. (*PCC repair*)
 him/*me.ACC LOC recommended/painted
 She recommended him/me to him; She painted him/*me for him.
 (Catalan, Bonet 1991: 212, 1992: 107, Rezac 2010c)

The third element of a modular signature is the difference of syntax and morphology in *mechanisms*. A striking difference appears in their domains. Opaque cliticization pays attention only to information available in a phrase-structurally local neighbourhood, including the clitic cluster, and it only has consequences in that neighbourhood. There seems to exist no analogue of the above 3.DAT 3.ACC $\rightarrow$ SE/LOC 3.ACC that would turn a 3.DAT clitic to a SE/LOC clitic in the context of a phrase-structurally remote 3.ACC pronoun, or conversely turn a nonclitic dative to a locative in the context of a 3.ACC clitic. Not even elements linked to an opaque clitic are affected by its opacity, as already pointed out in (16), where the left-dislocated pronoun does not gain the opaque plurality of the clitic *los*. Again, Catalan 3.DAT 3.ACC opaque cliticization stands in contrast to the syntactic PCC repair. It is convenient to present an example drawn from its French analogue that is fully discussed in [Chapter 4](#) (for Catalan, see [Bonet 1991: 4.1, 4.4](#)). In the PCC context (20), a dative clitic can become a locative clitic as in (19)b, but it can also become an unfocussed strong pronoun at a distance from the clitic cluster, (25).

- Theories of morphology usually limit it to phrase-structurally local domains such as the extended word or prosodic phrase ((28) below). Opaque cliticization

shares this limit with other morphological phenomena. It is otherwise for syntax, whose business is with long-distance dependencies over phrase-structurally large or unbounded distances. The PCC repair belongs too syntax on this score.¹¹

¹¹The largest domains spanned by opaque cliticization seem to be consistent with options in a local morphology rather than demand its expansions or resort to syntax. Sardinian in (i) (Manzini and Savoia 2010, T. Taraldsen p.c.) may illustrate how successive-cyclic movement can create nonlocal surface effects in a local morphology. In Sardinian as in Spanish (16), a dative is opaquely realized as *si* in the context of an accusative clitic, and the accusative ‘parasitically’ assumes the dative’s plurality. Unlike Spanish (16), Sardinian has past participle agreement with accusative clitics, and the opaque accusative plural in (i) feeds it. Manzini and Savoia (2010) rightly underline the significance of such apparent action-at-a-distance fed by opaque cliticization. However, (i) follows if object cliticization passes through the left periphery of the participle, where clitics surface in many Romance varieties, affecting its agreement. There it participates in allomorphy ‘en passant’ and then moves higher, much as an A’-trace blocks *want to* contraction. (One would then expect a transitive subject clitic to be able to contribute opaque plurality to the adjacent object clitic but not to the farther participle above which it originates, which seems to be correct, see Manzini and Savoia (2010: ex. 38, cf. 2008: 135f.)).

- (i) a (su libburu_i/sa 'makkina_i) si dḍɔ_i-z/dḍa_i-z appɔ 'jaɔɔɔ_i/'jaðaza_i
 the book(M)/the car(F) SE 3SGM-PL/3SGF-PL I.have given.PLM/PLF
 I have given it (the book/the car) to them.
 (Paulilätino (Sardinia), Manzini and Savoia 2010, ex. 33)

This is an option independently given by the theory, although in (i) itself, the clitic-auxiliary-participle may be within the ‘small’ domain of morphology, on proposals like Ackema and Neeleman (2003). Unrelated to opaque cliticization, the multiple copy spell-out studied for clitics by Nunes (1999) reveals the possibility of effects at the intermediate movement sites (cf. Bonet 1995b: 75). Typical is (ii), where a part of the downstairs cluster is doubled upstairs. Morin (1979b: 304f. note 5) observes that the availability of doubling may dependent on the prosody of the host, as befits spell-out but not syntax. The spell-out of a copy influences that of another since a movement chain is naturally viewed as a single object, as in multidominance. Usually the effect of (not) spelling-out one copy is to simply (not) suppress the spell-out of another copy (cf. Bonet 1991, Bobaljik and Branigan 2006, Boškovic and Nunes 2007). Vaudois French (iii) is more interesting (Bürgi 1998: 52f., cf. 99f.). The 3PL.DAT clitic *leur* but not the 3PL.DAT clitic *lui* may appear doubled by the locative clitic (*z'*)_y, as frequently in Romance (Rezac 2010a: 165), but here the doubling is local for 3PL.DAT, but only above a matrix restructuring predicate for 3SG.DAT. We may see (i) as involving the chain *lui/leur y veux lui/leur y prêter*, where *leur* but not *lui* licenses spell-out of adjacent *y* downstairs, else spelled out upstairs.

- (ii) que m' en bau pourta m' en lou
 C me GEN I'm.going.to carry me GEN it
 I will carry it away with me.
 (Occitan, Piat 1911: §44).
- (iii) J' y veux le lui/*leur prêter.
 J' veux *lui/leur z'y dire, moi comment ça marche
 I LOC want it.ACC him/them.DAT LOC lend/say me how it works
 I want to lend it to them. / I wanna tell them, me, how it works.
 (Vaudois French, Bürgi 1998: 53, cf. 99f.)

Morphology might also need devices more powerful than syntax. There is a superficial diversity to opaque cliticization that suggests more arbitrary and more finely specified couplings between the features manipulated and the features of the context than occur in syntax (Bonet 1991: 64–75, 1995a: 645, 1995b). Across Romance, 3.DAT 3.ACC clusters may turn the 3.DAT into reflexive SE, locative LOC, or genitive GEN clitic, or add these elements to 3.DAT (at least SE and LOC), the 3.ACC may turn into $\emptyset$ or 3SGM.ACC or 3PL.ACC, plurality may be transferred or not, in systems that seem closely similar (Bonet 1991, 1993, 1995a, b, Manzini and Savoia 2002, 2005, 2008, 2010, Pescarini 2010, Rezac 2010a, 2010c). A fuller consideration of this point is found in Rezac (2010c), and here it will be made more simply for opaque agreement below. However, a couple of points of variation for 3SG.DAT $\rightarrow$ LOC may be noted (from Rezac 2010c, cf. Bonet 1991, 1993, 1995a on Catalan, Ahlborn 1964: 59–63 on Ruffieu-en-Valrôme):

- Some varieties only have opaque cliticization in 3.DAT GEN $\rightarrow$ GEN LOC, others also 3.DAT 3.ACC $\rightarrow$ 3.ACC LOC.
- In Barceloní Catalan and Ruffieu-en-Valrôme, 3SG/PL.DAT 3.ACC $\rightarrow$ 3.ACC LOC, in “Catalan B” only 3SG.DAT 3.ACC $\rightarrow$ 3.ACC LOC. The difference does not correlate with the surface form of 3PL.DAT which may or may not look like it contains LOC.
- In Barceloní 3SG.DAT /li/ becomes LOC /i/ in the context of a GEN /n/ clitic, so that 3SG.DAT GEN is /n-i/, but 3PL.DAT /lzi/ in the same context splits into /lz/ and /i/, so that 3PL.DAT GEN is /lz-n-i/.

Opaque cliticization thus presents a coherent modular signature of the morphology component distinct from syntax on all three elements: interaction with syntax and interpretation, information used, and mechanisms. It patterns with other morphological phenomena such as the phi-syncretisms discussed in Section 2.1.

Opaque agreement has the same profile. Combinations of agreeing arguments often fail to control simple cumulations of the exponents realizing their agreement in isolation. Deletions and transfers of phi-features are commonplace. For instance in Mapudungun (26), transparent 1_{subject} + 2_{object} agreement combinations have been historically replaced by the agreement of 1PL reflexives if the total number of participants is greater than two, and otherwise by the unique combination 1DU_{subject} agreement + an “inverse” morpheme (Arnold 1997):

- | | | | |
|------|---|--|---|
| (26) | a. pe-e-yimi- $\emptyset$
see-INV-2SG.SU-1.O
I see you. | b. pe-e-yu /
see-INV-1DU.SU
(2 participants) | c. pe-w-iiñ
see-REFL-1PL.SU
(2+ participants) |
| | | (Mapudungun, Arnold 1997) | |

Rhodes (1993: 145) aptly calls similar opaque agreement in Algonquian ‘inflectional idioms’. They are particularly common cross-linguistically for combinations of two 1st/2nd persons (Heath 1991, 1998). The outcome typically

makes use of independently available affixes, though sometimes in unique combinations, just as opaque cliticization tends to recruit independent clitics.¹²

Arregi and Nevins (2006a, b, 2008) study opaque agreement in the Basque dialects in (27). The combinations of ergative→absolutive arguments on the left surface not with morphemes reflecting their expected phi-features, but as the combinations on the right, with the phi-features in bold deleted. These deletions are obligatory; elsewhere the expected morphemes are found, for instance in 2SG/PL.E→1.PLA in Gallartu, 1PL.E→2SG.A in Alboniga.¹³

- (27) Basque phi-feature deletion (ERG→ABS): (dialect)
- | | |
|---|---|
| a. 2SG/PL→ 1PL → 2SG/PL→3SG | (Ondarroa, Bermeo) |
| b. 2SG/PL →1PL → 3SG/PL→1PL | (Maruri, Alboniga) |
| c. 1PL →2PL → 3SG→2PL | (Alboniga) |
| d. 1PL →2SG/PL → 2SG/PL.ABS intrans. | (Zamudio, Bakio, Foru;
Gallartu for 2PL.A) |

Like Bonet for opaque cliticization, Arregi and Nevins model opaque agreement as post-syntactic deletion of phi-features, but in the Distributed Morphology framework. They bolster Bonet's point that phi-features are manipulated, rather than their exponents or the phonology thereof. Examples will follow in (29), but one may briefly summarize the key facts pertinent to this. First, the exponents involved share no material and are on opposite edges of the word. Second, an agreement exponent maps to another that is related to it by being poorer in the phi-features expressed but not by any phonological properties. Third, regularities like the interaction of 1PL and 2nd person make sense in terms of phi-featural complexity but not any property of its exponents. Finally, there is an effect on the allomorphy of auxiliary roots that depends specifically on phi-features rather than their exponents, discussed for (29)c.

Both opaque cliticization and opaque agreement present the same morphological signature. Taking up first the arbitrariness with which concluded the discussion of opaque cliticization, opaque agreement has it in an exacerbated form. In (27), Alboniga but not Ondarroa transforms both 2SG/PL.ERG→1PL.ABS and 1PL.ERG→2PL.ABS, and the latter transformation unlike the others differentiates 2PL from 2SG. More extreme is Chukchi (28), where

¹²Mapudungun is returned to in Chapter 3 for another aspect of its system. See Lakämper and Wunderlich (1998) for another detailed study of 1↔2 opaque agreement, in Quechua dialects.

¹³Some details are added from Yrizar (1992), Egaña (1984: 14), as is all of Foru from Gaminde (1992). The rules are exhaustive save for Bakio (where all 1/2→2/1 combinations are said to be opaque, Hualde 2001: 228 note 5). Thus in Gallartu only 2SG but in Alboniga 2SG/PL are affected (Yrizar 1992(I): 479, 482, (II): 124, 127), and in Alboniga alone both 1PL→2 and 2→1 combinations are opaque. Some of these combinations are subject to 'arbitrary' gaps discussed in Section 2.3: 2PL→1PL in Bermeo, as well as in Foru where however an independent dative-object construction steps into the breach, as it does for 1PL→2SG in Gallartu. Morphologically, 2SG in (27) is 2PL and 2PL is a double plural (Rezac 2006).

object agreement features are deleted for arbitrary combinations of the object, subject, and tense features.

- (28) Chukchi spurious antipassive: deletion of object agreement phi-features and insertion of an extra voice-like morpheme in the subject→object contexts 3SG→1SG, 2→1 in the non-participial tenses, and additionally 1→2, 1/2→3, 3SG→3 in the participial tenses.
(Bobaljik and Branigan 2006: 68, 77 note 20)

The superficial impression of arbitrariness may be given a sharp edge: it has no analogue in agreed-on syntactic dependencies. There is no Object Shift known for 1SG but not 1PL object when the subject is 3SG but not 3PL (see further Section 3.5). Syntax may lack the mechanisms for to code such feature couplings.

Bobaljik and Branigan's (2006) analysis of (28) is couched in a postsyntactic morphology, and they underscore that it rightly predicts syntactico-semantic intertness (p. 71f.). The same is true of the opaque agreement of Basque (27), illustrated in (29). The opaque forms retain their nonimpoverished interpretation, even under *pro*-drop, and the ϕ phi-features of linked pronouns are unaffected.

- (29) a. Su- k_i gu_j ikusi d-o- su_i [$< ga_j-itx_j-u-su_i$]
you-ERG us.ABS seen DFLT-AUX-2pE 1pA-pA-AUX+ERG-2pE
You saw us.
(Ondarroa Basque, Arregi and Nevins 2008, ex. 32)
- b. erung-o- su_i [$< -ga_j-it_j-u-su_i$] gu_j
bring.FUT-(AUX.)2pE 1pA-pA-AUX+ERG-2pE we.ABS
You will bring us.
(Bermeo Basque, Egaña 1984: 14, Hualde 2000: 22 note 1)
- c. $gu-k_i$ ikusi s_j-ara [$< sa_j-it_j-u-gu_i$]
we-ERG seen 2pA-AUX-ERG.pA 2pA-pA-AUX+ERG-1pE
We saw you.
(Foru Basque, Gaminde 1992: 92)

Case assignment to overt pronouns is also not affected. Basque agreement-bearing auxiliaries use different roots according to the presence or absence of ergative agreement: [+ERG] vs [-ERG] roots (Rebuschi 1983, Albizu 2002). In Alboniga (27)b, the impoverishment of the phi-features of the ergative agreement simply turns the exponent 2pE *sue* to 3sE $\emptyset$, so that $ga_{1pA-itx_{pA}-u_{[+ERG]}}-sue_{2pE-s_{pA}}$ becomes $ga-itx-u-\emptyset-s$. In (27)d shown in (29)c on the other hand, the ergative phi-features are totally erased so that not even 3sE is present. This affects the choice of the auxiliary root, which is now the [-ERG] root of unaccusatives, with its distinctive allomorphy for absolutive phi-features. The phenomenon is superficially similar to syntactic detransitivization used in Basque for anticausatives, mediopassives, and reflexives, so that

(29)c *ikusi sara* can mean ‘You see yourselves’ (Hualde and Ortiz de Urbina 2003: 4.7, 4.9.1.3). However, no ergative argument is possible then. When *ikusi sara* is created by opaque agreement in (29)c, the ergative argument *guk* remains, and remains ergative. Syntax and interpretation do not see the agreement impoverishment at all.

These observations also testify to the local character of opaque agreement, the same as for opaque cliticization. Only phi-features in the agreement complex are visible, not phi-features at a distance. There seems to be no analogue of opaque agreement that would reach out to affect the features of remote independent pronouns like *guk* in (29), with or without those of agreement affixes. It would appear as the deletion or transfer of phi-features, like Basque (29) or Chukchi (28), or the opaque cliticization in (16), as arbitrary as they are – but affecting the phi-features of pronouns separated by as large a phrase-structure distance as agreement regularly spans. The absence of such phenomena bespeaks a significant limit on morphology, (30).

- (30) Morphological mechanisms are restricted to “small” domains: adjacent elements, nonadjacent ones in the extended word, etc.

(30) characterizes many theories of morphology, which restrict morphological mechanisms to small domains explicitly (Carstairs-McCarthy 1992: 3.3.1, Ackema and Neeleman 2003, Embick and Marantz 2008), or through the nature of the information which they manipulate (Embick and Noyer 2001). Other theories give realizational morphology the power to span phrase-structurally unbounded domains, some explicitly for agreement and case (Marantz 2000, Bobaljik 2008). Opaque agreement and cliticization must not be within their scope, in order to derive (30).¹⁴

The generalization (30) is one of the core issues to be addressed if opaque agreement and cliticization belong to syntax rather than morphology. In order to model them, syntax must be capable of selecting or moving subsets of phi-features: 3rd person but not 1st/2nd person, 3rd person plural but not singular or 1st/2nd person plural. The means to do so are introduced by the pioneering work of Laka (1993a) and others on the separate placement of person and number agreement morphemes through X^0 movement in the syntax. Subsets of phi-features such as [number] are conceptualized as independent syntactic terminals. In this manner Bonet’s (1991) featural decomposition of Romance

¹⁴Strict adjacency does not seem to be the right condition on morphological phi-feature manipulations or even allomorph selection; see Carstairs-McCarthy (1992: 3.1.3), Bonet (1991: 90, 114 note 15, 173 note 29), Noyer (1992: 87), Stump (1998: 34), Ackema and Neeleman (2003), Bobaljik (2000: notes 17, 44). The iteration of local processes in morphology does not seem to break out of this small domain condition in general, Noyer (2001: 796), although perhaps such iteration is available, Harris and Halle (2005). If failure to iterate is derivable from the way the syntactic tree is spelled out, cf. Bobaljik (2000), it might permit exceptions.

clitics may be recast in syntax. Her [3rd person], [plural], or [locative] features become corresponding syntactic terminals, much as C° has become Fin° , $Force^\circ$, Top° , Int° in the cartography of the left periphery of Rizzi (1997). Among the rich studies in this vein are Ritter (1995), Polletto (2000), De Crousaz and Shlonsky (2003), Kayne (2000, 2007, 2008), Cardinaletti (2008), Taraldsen (2010), and with different assumptions, Manzini and Savoia (2002, 2005, 2008, 2010); Laenzlinger (1993) pioneers syntactic constraints on clitic features. The term *nanosyntax* of Taraldsen (2010) reflects the spirit of the analyses. It may be pursued independently of any considerations of the scope of the morphological component. However, it may also be given deeper foundations in modularity, in order to exclude a morphological component that would manipulate the same features as syntax or effectuate operations that resemble those of it, as discussed in Section 2.1.

Nanosyntax remains to be applied to opaque agreement and cliticization of any complexity. Their morphological signature indicates the contrasts with other syntactic phenomena that need to be addressed (Rezac 2010c):

- *Inertness*: The opaque phenomena above neither lose nor gain syntactico-semantic properties. Syntactic movement can often reconstruct, but it does affect properties such as binding. Empirically notable is the difference between all opaque cliticization and the PCC repair (cf. (19)), differing on inertness although superficially identical.
- *Information*: Opaque phenomena refer to the subset of syntactic information also used by exponence. Again, the PCC repair provides a minimal contrast (cf. (24)).
- *Mechanisms*: The locality of opaque phenomena contrasts with canonical syntactic movement across phrase-structurally large or unbounded distances. The PCC repair spans them, (25). The parametrization of opaque cliticization may also be technically difficult to achieve, and there remain to be found analogues in canonical syntactic movement.

Thus the nanosyntactic approach finds a way for syntax to model opaque agreement and cliticization, but it does not yet bridge the divide between them and established syntactic dependencies. These considerations do not exclude a partly syntactic approach to the former, but indicate the need to derive their distinctive properties and their coherence in their modular signature. Distributed Morphology is a step along this road, positing a single computational system for syntax and its realization, but modularizing its operations through information types (Section 2.1); see Harris (1996) for opaque cliticization, Noyer (1992, 2001), Arregi and Nevins (2006a,b 2008) for opaque agreement. Distributed Morphology is indeed partly a reconciliation of the similarities and differences of XP and X° movement in approaches like Rizzi (1990) and Chomsky (1995). XP and X° are both constituent movements observing locality, cyclicity, and referring to the same features in the Spec-Head Criterion. However, their chain links occupy different niches of the X -bar schema, and in virtue of this, Chain Uniformity and Relativized Minimality ensure that they do

not interact, and that they present different structural profiles in terms of the distance between chain-links and immediate c-command among them. Other divergences include scopal correlates of overt positions for XP chains only, and reference to affixal requirements for X° chains only. Distributed Morphology sends the phenomena involved into two modules with a shared computation. Principles like Chain Uniformity and Relativized Minimality impose a weaker cleavage, but still attribute to each phenomenon a distinctive interactional, informational, and structural profile, its modular signature. Along these lines nanosyntax might also proceed (Rezac 2010c).¹⁵

However that may be, these considerations show what would be the modular signature of syntax: visibility to other syntactic and interpretative phenomena, reference to information systematically ignored by morphology, and hallmarks of syntactic computation. In the next two chapters, these properties bring into syntax phenomena that superficially resemble opaque agreement and cliticization, as well those that resemble morphological synthetic-analytic alternations, discussed next.

2.3 Gaps and Synthetic-Analytic Alternations

In *synthetic-analytic alternations*, a set of syntactic features sometimes has an affixal or *synthetic* expression, the negation in *has-n't* and the tense in *walk-ed*, and sometimes a nonaffixal or *analytic* one, *has not*, *will walk*. This heterogeneous phenomenon comprises a natural class with a distinctive morphological signature. It speaks to the properties and limitations of morphology, and in it is reflected as in a mirror the character expected of synthetic-analytic alternation in syntax.

The morphological synthetic-analytic alternations in this section are governed by *syntactico-semantically arbitrary gaps* (Baerman, Corbett and Brown 2010). They occur when a syntactic structure is unrealizable, or 'ineffable', for reasons other than syntax or interpretation. Examples are the absence of 1/2PL for French *frire* 'fry' (e.g. 1PL **frions* vs. *rire* 'laugh', 1PL *rions*), past for English *forgo* (**forwent*, **forgoed*), past participle for *stride* (**stridden*, **strided*), contracted form for *am not* (**amn't* -- *isn't*, *aren't*), and subject-verb inversion in French for *-je* 'I' with most verbs (*dois-tu/je* 'must-you/I' but

¹⁵Less adapted to the inertness of opaque cliticization and agreement seems the view of Manzini and Savoia (2002, 2005, 2008, 2009, 2010) that surface syncretism entails full identity of syntactic structure (Rezac 2010c). This work adopts an early-insertion, surface-true analysis, where a locative for a dative clitic is the use of a locative syntax and interpretation for something that can also be described by a dative syntax and interpretation, in the way that the location *load hay on the wagon* corresponds to the theme in *load the wagon with hay*. In 18/19a, selection would restrict such a locative to the context of a 3.ACC clitic, a dative elsewhere, beside a generally available locative. At present, the failure of an opaque clitic to adopt the syntax witnessed by its independent use seems a considerable challenge, beside the issues faced by nanosyntax.

*bois-tu/*je* ‘drink-you/*I’). These gaps may be wholly arbitrary synchronically, but syntactico-semantically arbitrary are also gaps motivated in other systems, like the prosodic constraint in (4).

Arbitrary gaps often occur where closely related systems have opaque cliticization and agreement. In (27)a, the 2PL.ERG→1PL.ABS combination deletes the object’s phi-features in Bermeo Basque. The 1PL.ERG→2PL.ABS combination incurs a gap. Speakers resort to a paraphrase, like *Bakosu guretsako lekorik ela?* ‘Do you have room for us?’ for **Erungosu gu?* ‘Can you take us along?’ (Egaña 1984: 14). Lekeitio Basque lacks the agreement combination 1PL.ERG→2PL.DAT, and speakers can only use nonagreeing allative and other postpositions to paraphrase the sense of the agreeing dative, much as in (4) (Fernández 2001: 156). Wiltschko (2008: 309) compares the arbitrary agreement combinations where Chukchi uses the spurious antipassive (28) to Halkomelem gaps for (subject→object) 3→2 but not 3→1, and to Thompson River Salish gaps for 1PL→3 and 2SG→1PL but not elsewhere. There is one caveat. Opaque cliticization and agreement refer to phi-features rather than their exponents; it is less clear that arbitrary gaps ever do so. However, there is some evidence for it analogous to that mentioned for opaque agreement, including generalizations over phi-feature classes like interactions between 2nd person and 1PL in Basque.

The causes of these gaps are sometimes understood and reinforce the impression of syntactico-semantic arbitrariness. Among them are uncertainty in morpheme order or allomorph choice, anti-repetition constraints on morphological or phonological features, morphological garden paths, acquisition failures due to conflicting generalizations, and perhaps limits on feature complexity in morphemes: see Noyer (1992: 164–6), Heath (1991, 1998), Neeleman and van der Koot (2005), Albright (2006), Arregi and Nevins (2008), Rivero (2008), Wiltschko (2008), and Baerman et al. (2010).

The gaps of interest here belong to the morphology or its use by the parser-producer. From this follow their properties. One is their definability within phrase-structurally ‘small’ domain, to which morphology but not syntax is restricted by (30) (cf. Wiltschko op.cit.). Another, central to modularity, is their syntactico-semantic inertness, brought out by Trommer (2002) and Embick and Marantz (2008). An expression that exists only in the context of a gap is its *repair*, whether licensed by the gap itself (Andrews 1990, Poser 1992, Williams 1997), or by a restatement of the conditions that define the gap. The modular architecture of the Y/T model claims that gaps defined at PF cannot have syntactico-semantic repairs. This is so. The missing past participle of English *stride* renders unavailable the perfect (31)a, but does not license otherwise unavailable syntactic structures (31)b or interpretations (31)c. The perfect of *stride* is ineffable.

- (31) a. *He has strid-?.
 b. *He is after striding.
 c. *By now, she strode across the desert for many years.

Inert arbitrary gaps are pervasive in French clitic clusters, such as those in (32) (Rezac 2010a). Unfocussed pronouns in French must be realized as clitic rather than strong. Arbitrary clitic cluster gaps do not license strong pronouns, as in (33) and (34). The underlying syntax is ineffable. When strong pronouns do replace the blocked clitics in (33) or (34), they bring along obligatory focus (see further Section 4.6).

- (32) a. ?*3SG.DAT + LOC (*lui y*)
 √3PL.DAT + LOC (*leur y*)
 b. ??3SG.ACC + LOC (*l'y*) // __subcategorized dative
 √3PL.ACC + LOC (*les y*) // __subcategorized dative
- (33) C'est parce que le nid protège ses petits_i / son petit_i que
 a. l'oiseau *leur_i* *y* donne à manger.
 b. l'oiseau *y* donne à manger *à eux_i / EUX.
 the bird them.DAT LOC gives to eat to them / THEM
 c. *l'oiseau *lui_i* *y* donne à manger.
 d. l'oiseau *y* donne à manger *à lui_i / LUI.
 the bird him.DAT LOC gives to eat to him / HIM
 Because the nest protects its young, the bird feeds them/*him/HIM there.
 (French, Rezac 2010a: 164; see Section 4.6)
- (34) Maï voulait de nos hérissons_i / notre hérisson_i, mais c'était embêtant de
 (les_i/le_i) lui donner à la boutique. C'est parce que c'était calme au bar qu'
 a. on *les/??l'_i* *y* a donnés à Fañh.
 b. *on *y* a donnés eux/lui_i à Fañh.
 one them/??him.ACC LOC has given them/him to Fañh
 Maï wanted our hedgehog(s), but it was hard to give him/them to her at
 the shop. Because it was calm at the bar, we gave them/??him there to
 Fañh.
 (French, Rezac 2010a: 168, see Section 4.6)

The inability of arbitrary clitic gaps to license the syntax of strong pronouns is just the syntactico-semantic inertness of morphology in a modular architecture. They are outside syntax and syntax cannot respond to them. This prediction obtains only for those strong pronouns that differ syntactically from the clitics they would repair. In French strong pronouns do so, as will be seen in Chapter 4 for a variety of other properties. Moreover, they are placed at a considerable phrase-structural distance from the clitic cluster where the gap occurs.

If there were strong pronouns that differed from clitics/affixes only by their form, but reflected the same underlying syntax, modular architecture would not bar a clitic/affix-strong alternation, for it could occur entirely in the morphology. It should then present the other aspects of morphology, such as limitation to small domains. The well-studied English comparative in (35) illustrates the expected character of a morphological clitic/affix-strong alternation.

- (35) Lynn is slower / more rapid / more apt / more ploddingly slow than Helen ever was. (*more slow, *rapider, *apter, *ploddingly slower)
- (36) The slower / more detailed, the better / more interesting.
(Booij 2002: 316 note 7)

The availability of the *-er* comparative depends on the morphophonological properties of the adjective: length (*quicker*, **rapider*), segmental phonology (*sillier*, **regaler*), and lexical idiosyncrasy (*redder*, **gladder*, **apter*). To syntax these differences among adjectives are arbitrary and invisible. The *more* comparative occurs to repair the gaps of *-er* formation, and not otherwise (Poser 1992, Williams 1997, cf. Embick and Marantz 2008: 27).¹⁶ Since nonsyntactic factors govern the synthetic-analytic alternation of the comparative, by modularity it should occur outside syntax. So it is indeed. For syntax and interpretation, the alternation is inert. Both *-er* and *more* have the same comparative meaning, capacity to license NPIs (35), and special use in correlatives (36). Bracketing paradoxes like (37) show that *-er* scopes over the entire adjective, like *more*, even when its morphophonological restrictions require it to attach to a subpart of it.

This alternation demands of morphology the power to span more than the word, but not much more. Embick (2007) develops an analysis in Distributed Morphology. After the mapping to LF, morphophonological information is inserted. The affix *-er* spells out the degree head DEG° . It right-attaches to the adjective if its morphophonological requirements are met, else surfaces as *more*, (38). Attachment occurs through the Merger operation (10)b operating at this point over morphophonological strings, so it is restricted to changing the order of adjacent elements. The affix *-er* can attach to an adjacent adjective, but not skip a modifier like *ploddingly* in (35). The limitation of morphology to ‘small’ domains, (30), resurfaces, even if larger than the word (cf. Poser 1992).

- (37) Bracketing paradox: *unhappier*
 a. Meaning: *-er* modifies *unhappy*, ‘less happy’, not *happy*, ‘*not happier’;
 cf. *more unequivocal* ‘less equivocal, *not more equivocal’.
 b. Morphology: *-er* attaches to short adjective *happy*, not long *unhappy*.
 (Sproat 1985, Stump 1991)

- (38) $\text{DEG}^\circ \text{ A}^\circ \rightarrow \text{(a) A} + \textit{er}$ if attachment possible, else (b) *mo* + *er* A

In the comparative alternation thus emerges the familiar morphological signature: syntactico-semantic inertness, partly nonsyntactic information, and partly nonsyntactic mechanisms (insofar as Merger operates in a special way in virtue

¹⁶The fact that adjectives like *happy* accept both formations for some speakers admits of technical solutions even in models that license the analytic form in virtue of a synthetic gap (Poser, Williams, Embick op.cit.); but see Spencer (2005: 289) for other relevant examples.

of linear order). The same signature appears in synthetic-analytic alternations due to gaps defined by phi-features. In Irish, the subject of a verb must be realized as an agreement affix if an appropriate inflected form of the verb is available, and as a strong pronoun otherwise, (39). The verb *cuir* ‘put’ has a synthetic 1SG conditional form, blocking the strong pronoun, but no 2PL conditional, for which must be used the 3SG and a strong pronoun (McCloskey and Hale 1983, Andrews 1990):

- (39) a. Chuirfinn (*mé) b. *Chuirfeadh mé c. Chuirfeadh sibh
 put.COND.1SG I put.COND.3SG I put.COND.3SG you.PL
 (Irish, McCloskey and Hale 1983: 489–91)

The set of inflected forms is syntactico-semantically arbitrary, although there are islands of regularities over phi-feature classes. Taking the present and past from Andrews (1990): the dialect of Kerry has inflected forms for all phi-features save 2PL present; likewise Chorca Dhuibhne, but the gaps extend to 2SG/PL present; Connacht and Ulster retain only 1SG present (Connacht also has 1/2SG present/past and 3PL past in a tag/response VP-ellipsis construction). This arbitrary, lexically-specified set of inflected forms block the analytic constructions used elsewhere (McCloskey and Hale 1983: 531, Andrews 1990, and the citations below). Modularity predicts that this affix-strong pronoun alternation should have a morphological signature, including syntactico-semantic invisibility and locality.

McCloskey and Hale (1983) establish that the behaviour of the agreement affix and the pronoun is indeed syntactically identical: that of a strong pronoun. For example, the affix can head relative clauses, or participate in coordinate structures (40). This is a context where in Romance only strong pronouns and not clitics or *pro* can occur. Cardinaletti and Starke (1999) argue that the prosodic deficiency of Romance clitics and *pro* corresponds to a syntactico-semantic deficiency that excludes them from such contexts (cf. Chapter 4). In Irish, prosodic and syntactico-semantic deficiency do not cohere, as also sometimes elsewhere (Zribi-Hertz and Mbolatianavalona 1999, Zribi-Hertz and Diagne 2001). Irish affixes are deficient in their prosodic attachment need alone, not in syntax or interpretation.

- (40) dá mbeinn -se agus tusa mór len a chéile
 that be.COND.1SG CONTR and you great with each other
 that you and I would be very friendly with one another.
 (Irish, McCloskey and Hale 1983: 502)

Attributing the Irish alternation to morphology immediately explains its properties and its contrast with French. It is syntactico-semantically inert, both the pronoun and the affix reflecting the same syntactic structure. It is sensitive to arbitrary gaps. It can ignore the Coordinate Structure Constraint in (40)

because the morphological verb-pronoun amalgamation is not blocked by syntactic islands (Pranka 1983, Doron 1988, Legate 1999, Ackema and Neeleman 2003; cf. (10)b). Finally, it is limited to a ‘small’ domain. In French strong pronouns are VP-internal and clitics attach to T, and much phrase-structure lies in between. Morphology cannot cross this distance, just as English *-er* affixation cannot. In Irish however, subjects raise in the syntax to a position immediately c-commanded by the finite verb (Chung and McCloskey 1987: 227). Morphology then realizes the subject as affix or strong pronoun under adjacency (Ackema and Neeleman 2003).

The grouping in the Irish synthetic-analytic alternation of syntactico-semantic inertness, sensitivity to arbitrary gaps, and limitation to small domains that may cross syntactic islands, is once more the full signature of morphology in a strong modular architecture. Beside such morphological alternations, others exist that are syntactic: potentially visible to syntax and interpretation, blind to purely morphophonological information and often referring to a fuller panoply of syntactic information that morphology does, with the potential to span phrase-structurally large domains. The French alternation of unfocussed clitics and focussed strong pronouns in 33 is one. A subtler French clitic-strong pronoun alternation is the subject of Chapter 4. It is the repair of the Person Case Constraint that stands in minimal contrast to both morphological opaque cliticization and synthetic-analytic alternations on all aspects of the modular signature.¹⁷

¹⁷Syntactic models of morphophonologically-governed synthetic-analytic alternations often ensure a weaker modular signature by restricting the syntactically visible aspects or domains of realization: see Poser (1992), Embick (2000), Chomsky (2001). Richer models with less restricted paradigms of synthetic and analytic constructions are Andrews (1990), Börjars, Vincent and Chapman (2005), Sadler and Spencer (2000). Fully amodular interaction of syntactic, interpretive, and realizational constraints is proposed by Kiparsky (2005).

The locality prediction of strong modularity would be nuanced if an analytic construction first spelled out according to morphophonological conditions and then could be dissociated by syntactic movement of a part of its PF-content, as sometimes proposed for ‘stylistic’ rules or inert scrambling (Chomsky 2001). Consider the Latin perfect active. It alternates between the synthetic for most verbs, *laudā-v-ī* ‘praised-PERF-1SG = I have praised’, and the analytic for an arbitrary set of ‘deponent’ verbs that are passive in perfect formation but active in syntax, *secūtus sum*, ‘followed I.am = I have followed (transitive)’. Embick (2000) entertains an analysis where the arbitrary property P of deponent roots blocks postsyntactic amalgamation of V with T + AGR. V is then spelled out as the participle and may move away from T + AGR by semantically inert syntactic movement. He favors an alternative with early insertion of P into the syntax where it block syntactic head raising of V_P to T, allowing the unraised V_P to move in syntax prior to spell-out, and then be spelled out as the ‘passive’ participle separate from T + AGR. The third alternative, which does not weaken modularity, would allow any V to move away from T prior to spell-out, amalgamate with T at spell-out if adjacent, and assume the ‘passive’ participle form otherwise. Embicks rejects this because it would let any verb have the deponent analytic formation if moved away from T + AGR, not only those with P (**laudātus . . . sum* ‘I have praised (active)’ beside *laudāvī*, p. 203). However, for ordinary transitives, the moved V would in fact not have any form to assume, since Latin

2.4 The Limits of a Modular Signature

From this survey emerges a strong modular architecture in which syntax and morphology each have their distinctive informational and computational properties, and morphology is invisible to syntax and interpretation. By the clustering of these properties in the modular signatures (2), linguistic phenomena are individuated as morphological or syntactic. The counterpart of the morphological signature of this chapter is the syntactic one of those that follow, the more striking because it characterizes phenomena superficially similar to the ones seen here.

The strength of the conclusions reached in this chapter must be tempered in two ways: the phenomena left aside and the nature of the evidence. DP-internal concord illustrates the first caveat. It has not been investigated here, and so might be a domain where morphology transmits phi-features at a ‘moderate’ distance (cf. the remarks on adjacency in Wechsler and Zlatić 2000: 819). The French *gens* ‘people’ illustrates a possible state of affairs (Grevisse and Goosse 2008: §490). It is masculine, including for adjectival concord, *pleins* in (41)a, save for preceding determiners and modifiers if adjacent: *vieilles* and *bonnes* in (41)a, *toutes* and *petites* in (41)b, *bonnes* in (41)c but not in (41)d where *et* ‘and’ intervenes. This would then be transmission of phi-features sensitive to linearity and adjacency, and thus in the morphology, yet iterative or unbounded. However, beyond a few set collocations, speakers either treat *gens* as masculine or lack judgments. This phenomenon therefore looks like the prescriptive ‘viruses’ of Sobin (1997), Lasnik and Sobin (2000), or like idiomatic exceptions that do not refer to phi-features at all.

lacks perfect active participles. The effect of P is precisely to allow the perfect active vP of V_P to spell out as perfect passive participle.

Kiparsky (2005) describes clearer evidence for Embick’s problem. The Sanskrit analytic perfect mostly occurs only when the synthetic perfect is unavailable: (i) regularly when a morphological affix prevents the root from reduplicating; (ii) sometimes when a phonological reason does so; (iii) for a handful of roots where synthetic and analytic perfects coexist. The two parts of the analytic perfect may occur widely-separated: *prabhranīccayām yo nagusām cakāra* ‘who (yo) made (*cakāra*) Nagusha (*nagusām*) fall headlong (*prabhranīccayām*)’ (Whitney 1896: §1071–2). This does suggest that the result of an analytic formation sensitive to morphophonology can subsequently displace. However, it would seem that at the Vedic stage where Sanskrit was a first language, the analytic perfect is too rare to conclude anything; after the grammarian Panini’s time when the foregoing dissociated analytic perfects occur, Sanskrit was only a second language; and Panini describes the analytic perfect as a morphological alternative to the synthetic with its parts inseparable (Staal 1967: 30; for Panini’s Sanskrit, Cardona 1999: 2.1.4.8). (Kiparsky also discusses a couple of roots that allow the analytic perfect because the synthetic one has an irregular meaning, like *veda* ‘knows < has seen’; but these are treated by Whitney (op.cit.) under (iii) as roots that need a diacritic specifying the availability of the analytic perfect, also needed for (ii) because roots with the same shape may behave differently.)

- There are more robust cases of apparent sensitivity of agreement to linear order, notably in first-conjunct agreement by preceding targets versus last- or whole-conjunct agreement by following ones, as in (42). However, some have elegant syntactic treatments using c-command rather than linearity, e.g. Munn (1999), van Koppen (2005), and Bošković (2009), while others may involve adjacent elements in a small domain, Benmamoun, Bhatia and Polinsky (2009). If there is a morphological mechanism of phi-concord over phrase-structurally unbounded distances, it must remain so delimited as not to create undesirable opaque agreement and cliticization and synthetic-analytic alternations over such distances.

- The second caveat comes from the nature of grammaticality judgments and the linguistic domains on which they bear. Synthetic-analytic alternations may illustrate the issue. Some analysts attribute to the same mechanism the ‘blocking’ of **more small* by *smaller* and of *#the day before today* by *yesterday* (Di Sciullo and Williams 1986: 13, Andrews 1990b: 521, Williams 1997, 2007). For others, these have a wholly unlike status, and arise from unrelated mechanisms in different domains, morphological (non-)generation versus pragmatic (non-)felicity (Poser 1992: 123–5, Embick and Marantz 2008: 15 note 8; cf. Legate 1999, Nunberg 2002: 268ff., Langendoen 2002: 631). The latter is the view adopted here. It leads to the correlations of properties discussed above, including of morphophonological conditioning and phrase-structurally small domains. The alternative former view leads to a generalized blocking principle covering domains from the ‘lexical’ blocking of *went* – **goed*, through classical synthetic-analytic alternations, to syntactic pronoun-anaphora alternations, and finally the pragmatic blocking illustrated by *yesterday* above (Williams 1997, 2007, Kiparsky 2005). The disagreement is about where judgments carve nature at the joints.

The same issue recurs for the clitic phenomena discussed earlier for (23) and seen again in (43). In some French varieties, a 3PL.ACC clitic is deleted in a 3PL.DAT 3.ACC cluster, but it continues to behave as if present for binding, floating quantifier licensing, and participle agreement. In these varieties, such examples are usually judged as perfect. However, (linguist) speakers may report them more difficult to *parse* than with an overt clitic, according to the contextual facility of recovering the silent clitic's referent. Thus 3PL.ACC clitic deletion is easy in (23)b, *Elle [n']a plus de conseillères_i a proposer: elle les_i/Ø_i lui (toutes_i) a déjà présentées* 'She has no more counsellors_i to propose: she has already introduced them_i/Ø_i to him', but difficult if *conseillères* 'counsellors' is replaced by *rencards* 'meetings', which forces one to infer some contextually plausible theme of 'introduce' like 'counsellors'. Elements that depend on the clitic's phi-features like floating quantifiers and participle agreement accentuate these preferences for some. As with the blocking of *the day before today* by *yesterday*, linguist speakers split in reporting clitic deletion in (43) as more difficult to parse than an overt clitic but perfectly grammatical, versus as degraded (?), if the floating quantifier is present.¹⁸

- (43) a. Je ne peux pas te donner mes chaussures;
I cannot give you my shoes(F)
parce que je les_i/Ø_i lui ai toutes_i promises_i.
because I them.ACC her.DAT have all.PLF promised.PLF
- b. Laisse-moi les robes_i je les_i/Ø_i lui mettrai toutes_i;
Leave me the dresses I them.ACC her.DAT will.put.on all.PLF
pendant les vacances.
during the vacations.

¹⁸The results reported here about clitic deletion are drawn, on the one hand, from discussions with eleven speakers (four linguists), on the other, from the eleven speakers (three linguists) of the questionnaire discussed in Chapter 4; I am particularly grateful to M. Joutteau, N. Guillot, A. Zribi-Hertz, A. Dagnac, and R. Kayne for discussion. The following patterns may be discerned. Most speakers find 3PL.ACC *les* clitic deletion perfect with floating quantifiers (on the questionnaire, 6/11 for (43)c); for some it is virtually obligatory unless the clitic is contextually difficult to recover (cf. Ronjat 1937: 566). Some (4/11 on the questionnaire) only allow 3SGM/%F.ACC clitic deletion, so that in (i), elements that depend on plural rather than singular clitics are impossible with the silent 3.ACC clitic: cf. *Je *(les) ai envoyé tous ensemble / les uns après les autres*, *Je *(l')ai envoyé l'un après l'autre*. Without them bare *Je lui ai envoyé* is fine in this context, or with right dislocation *Je lui ai envoyé, les uns après les autres*, but a 3SG clitic may be posited here, cf. *J'ai envoyé la commande, les uns après les autres* 'I sent the order, two at a time'. This pattern may be reported in Morin (1978: 12 note 5, 1977: 371), brought to my attention by R. Kayne p.c. Some speakers do not permit 3.ACC clitic deletion at all. (From floating quantifiers must be kept distinct the nonagreeing adverb *tout* 'entirely', *toute* in Quebec French, Jones 1997: 237f., De Cat 2000: 4f.: *J'ai %tout/*tous_{PLM} rapé mes gants* 'I have completely scratched up my gloves').

(i) [Context: (43)c.]

On Ø *lui* a (??*tous*) envoyés (??*tous ensemble* / *l'un après l'autre* / ??*les uns après les autres*).
We *him*.DAT have (??all) sent (??all together / one after the other / ??ones after the others)

- c. Elle voulait [deux livres sur le Périgord et deux_j sur le Finistère]_i
 She wanted two books(M) about Perigord and two about Finistere
 On *les_i/Ø_i lui a tous_i envoyés_i tout de suite.*
 We them.ACC her.DAT have all.MPL sent[MPL] immediately.
 (French; [] orthographic agreement only)

The most striking illustration of such issues comes from interactions between clitics and agreeing elements in Italian reported in Napoli (1974). Napoli proposes a ban on the crossing of agreement dependencies between subject / clitic object controllers and elements that agree with them. In (44)a, the floating quantifier *tutti*, agreeing with the subject for plural masculine, is barred if it intervenes between the plural feminine object clitic and the participle *viste* that agrees with it. If the participle did not agree, for instance if the object were a non-clitic or a dative clitic, *tutti* would be fine. *Tutti* is also fine in the post-participial position in (44)a because then there is no crossing of agreement dependencies, but bad again in (44)c because the secondary predicate recreates the crossing. The striking effect that Napoli observes is that the morphophonological realization of phi-features on the controller has an effect on the crossing ban. When the distinctively PLF *le* clitic of (44)a is in (44)b replaced by the 1PL *ci* syncretic for gender, the effect is reduced to ?, and likewise for other choices of object clitics and subjects syncretic for gender. Even more remarkably, in (44)d the same amelioration is brought about by phonological elision of the vowel of the clitic that eliminates the gender-marking vowel (on the phonological nature of the elision, see Russi 2008: 217f.).

- (44) a. I ragazzi_i le_j hanno (*tutti_i) viste_j (√tutti_i).
 b. I ragazzi_i ci_j hanno (?tutti_i) viste_j (√tutti_i).
 the boys them(F)/us have.3PL all.PL seen.PLF all.PL
 c. I ragazzi_i le_j volevano (*tutti_i) vedere (*tutti_i) nude_j.
 the boys them(F) wanted.3PL all.PL see all.PL nude.PLF
 d. I ragazzi_i *la/?l'_j hanno tutti_i vista_j.
 the boys her have.3PL all.PL seen.SGF
 (Italian, Napoli 1974)

These ameliorations, Napoli reports as grammaticality judgments. Cinque (1999: 219 note 28, 118) finds Napoli's cases like (44)a 'quite grammatical'. Other Italian and French speakers find Napoli's pattern, yet not necessarily as a matter of grammaticality, rather of parsing (for some independent of the overt expression of agreement). Napoli's effect of elision on long-distance agreement dependencies would be hard to account for under the hypothesis of phonology-free syntax, the most robust and explanatory aspect of modularity. But it may be viewed otherwise: as the summation of both syntactic and morphological well-formedness and of production-processing. In parsing/production, morphophonological difficulties interact with judgments of syntactic well-formedness,

along with other factors like prescriptive rules (cf. Rezac 2010a for (32)a). These different sources of linguistic difficulties are only sometimes superficially distinguishable. Garden-paths, for instance, can sometimes be bypassed by a judgment of grammaticality, as in the centre-embedding type *The horse raced path the barn fell*, but sometimes not, as in the type (*)*The daughter of the Pharaoh's son admires himself* 'The son of the daughter of the Pharaoh admires himself' (Fodor and Inoue 1994). This leads to familiar uncertainty about the source of phenomena like A'-Superiority (Clifton, Fanselow and Frazier 2006, Sag et al. 2006, cf. Snyder 2000, Sprouse 2009). Only the analysis remains to judge the coherence and robustness of the patterns and weigh the caveats.

References

- Ackema, Peter, and Ad Neeleman. 2003. Context-sensitive spell-out. *Natural Language and Linguistic Theory* 21: 681–735.
- Ackema, Peter, and Ad Neeleman. 2007. Morphology $\neq$ syntax. In *The Oxford handbook of linguistic interfaces*, ed. Gillian Ramchand, and Charles Reiss, 325–352. Oxford: Oxford University Press.
- Ahlborn, Gunnar. 1964. *Le patois de Ruffieu-en-Valromey (Ain)*. Göteborg: Elanders Boktryckeri Aktiebolag.
- Albizu, Pablo. 2002. Basque verbal morphology: Redefining cases. In *Erramu Boneta* ed. Xabier Artiagoitia, Patxi Goenaga, and Joseba A. Lakarra, 1–19. Bilbao: UPV/EHU.
- Albright, Adam. 2006. Lexical and morphological conditioning of paradigm gaps. Cambridge, MA: Ms., MIT.
- Anderson, Stephen R. 1992. *A-morphous morphology*. Cambridge: Cambridge University Press.
- Andrews, Avery D. 1990. Unification of morphological blocking. *Natural Language and Linguistic Theory* 8: 507–557.
- Arnold, Jennifer. 1997. The inverse system in Mapudungun and other languages. *Revista de Lingüística Teórica y Aplicada* 34: 9–48.
- Aronoff, Mark. 1994. *Morphology by itself: Stems and inflectional classes*. Cambridge, MA: MIT Press.
- Arregi, Karlos, and Andrew Nevins. 2006a. A distributed morphology analysis of present tense auxiliaries in Zamudio Basque. *Euskalingua* 9: 146–156.
- Arregi, Karlos, and Andrew Nevins. 2006b. Obliteration vs. Impoverishment in the Basque g-/z- constraint. In *Proceedings of the Penn Linguistics Colloquium 30, U. Penn Working Papers in Linguistics 13*, 1–14. Philadelphia, PA: University of Pennsylvania.
- Arregi, Karlos, and Andrew Nevins. 2008. A principled order to postsyntactic operations. Ms., University of Illinois at Urbana-Champaign and Harvard University. On-line: ling.auf.net/lingbuzz/000646. Accessed September 2004
- Baerman, Matthew. 2004. Directionality and (un)natural classes in syncretisms. *Language* 80: 807–827.
- Baerman, Matthew, Dunstan Brown and Greville G. Corbett. 2005. *The syntax-morphology interface: A study of syncretism*. Cambridge: Cambridge University Press.
- Baerman, Matthew, Greville G. Corbett, and Dunstan Brown. 2010. *Defective paradigms*. Oxford: Oxford University Press.
- Beard, Robert. 1995. *Lexeme-morpheme based morphology*. Albany, NY: State University of New York Press.
- Belloro, Valeria A. 2004. A Role and Reference Grammar account of third person clitic clusters in Spanish. MA, State University of New York at Buffalo.

- Benincà, Paola, and Cecilia Poletto. 2005. On some descriptive generalizations in Romance. In *The Oxford handbook of comparative syntax*, ed. Guglielmo Cinque and Richard Kayne, 221–258. Oxford: Oxford University Press.
- Benmamoun, Elabbas, Archana Bhatia, and Maria Polinsky. 2009. Closest conjunct agreement in head-final language. *Linguistic Variation Yearbook* 9: 67–88.
- Bobaljik, Jonathan David. 2000. The ins and outs of contextual allomorphy. In *University of Maryland Working Papers in Linguistics 10*, 35–71. College Park, MD: University of Maryland.
- Bobaljik, Jonathan David. 2002. A-chains at the PF-interface: Copies and ‘covert movement’. *Natural Language and Linguistic Theory* 20: 197–267.
- Bobaljik, Jonathan David. 2008. Where’s phi? In *Phi theory*, ed. Daniel Harbour, David Adger, and Susana Béjar, 295–328. Oxford: Oxford University Press.
- Bobaljik, Jonathan David, and Phillip Branigan. 2006. Eccentric agreement and multiple Case checking. In *Ergativity: Emerging issues*, ed. Alana Johns, Diane Massam., and Juvenal Ndayiragije, 47–77. Dordrecht: Kluwer.
- Bonami, Olivier, and Gilles Boyé. 2006. French pronominal clitics and the design of Paradigm Function Morphology. In *On-line Proceedings of the 5th Mediterranean Morphology Meeting (MMM5)*. University of Bologna. On-line: mmm.lingue.unibo.it/proc-mmm5.php. Accessed September 4 2010.
- Bonet, Eulàlia. 1991. Morphology after syntax: Pronominal clitics in Romance. Doctoral dissertation, Cambridge, MA: MIT.
- Bonet, Eulàlia. 1992. Sobre un dels usos de *hi* en lloc de *li*. *Els Marges* 46: 101–110.
- Bonet, Eulàlia. 1993. 3rd person pronominal clitics in dialects of Catalan. *Catalan Working Papers in Linguistics* 3: 85–111.
- Bonet, Eulàlia. 1995a. Feature structure of Romance clitics. *Natural Language and Linguistic Theory* 13: 607–647.
- Bonet, Eulàlia. 1995b. The where and how of clitic order. *Revue québécoise de linguistique* 24: 61–81.
- Booij, Geert. 2002. Constructional idioms, morphology, and the Dutch lexicon. *Journal of Germanic Linguistics* 14: 301–329.
- Börjars, Kersti, Nigel Vincent, and Carol Chapman. 1996. Paradigms, periphrases, and pronominal inflection: A feature-based account. *Yearbook of Morphology* 1996, 155–180.
- Bošković, Željko. 2009. Unifying first and last conjunct agreement. *Natural Language and Linguistic Theory* 27: 455–496.
- Bošković, Željko, and Jairo Nunes. 2007. The copy theory of movement: A view from PF. In *The copy theory of movement*, ed. Norbert Corver and Jairo Nunes, 13–74. Amsterdam: Benjamins.
- Bresnan, Joan, and Tatjana Nikitina. forthcoming. On the gradience of dative alternation. In *Reality exploration and discovery: Pattern interaction in language and life*, ed. Linda Uyechi and Lian Hee Wee. Stanford, CA: CSLI.
- Bruening, Benjamin. 2010. Double object constructions disguised as prepositional datives. *Linguistic Inquiry* 41: 287–305.
- Bürgi, Anne. 1998. Le pronom *ça* en français vaudois, description et analyse. Sherbrooke, QC: MA, Université de Sherbrooke.
- Cardinaletti, Anna. 2008. On different types of clitic clusters. In *The Bantu-Romance connection*, ed. Cécile De Cat and Katherine Demuth, 41–82. Amsterdam: Benjamins.
- Cardinaletti, Anna, and Michael Starke. 1999. The typology of structural deficiency. In *Clitics in the languages of Europe*, ed. Henk van Riemsdijk, 145–233. Berlin: Mouton de Gruyter.
- Cardona, George. 1999. *Recent research in Pāṇinian studies*. Delhi: Motilal Banarsidass.
- Carstairs-McCarthy, Andrew. 1992. *Current morphology*. London: Routledge.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000a. Minimalist inquiries: The framework. In *Step by step*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89–156. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.

- Chung, Sandra, and James McCloskey. 1987. Government, barriers, and small clauses in Modern Irish. *Linguistic Inquiry* 18: 173–237.
- Cinque, Guglielmo. 1990. *Types of A'-dependencies*. Cambridge, MA: MIT Press.
- Cinque, Guglielmo. 1999. *Adverbs and Functional Heads*. Oxford: Oxford University Press.
- Clifton, Charles Jr., Gilbert Fanselow, and Lyn Frazier. 2006. Amnestying Superiority violations. *Linguistic Inquiry* 37: 51–68.
- Corbett, Greville. 2007. Canonical typology, suppletion, and possible words. *Language* 83: 8–42.
- Corbett, Greville, and Matthew Baerman. 2006. Prologmena to a theory of morphological features. *Morphology* 106: 231–246.
- Costa, João. 2003. Review of “Focus and the syntax-phonology interface”. *Glott International* 7: 263–8.
- De Crousaz, Isabelle, and Ur Shlonsky. 2003. The distribution of a subject clitic in a Franco-Provençal dialect and the licensing of *pro*. *Linguistic Inquiry* 34: 413–442.
- De Cat, Cécile. 2000. Towards a unified analysis of French floating quantifiers. *French Language Studies* 10: 1–25.
- Dell, Gary. S. and Reich, Peter A. 1981. Stages in sentence production: An analysis of speech error data. *Journal of Verbal Learning and Verbal Behavior* 20: 611–629.
- Di Sciullo, Anna-Maria, and Edwin Williams. 1986. *On the definition of word*. Cambridge, MA: MIT Press.
- Doron, Edit. 1988. On the complementarity of subject-verb agreement. In *Agreement in natural language*, ed. Michael Barlow and C.A. Ferguson, 201–218. Stanford, CA: CSLI.
- Dowty, David. 1995. Toward a minimalist theory of syntactic structure. In *Discontinuous constituency*, ed. Harry Bunt and Arthur van Horck. New York: Mouton.
- Egaña 'tar, Aitzane. 1984. Bermeoko aditzaren azterketa lorrazak. *Bermeo* 5: 47–207.
- Embick, David. 2000. Features, syntax, and categories in the Latin perfect. *Linguistic Inquiry* 31: 185–230.
- Embick, David. 2007. Blocking effects and analytic/synthetic alternations. *Natural Language and Linguistic Theory* 25: 1–37.
- Embick, David, and Alec Marantz. 2008. Architecture and blocking. *Linguistic Inquiry* 39: 1–53.
- Embick, David, and Rolf Noyer. 2001. Movement operations after syntax. *Linguistic Inquiry* 32: 555–595.
- Embick, David, and Rolf Noyer. 2007. Distributed Morphology and the syntax-morphology interface. In *The Oxford handbook of linguistic interfaces*, ed. Gillian Ramchand and Charles Reiss, 289–324. Oxford: Oxford University Press.
- Emonds, Joseph, and Rosemarie Whitney. 2005. Double object constructions. In *The Blackwell companion to syntax*, ed. Martin Everaert and Henk van Riemsdijk, vol. 2, case 21. Oxford: Blackwell.
- Fernández, Beatriz. 2001. Absolutibo komunztaduradun ergatiboak, absolutibo komunztaduradun datiboak: Ergatiboaren Lekualdatzetik Datiboaren Lekualdatzera. In *On Case and agreement*, ed. Beatriz Fernández and Pablo Albizu, 147–165. Bilbao: UPV/EHU.
- Fodor, Jerry A. 1983. *The modularity of mind*. Cambridge, MA: MIT Press.
- Frampton, John. 2004. Distributed reduplication. Boston: Ms., Northeastern University.
- Franks, Steven. 1995. *Parameters of Slavic morphosyntax*. Oxford: Oxford University Press.
- Gaminde, Iñaki. 1992. *Foruko euskararen morfosintaxiaz*. Forua: Foruko Udala.
- García, Erica C. 2001. The cognitive implications of unlike grammars: Variable clitic-clustering in Spanish vs. Italian. *Neuphilologische Mitteilungen* 102: 389–417.
- Grevisse, Maurice, and André Goosse. 2008. *Le bon usage*. 14th edition. Bruxelles: De Boeck & Larcier.
- Griffin, Zenzi M., and Victor S. Ferreira. 2006. Properties of spoken language production. In *Handbook of psycholinguistics*, ed. Matthew J. Traxler, and Morton A. Gernsbacher, 21–60. Oxford: Elsevier.
- Haddican, William. 2010. Theme-goal distransitives and theme passivization in British English dialects. *Lingua* 120: 2424–2443.

- Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The view from building 20*, ed. Kenneth Hale and Jay Keyser, 111–176. Cambridge, MA: MIT Press.
- Halle, Morris. 1997. Distributed morphology: Impoverishment and fission. In *Papers at the interface*, *MIT Working Papers in Linguistics* 30, 425–449. Cambridge, MA: MITWPL.
- Harley, Heidi, and Rolf Noyer. 1999. Distributed Morphology. *GLOT* 4(4): 3–9.
- Harris, James. 1996. Why *n'ho* is pronounced [li] in Barceloní Catalan: Morphological impoverishment, merger, fusion, and fission. In *Papers at the interface*, *MIT Working Papers in Linguistics* 30, 451–479. Cambridge, MA: MIT Press.
- Harris, Alice C. 2002. Where in the word is the Udi clitic? *Language* 76: 593–616.
- Harris, James, and Moris Halle. 2005. Unexpected plural inflection in Spanish: Reduplication and Metathesis. *Linguistic Inquiry* 36: 195–222.
- Heath, Jeffrey. 1991. Pragmatic disguise in pronominal-affix paradigms. In *Paradigms: The economy of inflection*, ed. Frans Plank, 75–89. Berlin: Mouton de Gruyter.
- Heath, Jeffrey. 1998. Pragmatic skewing in 1↔2 pronominal combinations in Native American languages. *International Journal of American Linguistics* 64: 83–104.
- Hualde, José Ignacio. 1992. *Catalan*. New York: Routledge.
- Hualde, José Ignacio. 2000. Bizaiko kostaldeko hizkerak atzo, gaur, eta bihar. In *Dialektologia gaiak*, ed. Koldo Zuazo, 13–28. UPV/EHU.
- Hualde, José Ignacio. 2001. On the loss of ergative displacement in Basque and the role of analogy in the development of morphological paradigms. In *The linguist's linguist*, ed. Fabrice Cavoto, 219–230. München: Lincom Europa.
- Hualde, José Ignacio, and Jon Ortiz de Urbina. 2003. *A grammar of Basque*. Berlin: Mouton de Gruyter.
- Inkelas, Sharon, and Draga Zec. 1990. *The phonology-syntax connection*. Chicago: Chicago University Press.
- Irurtzun, Aritz. 2007. The grammar of focus at the interfaces. Doctoral dissertation, Leioa: University of the Basque Country.
- Jackendoff, Ray. 2002. *Foundations of language*. Cambridge, MA: MIT Press.
- Jones, Michael Allan. 1997. *Foundations of French syntax*. Cambridge: Cambridge University Press.
- Julien, Marit. 2002. *Syntactic heads and word formation*. Oxford: Oxford University Press.
- Kailuweit, Rolf. 2008. 'Floating plurals', pro-drop and agreement - an optimality-based RRG approach. In *Investigations of the syntax-semantics-pragmatics interface*, ed. Robert D. Van Valin Jr., 179–202. Amsterdam: Benjamins.
- Kayne, Richard S. 1975. *French syntax*. Cambridge, MA: MIT Press.
- Kayne, Richard S. 2000. *Parameters and universals*. Oxford University Press.
- Kayne, Richard S. 2007. Some silent first person plurals. New York: Ms., New York University.
- Kayne, Richard S. 2008. Expletives, datives, and the tension between morphology and syntax. In *The limits of syntactic variation*, ed. Teresa Biberauer. Amsterdam: Benjamins.
- Kiparsky, Paul. 2005. Blocking and periphrasis in inflectional paradigms. In *Yearbook of Morphology 2004*, ed. Geert Booij and Jaap van Marle, 113–135. Dordrecht: Springer.
- De Kok, Ans. 1985. *La place du pronom personnel régime conjoint en français: une étude diachronique*. Amsterdam: Rodopi.
- Krifka, Manfred. 2004. Semantic and pragmatic conditions for the dative alternation. *Korean Journal of English Language and Linguistics* 4: 1–32.
- Laenzlinger, Christopher. 1993. A syntactic view of Romance pronominal sequences. *Probus* 5: 241–270.
- Laka, Itziar. 1993a. The structure of inflection. In *Generative studies in Basque linguistics*, ed. José Ignacio Hualde and Jon Ortiz de Urbina, 21–70. Amsterdam: Benjamins.
- Laka, Itziar. 1993b. Unergatives that assign ergative, unaccusatives that assign accusative. In *Papers on Case and agreement 1*, *MIT Working Papers in Linguistics* 18, 149–172. Cambridge, MA: MITWPL.

- Lakämper, Renate and Dieter Wunderlich. 1998. Person marking in Quechua – A constraint-based minimalist analysis. *Lingua* 105: 113–148.
- Langendoen, Terence D. 2002. Linguistics at the beginning of the 21st century. *Journal of Linguistics* 38: 627–643.
- Lasnik, Howard, and Nicholas Sobin. 2000. The *who/whom* puzzle: On the preservation of an archaic feature. *Natural Language and Linguistic Theory* 18: 343–371.
- Legate, Julie. 1999. The morphosyntax of Irish agreement. In *Papers on morphology and syntax, cycle one, MIT Working Papers in Linguistics* 33, 219–240. Cambridge, MA: MITWPL.
- Levin, Beth, and Malka Rappaport Hovav. 2005. *Argument realization*. Cambridge: Cambridge University Press.
- Luis, Ana R., and Andrew Spencer. 2004. Udi clitics: A Generalized Paradigm Function Morphology approach. *Essex Research Reports in Linguistics* 48: 47–59.
- Manzini, Maria Rita, and Leonardo M. Savoia. 2002. Clitics: Lexicalization patterns of so-called 3rd person datives. *Catalan Journal of Linguistics* 1: 117–155.
- Manzini Maria Rita, and Leonardo M. Savoia. 2005. *I dialetti italiani e romanci: Morfosintassi generativa*. 3 vols. Alessandria: Edizioni dell’Orso.
- Manzini, Maria Rita, and Leonardo M. Savoia. 2008. *A unification of morphology and syntax*. Cambridge: Cambridge University Press.
- Manzini, Maria Rita, and Leonardo M. Savoia. 2010. Morphology dissolves into syntax: Infixation and Doubling in Romance languages. *Annali Online di Ferrara* 1.
- Marantz, Alec. 2000 [1991]. Case and licensing. In *Arguments and Case*, ed. Eric Reuland, 11–30. Amsterdam: Benjamins.
- McCloskey, James, and Ken Hale. 1983. On the syntax of person-number inflection in Modern Irish. *Natural Language and Linguistic Theory* 1: 487–534.
- McCreight Young, Katherine. 1988. Multiple Case assignment. Doctoral dissertation, Cambridge, MA: MIT.
- Miller, Philip H., Geoffrey K. Pullum, and Arnold M. Zwicky. 1997. The principle of phonology-free syntax. *Journal of Linguistics* 33: 67–90.
- Morin, Yves-Charles. 1978. Interprétation des pronoms et des réfléchis en français. In *Syntaxe et sémantique du français, Cahier de linguistique numéro* 8: 337–376.
- Morin, Yves-Charles. 1979a. More remarks on French clitic order. *Linguistic Analysis* 5: 293–312.
- Morin, Yves-Charles. 1979b. La morphophonologie des pronoms clitiques en français populaire. *Cahier de linguistique* 9: 1–36.
- Munn, Alan. 1999. First conjunct agreement: Against a clausal analysis. *Linguistic Inquiry* 30: 643–668.
- Napoli, Donna Jo. 1974. The No Crossing Filter. In *Proceedings of CLS 10*, 482–491. Chicago: Chicago University Press.
- Neeleman, Ad and Hans van de Koot. 2005. Syntactic haplology. In *The Blackwell companion to syntax*, ed. Martin Everaert and Henk van Riemsdijk, vol. 4, case 69. Oxford: Blackwell.
- Noyer, Rolf. 1992. Features, positions, and affixes in autonomous morphological structure. Doctoral dissertation, Cambridge, MA: MIT.
- Noyer, Rolf. 2001. Clitic sequences in Nunggubuyu and PF convergence. *Natural Language and Linguistic Theory* 19: 751–826.
- Nunes, Jairo. 1999. Linearization of chains and phonetic realization of chain links. In *Working minimalism*, ed. Samuel David Epstein and Norbert Hornstein, 217–249.
- Pescarini, Diego. 2010. Elsewhere in Romance: Evidence from clitic clusters. *Linguistic Inquiry* 41(427–444).
- Phillips, Collin, and Ellen Lau. 2004. Foundational issues. *Journal of Linguistics* 40: 571–591.
- Piat, Louis. 1911. Grammaire générale populaire des dialectes occitaniens: Essai des syntaxe. Montpellier: Imprimerie générale du Midi.
- Polletto, Cecilia. 2000. *The higher functional field*. Oxford: Oxford University Press.

- Poser, William J. 1992. Blocking of phrasal constructions by lexical items. In *Lexical matters*, ed. Ivan Sag and Anna Szabolcsi, 111–130. Stanford, CA: CSLI.
- Pranka, Paula. 1983. Syntax and word formation. Doctoral dissertation, Cambridge, MA: MIT.
- Pullum, Geoffrey K., and Arnold M. Zwicky. 1986. Phonological resolution of syntactic feature conflict. *Language* 62: 751–773.
- Pullum, Geoffrey K., and Arnold M. Zwicky. 1988. The syntax-phonology interface. In *Linguistics: The Cambridge survey*, ed. Fredredick J. Newmeyer: 255–280. Cambridge: Cambridge University Press.
- Rebuschi, George. 1983. *Structure de l'énoncé en basque*. Paris: SELAF.
- Reinhart, Tanya. 2006. *Interface strategies*. Cambridge, MA: MIT Press.
- Rezac, Milan. 2009. On the unifiability of repairs of the Person Case Constraint. In *Festschrift for Beñat Oyharçabal*, ed. Ricardo Etxepare, Ricardo Gómez, and Joseba A. Lakarra, *Anuario del Seminario de Filología Vasca Julio de Urquijo* XLIII: 769–790.
- Rezac, Milan. 2010a. Ineffability through modularity: Gaps in French clitic clusters. In *Defective paradigms*, ed. Matthew Baerman, Greville Corbett, and Dunstan Brown, 151–180. Oxford: Oxford University Press.
- Rezac, Milan. 2010b. Phi-Agree vs. movement: Evidence from floating quantifiers. *Linguistic Inquiry* 41: 496–508.
- Rezac, Milan. 2010c. Dative-locative syncretisms in Romance clitics and the relationship between syntax and morphology. Ms., UMR 7023 CNRS/Université de Paris 8.
- Rhodes, Richard. 1993. Syntax vs. morphology: A chicken and egg problem. *Proceedings of BLS 19, Special session on syntactic issues in Native American languages*, 139–147. Berkeley, CA: Berkeley Linguistics Society.
- Ritter, Nancy. 1995. On the syntactic category of pronouns and agreement. *Natural Language and Linguistic Theory*. 13: 405–443.
- Rivero, Maria Luisa. 2008. Oblique subjects and person restrictions in Spanish: A morphological approach. In *Agreement restrictions*, ed. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 215–250. Berlin: Mouton de Gruyter.
- Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge, MA: MIT Press.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar*, ed. Liliane Haegeman, 281–337. Dordrecht: Kluwer.
- Ronjat, Jules. 1937. *Grammaire istorique des parlers provençaux modernes*. vol. 3. Montpellier: Société des Langues Romanes
- Russi, Cinzia. 2008. *Italian clitics*. Berlin: Mouton de Gruyter.
- Russi, Cinzia. 2008. Italian clitics. Berlin: Walter de Gruyter.
- Sadler, Louisa, and Andrew Spencer. 2001. Syntax as an exponent of morphological features. In *Yearbook of Morphology 2000*: 71–96.
- Sag, Ivan A., Inbal Arnon, Bruno Estigarribia, Philip Hofmeister, T. Florian Jaeger, Jeanette Pettibone, and Neal Snider. 2006. Processing accounts for Superiority Effects. Stanford, CA: Ms., Stanford University.
- Sauerland, Uli, and Paul Elbourne. 2002. Total reconstruction, PF movement, and derivational order. *Linguistic Inquiry* 33: 283–319.
- Snyder, William. 2000. An experimental investigation of syntactic satiation effects. *Linguistic Inquiry* 31: 575–582.
- Sobin, Nicholas. 1997. Agreement, default rules, and grammatical viruses. *Linguistic Inquiry* 28: 318–343.
- Spencer, Andrew. 2005. Periphrasis. In *Encyclopedia of language and linguistics*, ed. Keith Brown, 287–294. Oxford: Elsevier.
- Sproat, Richard. 1985. On deriving the lexicon. Doctoral dissertation, Cambridge, MA: MIT.
- Sproat, Richard. 1998. Morphology as component or module: Mapping principles approach. In *The handbook of morphology*, ed. Andrew Spencer and Arnold M. Zwicky, 335–348. London: Basil Blackwell.
- Sprouse, Jon. 2009. Revisiting satiation. *Linguistic Inquiry* 40: 329–341.
- Staal, J.F. 1967. *Word order in Sanskrit and Universal Grammar*. Dordrecht: Kluwer.

- Starke, Michal. 2002. The day that syntax ate morphology. Handout from EGG 2002, University of Novi Sad.
- Van Koppen, Marjo. 2005. One probe - Two goals: Aspects of agreement in Dutch dialects. Doctoral dissertation, Universiteit Leiden, Leiden.
- Stump, Gregory T. 1991. A paradigm-based theory of morphosemantic mismatches. *Language* 67: 675–725.
- Stump, Gregory T. 1993. On rules of referral. *Language* 69: 449–479.
- Stump, Gregory T. 1998. Inflection. In *The handbook of morphology*, ed. Andrew Spencer and Arnold M. Zwicky, 13–43. London: Basil Blackwell.
- Stump, Gregory T. 2001. *Inflectional morphology*. Cambridge: Cambridge University Press.
- Svenson, Lars-Owe. 1959. *Les parlers du Marais Vendéen*. vol. 1. Göteborg: Elanders Boktryckeri Aktiebolag.
- Szendrői, Kriszta. 2004. Focus and the interaction between syntax and pragmatics. *Lingua* 114: 229–254.
- Szendrői, Kriszta. 2005. Focus movement (with special reference to Hungarian). In *The Blackwell companion to syntax*, ed. Martin Everaert and Henk van Riemsdijk, vol. 2, case 26. Oxford: Blackwell.
- Taraldsen, Knut Tarald. 2010. The nanosyntax of Nguni noun class prefixes and concords. *Lingua* 120: 1522–1548.
- Trommer, Jochen. 2002. Modularity in OT-Morphosyntax. In *Resolving conflicts in grammar*, *Linguistische Berichte* 11: 83–117.
- Tseng, Jesse. 2005. Prepositions and complement selection. In *Proceedings of the 2nd ACL-SIGSEM Workshop on the linguistic dimensions of prepositions and their use in computational linguistics formalisms and applications*, ed. Aline Villavicencio and Valia Kordoni, 11–19. Essex: University of Essex.
- Ussishkin, Adam. 2007. Morpheme position. In *The Cambridge handbook of phonology*, ed. Paul de Lacy, 457–472. Cambridge: Cambridge University Press.
- Whitney, William Dwight. 1896. *A Sanskrit grammar*. Leipzig: Breitkopp and Härtl.
- Williams, Edwin. 1974. Rule ordering in syntax. Doctoral dissertation, Cambridge, MA: MIT.
- Williams, Edwin. 1997. Blocking and anaphora. *Linguistic Inquiry* 28: 577–628.
- Williams, Edwin. 2003. *Representation theory*. Cambridge, MA: MIT Press.
- Williams, Edwin. 2007. Dumping lexicalism. In *The Oxford handbook of linguistic interfaces*, ed. Gillian Ramchand and Charles Reiss, 353–382. Oxford: Oxford University Press.
- Wiltschko, Martina. 2008. Person-hierarchy effects without a person hierarchy. In *Agreement restrictions*, ed. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 281–314. Berlin: Mouton de Gruyter.
- Yrizar, Pedro de. 1992. *Morfología del verbo auxiliar vizcaino*, vols. I, II, Bilbao: Euskaltzaindia.
- Zink, Gaston. 1997. *Morphosyntaxe du pronom personnel (non réfléchi) en moyen français (XIVe-XVe siècles)*. Droz: Genève.
- Zribi-Hertz, Anne, and Lamine Diagne. 2002. Clitic placement after syntax: Evidence from Wolof person and locative markers. *Natural Language and Linguistic Theory* 20: 823–884.
- Zribi-Hertz, Anne, and Liliane Mbolatianavalona. 1999. Towards a modular theory of linguistic deficiency: Evidence from Malagasy personal pronouns. *Natural Language and Linguistic Theory* 17: 161–218.
- Zubizarretta, Maria-Luisa. 1998. *Prosody, focus, and word-order*. Cambridge, MA: MIT Press.
- Zwicky, Arnold M. 1969. Phonological constraints in syntactic descriptions. *Papers in Linguistics* 1: 411–63.
- Zwicky, Arnold M. 1986. The Unaccented Pronoun Constraint in English. *Ohio State University Working Papers in Linguistics* 32, 100–113. Columbus, Ohio: Ohio State University.

- Zwicky, Arnold. 1991. Systematic versus accidental phonological identity. In *Paradigms: the economy of inflection*, ed. Frans Plank, 113–131. Berlin: Moutan de Gruyter.
- Zwicky, Arnold M. 1992. Some choices in the theory of morphology. In *Formal grammar: Theory and implementation*, ed. Robert D. Levine, 327–371. Oxford: Oxford University Press.
- Zwicky, Arnold M. 1996. Syntax and phonology. In *Concise encyclopedia of syntactic theories*, ed. Keith Brown and Jim Miller, 300–305. Oxford: Elsevier Science.
- Zwicky, Arnold M. and Geoffrey K. Pullum. 1983. Phonology in syntax: the Somali optional agreement rule. *Natural Language and Linguistic Theory* 1: 385–402.
- Zwicky, Arnold M. and Geoffrey K. Pullum. 1986. The principle of phonology-free syntax. *Ohio State University Working Papers in Linguistics* 32, 63–91. Columbus, Ohio: Ohio State University.

Chapter 3

Person Hierarchy Interactions in Syntax

3.1 Person Hierarchies and Person Interactions

In a strong modular architecture like the Y/T-model, a syntactic phenomenon is expected to exhibit the modular signature in (1):

- (1) Syntactic signature in a modular architecture:
 - a. *Interaction*: potentially visible to syntax and to interpretation.
 - b. *Information*: syntactic but not phonological or purely morphological information (such as declension class).
 - c. *Computation*: mechanisms over phrase-structurally unbounded domains, sensitive to c-command, syntactic islands, but not adjacency, etc.

This signature will establish the syntactic status of certain instances of phi-agreement, in the sense of [Chapter 1](#): of the form or position of an element governed by the phi-features of another. The phi-agreement phenomena concerned are those where arguments interact according to their person values, or *person hierarchy (PH) interactions*. In the present chapter, the argument is developed from cross-linguistic PH interactions between the transitive subject EA and object O ([DeLancey 1981](#): 641ff., [Jelinek and Demers 1983](#), [Silverstein 1986](#), [Klaiman 1992](#), [Jelinek 1993](#), [Arnold 1997](#), [Aissen 1997](#), [Nichols 2001](#), [Trommer 2001](#), [Zuñiga 2002](#), [Béjar 2003](#), [Béjar and Rezac 2009](#), [Georgi 2009](#)). The next chapter continues in the same vein with a more sustained argument for the syntactic status of the PH interaction between the direct and indirect object in the Person Case Constraint of French.¹

In systems with PH interaction, agreement, case, and certain other properties of EA and O depend on the other's person specifications, rather than on the individual properties of each. Such agreement and case that refers to the

¹The term O is intended to mean the lower agreement controller in the agreement domain of EA, rather than its thematic co-argument, and so includes the embedded subject of cross-clausal agreement and raising-to-object (as in Algonquian below, or [Picuris, Nichols 2001](#): 523, 531).

properties of another argument has been called ‘global’, in contrast to ‘local’ (Silverstein 1986: 178f., Georgi 2009). In the following Ojibwa example, the agreement prefix is controlled by 1st person as *n*- whether it is the EA acting on a 3rd person O, $1_{EA} \rightarrow 3_O$, or the O being acted on by a 3rd person EA, $3_{EA} \rightarrow 1_O$. When a 2nd person EA/O is present, control of the prefix falls to it as *g*-, both in $1_{EA} \rightarrow 2_O$ and $2_{EA} \rightarrow 1_O$. Thus neither EA nor O nor 1st person control the prefix. Rather, the highest of EA/O on the scale $2 > 1 > 3$ person does.

- (2) a. *n*-waabm-aa b. *n*-waabm-ig c. *g*-waabm-in
 1-see-3ANIM.O 1-see-INV 2-see-INV
 I see him. He sees me. I see you. (Ojibwa)

The Ojibwa example is typical of PH interactions, which often reveal themselves in case-marking and agreement. The behavior of an argument α depends on, or agrees with, the person of another argument β , uninterpretable to α , in interaction with α ’s own person. The highest argument on the hierarchy tends to have unmarked case and richer agreement. If it is the EA, as in Ojibwa $1_{EA} \rightarrow 3_O$, the EA-O combination is said to be *direct*, while if it is the O, as in $3_{EA} \rightarrow 1_O$, it is said to be *inverse*, often bringing with it further special morphology. For reference, Table 3.1 resumes these properties for the PH interactions of this chapter.

‘Global’ PH-interactions must be strictly distinguished from superficially similar phenomena that are ‘local’ in Silverstein’s (1986: 178f.) sense. One is plain voice alternations. PH-interactions resemble active-passive alternations, since if the EA wins the interaction (direct), it tends to bear unmarked case and agree, while if it loses (inverse), it tends to bear marked case and not agree. However, the English passive is grammatically available independently of the interaction of the phi-features of the arguments involved, as in (3), although factors like the foregrounding of 1st/2nd person may affect its use in a given context (Delancey 1981). By contrast, PH-interactions are inherently phi-relational.

Table 3.1 Person Hierarchy interactions (excluding $3_{EA} \rightarrow 3_O$)

	Ojibwa	Mapudungun	Arizona Tewa	Southern Tiwa
Hierarchy	$2 > 1 > 3$	$1/2 > 3$	$1/2 > 3$	$1/2 > 3$
Direct	$2_{EA} \rightarrow 1/3_O$ $1_{EA} \rightarrow 3_O$	$1/2_{EA} \rightarrow 3_O$	$1/2_{EA} \rightarrow 3_O$ $1/2_{EA} \rightarrow 2/1_O$	$1/2_{EA} \rightarrow 1/2/3_O$
Inverse	$3_{EA} \rightarrow 1/2_O$ $1_{EA} \rightarrow 2_O$	$3_{EA} \rightarrow 1/2_O$ $1/2_{EA} \rightarrow 2/1_O$	$3_{EA} \rightarrow 1/2_O$	$3_{EA} \rightarrow 1/2_O$ $1/2_{EA} \rightarrow 3_O$
EA in dir	AGR; bare	AGR; bare	AGR; bare	AGR; bare
EA in inv	(AGR); bare	(AGR); bare	AGR; oblique	-; oblique
O in dir	(AGR); bare	(AGR); bare	AGR; bare	AGR; bare
O in inv	AGR; bare	AGR; bare	AGR; bare	AGR; bare
Extra affix	(Suffix field)	Inverse	–	Inverse

Legend: AGR = agreement, (AGR) = different/impoverished agreement

An EA of a given person assumes this or that behavior only in virtue of an O having a given person. Similarly, PH interactions are distinct from *differential case marking*, where the agreement and case of an argument depend on its person only (Delancey 1981, Silverstein 1986). In Yidin^y, EA is ergative if sufficiently low on the scale 1st/2nd person > humans > names > common nouns, and O accusative if sufficiently high on it, but there is no dependence on the person of the other argument (Dixon 1994: 87). The case-marking of EA and O depends only on its own ‘local’ features, not ‘globally’ on (agreement with) those of another argument, as it does in PH-interactions.

- (3) a. I was flunked by Prof. Summers.
b. Mary Summers was flunked by me.

(Delancey 1981: 638)

PH interactions have sometimes been modelled entirely in the morphology, for instance Noyer (1992) for a variety of languages, Anderson (1992) and by Halle and Marantz (1993) for Potawatomi related to Ojibwa, and Marantz (2000) for Georgian within a postsyntactic approach to all case and agreement relations. The prediction of morphological approaches is that syntax and interpretation should be blind to them. The Ojibwa 1st person EA should behave the same in syntax and interpretation regardless of whether it wins over a 3rd person O, or loses to a 2nd person O. PH-interactions should be as syntactically invisible as the forms of the plural in *ox-en*, *sheep*, *cow-s*. This is incorrect, as will be seen in one way for Ojibwa and Mapudungun in Sections 3.2 and 3.3, and in a different way for Arizona Tewa in Section 3.4. Some PH interactions, and thus their person agreement and its uninterpretable person phi-features, are to be placed in the syntax, answering one of the central questions of Chapter 1. The concluding Section 3.5 returns to the contrast between them and the morphological ‘opaque’ agreement of Chapter 2.

3.2 PH-Interactions in Ojibwa and Mapudungun

The seminal arguments for the syntactic character of PH-interaction are due to Rhodes (1994), for Ojibwa. This section reviews it and adds Arnold’s (1997) evidence from Mapudungun. The next section develops the consequences.

In the Algonquian language Ojibwa, the morphological reflex of PH-interaction is control of the agreement prefix. It falls to the highest DP on the hierarchy 2 (*g-*) > 1 (*n-*) > 3 (*w-* in 3→3 transitives, $\emptyset$ in intransitives). The PH interaction thus partitions the set of EA→O combinations into *direct contexts*, where the EA controls the prefix ($2_{EA} \rightarrow 1_O$, $2/1_{EA} \rightarrow 3_O$), and *inverse contexts*, where the O does ($1_{EA} \rightarrow 2_O$, $3_{EA} \rightarrow 1/2_O$). This prefix oscillation between EA and O is illustrated in Table 3.2, in the column headed *Independent Order*.

Meaning	Independent Order	Conjunct Order
I go home	n[i]-giiwe 1 go.home	giiwe- yaanh go.home 1SG.SU
You go home	g[i]-giiwe 2- go.home	giiwe- yan go.home 2SG.SU
he goes home	giiwe- w-ag go.home 3 3PL	giiwe- waa- d go.home 3PL 3.SU
I see him	n[i]-waab[a]m-aa 1 see 3ANIM.O	waab[a]m-Ø- ag see 3ANIM.O 1.ERG
he sees me	n[i]-waab[a]m-ig[o] 1 see INV	waab[a]m-i- d see 1O 3.SU
you see me	g[i]-waabam-[i] 2 see 1O	waab[a]m-i- yan see 1O 2SG.SU
I see you	g[i]-waab[a]m-in 2 see INV	waab[a]m-in- aanh see 2O 1SG.SU
he sees him	w[<o]-waab[a]m-aa- [a]n 3ERG see 3AN.O OBV	waab[a]m-aa- d see 3AN.O 3.SU

	<i>Independent</i>	<i>Conjunct</i>	<i>Meaning</i>
(4)			
a.	n-wābam-igw 1-see-INV	wābam- $\bar{\text{I}}$ -d see-1.O-3	'he sees me'
b.	g-wābam- $\bar{\text{I}}$ 2-see-2→1	wābam- $\bar{\text{I}}$ -an see-1.O-2SG	'you(SG) see me'

(Zuñiga 2002: 103–4)

(5) Suffix *i*: Independent: $2_{\text{EA}} \rightarrow 1_{\text{O}}$, Conjunct: $\text{X}_{\text{EA}} \rightarrow 1_{\text{O}}$

In the independent order, *i* occurs in $2_{EA} \rightarrow 1_O$, where the 2nd person EA controls the prefix, and not in $3_{EA} \rightarrow 1_O$, where the 1st person O does and the ‘inverse’ marker *igw* appears instead. Here distribution of *i* thus depends on the PH-interaction of both EA and O, as in (5). In the conjunct order however, *i* appears in both $2/3_{EA} \rightarrow 1_O$ combinations. Rhodes (1976) argues that here *i* is rather a 1st person object marker insensitive to the person of the subject. From this and similar evidence he concludes that in $EA \rightarrow O$ combinations involving a 1st/2nd person argument, suffixes are sensitive to PH interaction in the independent but not in the conjunct order, where all combinations behave as if direct.²

²See Zuñiga (2002) for a lucid overview. Although it might appear that *igw* could contain *i*, this is not so on distributional and morphophonemic grounds: analyses such as Piggott (1989), Rhodes (1976) agree on this, although not on the gloss of *i* (see esp. Zuñiga 2002: 3.1–2).

Combinations of two 3rd person arguments behave differently. They will not themselves be the focus here, but they provide an important tool. Each 3rd person argument is inherently either *animate* or *inanimate*. Each is also either *proximate*, reserved for the most 'prominent' (topical, central) 3rd person, or *obviative*. Combinations of two 3rd person EA and O are governed by the hierarchies 3 proximate > 3 obviative and 3 animate > 3 inanimate. They have no bearing on the agreement prefix, but they are relevant for the suffixes, and unlike the 2 > 1 > 3 hierarchy, in the conjunct as well as the independent order (Rhodes 1994: 432). Obviation and the 3↔3 interactions based on it are important here because they are well established to be syntactic rather than morphological phenomena. Evidence for this is rehearsed below, but one striking result of Bruening (2001) for the Algonquian language Passamaquoddy may be mentioned immediately: 3.OBV_{EA}→3.PROX_O but not 3.PROX_{EA}→3.OBV_O combinations allow O to scope over EA, an unambiguously syntactico-semantic property. This is not evidence for PH-interactions in syntax because obviation is not known to be a phi-feature. However, clear PH-interactions will turn out to affect obviation, and thus syntax.³

The literature on Algonquian PH-interactions splits on whether they are syntactic or morphological. To the former view belong Rhodes (1976, 1994) for Ojibwa, LeSourd (1976) for Fox, Béjar (2003) for Nishnaabemwin; to the latter, Anderson (1992) and Halle and Marantz (1993) for Potawatomi. Rhodes (1994) demonstrates that for some Ojibwa varieties, the PH-interactions seen in verbal morphology have syntactic correlates. Their winner is not only relevant for control of the agreement prefix and for suffixal morphology, but also the *pivot* of unambiguously syntactic phenomena like control. This evidence is reviewed next. Not all Ojibwa varieties have all the syntactic correlates discussed below, and other Algonquian languages differ as well. Thus either a uniform syntactic system underlies their PH-interaction with the potential to have or not certain syntactic consequences, as in Béjar and Rezac (2009: 68), or for some languages the PH-interactions occur in syntax while for others in morphology (see Section 3.5).⁴

Among the syntactic phenomena of Ojibwa, some are not sensitive to PH-interaction. For instance, the shared argument in the constructions as *stop* (preverb) + *V-ing* must be the EA, as in English, suggesting the same thematic structure. However, the phenomena resumed in (6) and taken up below refer to

³The 3.PROX > 3.OBV hierarchy is actually 3 topic > 3 nontopic, which determines the former whenever one of the arguments is proximate because the proximate must be the unique topic, but also encompasses 3.OBV↔3.OBV that may be direct or inverse (Dahlstrom 1986: 53f., Klaiman 1992: 247; cf. Rhodes 1974: 211 note 5, Bruening 2001: 124).

⁴Rhodes (1994: 443) notes that some speakers pick the EA as the pivot of cross-clausal obviation and/or cross-clausal agreement, rather than the winner of EA-O PH interaction (some picking EA for one diagnostic but the PH winner for the other). Dahlstrom (1986) finds that cross-clausal agreement in Plains Cree is not affected by the 3.PROX > 3.OBV hierarchy.

the winner of the EA-O PH-interaction. Rhodes's remarkable finding is that EA and O PH-interaction counts for these syntactic diagnostics when and when it counts for the morphology: for the $2 > 1 > 3$ hierarchy in the independent but not in the conjunct order, for the $3 > 3$ hierarchies in both. In the independent order the pivot of $1/2_{EA} \rightarrow 3_o$ is the EA and of $3_{EA} \rightarrow 1/2_o$ the O, the argument that controls the prefix agreement; in the conjunct, where there is no prefix agreement, it is always the EA. For $1 \leftrightarrow 2$ interactions, the diagnostics are either inapplicable or untested. Thus (6) establishes that the $1/2 > 3$ subset of the $2 > 1 > 3$ hierarchy governs syntactically visible PH interactions when it governs agreement morphology.

- (6) a. *Ban on inanimates*: The pivot cannot be notionally inanimate, even if grammatically animate like *mtig* 'tree', *mshiimin* 'apple', *pwaagan* 'pipe'.
(Rhodes 1994: 333f.; see also Rhodes 1993: 144).
- b. *Cross-clausal obviation*: Only the pivot triggers obviation on the subjects of adjunct clauses.
(Rhodes 1994: 440f.)
- c. *Cross-clausal agreement ('raising')*: Only the pivot of a PH-interaction (and only if topic and animate) can control agreement on certain upstairs verbs like *gkendank* 'to know', as if it were their O. This argument's PH-interaction with the matrix EA has syntactic repercussions for the way O links to its site in the embedded clause.
(Rhodes 1994: 338–40; Bruening 2001: 275–8)

The ban on inanimates is demonstrated in (7).⁵

- (7) a. *Wgii-bsikwaan mshiimin niw pwaagnan.
The apple (*mshiimin*) struck the pipe-obv (*pwaagn-an*).
- b. *Wgii-bsikaagoon aw pwaagan mshiimnan.
The apple-obv (*mshiimn-an*) struck the pipe (*pwaagan*).
- c. Ngii-bsikaag aw mshiimin.
The apple (*mshiimin*) struck me (*n-*) (independent).
- d. Mii-sh *gii-bsikwid aw mshiimin.
[Then] the apple (*mshiimin*) struck me (*-i-*) (conjunct).
(Rhodes 1993: 144f., Ottawa Ojibwa)

The ban requires that the one of EA, O which is the pivot be animate. The constraint operates over notional rather than morphological animacy, so that nouns animate only in the morphology like *mtig* 'tree' and *mshiimin* 'apple' count as inanimate for it. This indicates that the ban is about syntax or interpretation rather than morphology. When EA and O are both inanimate, there is

⁵I do not add glosses to Rhodes's translations; the discussion below should clarify the examples.

no way to satisfy the ban. This is so in (7)a and (7)b. If the sentences are modified to make one of the arguments animate, they are fine provided it turns out to be the pivot of the PH-interaction. In the independent order of (7)c, the object is replaced by 1st person to give a $3\text{INAN}_{\text{EA}} \rightarrow 1\text{O}$. Since the 1st person O outranks the inanimate EA on the $2 > 1 > 3$ hierarchy, it wins the PH-interaction. In the morphology, it controls the agreement prefix *n-* for 1st person, and determines the *-g* suffix which indicates an inverse context where the O wins. In the syntax, this sentence satisfies the Ban on Inanimates, because the pivot is animate. In contrast, (7)d has the same same $3\text{inan}_{\text{EA}} \rightarrow 1\text{O}$ combination, but in the conjunct order. In the conjunct, $1/2 \leftrightarrow 3$ PH-interactions have been seen not to affect the morphology, indicating that the EA is always the pivot. For this reason (8)d is ruled out by the Ban despite the presence of animate O: the EA pivot is inanimate. The form *gii-bsikwid* is morphologically appropriate to the $3_{\text{EA}} \rightarrow 1\text{O}$ conjunct with a grammatically animate EA *mshii-min* ‘apple’, but runs into the Ban on Inanimates. No other verbal form is possible (Rhodes 1993: 145). The Ban illustrates the tight coupling of syntax and morphology in PH interactions. The $2 > 1 > 3$ interaction is relevant to the syntactic Ban if and only if it affects morphology: in the independent order.⁶

The nature of constraints like the Ban on Inanimates is not fully understood. When a thematic role is constrained by animacy, selectional restrictions may be posited. However, EA-O PH-interactions go beyond selection, because in order to allow O to be inanimate or not, it is necessary to know what the features of the EA are, and because EA and O may come from different clauses, as will be seen below. Instead, PH-interactions are usually formalized through movement-type dependencies whereby the winner/pivot moves to the highest (A-)position (Section 3.3). Even in English, tools are necessary to constrain A-movement by animacy, as Abney (1987: 176f., 205, 207f.) points out for (8). Possessive and unmarked subjects of gerunds may both involve raising, but the possessive prefers animates and excludes idiom chunks and expletives. On Abney’s proposal (9)a, this is a selectional restriction on the possessive base-generated in [Spec, DP], which controls a PRO, which undergoes A-movement. A-movement is thus constrained by animacy indirectly. Ojibwa may lend itself to the same analysis, as in (9)b.⁷

⁶The same Ban constrains $3 \leftrightarrow 3$ contexts on the hierarchy $3.\text{PROX} \rightarrow 3.\text{OBV}$. They are not illustrated here in detail, but they provide supporting evidence for the syntactic status of obviation. *The tree* (inanimate) *hit John* (animate) requires by the Ban that *John* be the winner on the hierarchy and thus proximate, giving an inverse configuration where O outranks EA. By contrast, *John hit the tree* is fine only if *John* is proximate, a direct configuration. These direct/inverse contrasts obtain reflected in the morphology in both the independent and conjuncts orders (Rhodes 1994: 433f.).

⁷At issue is whether the pivot can reconstruct, which it should not be able to do via PRO unlike via A-movement (Burzio 1986). Bruening (2001: 131) does demonstrate for the Algonquian language Passamaquoddy that the inverse of $3_{\text{EA}} \rightarrow 3_{\text{O}}$ combinations not only allows $\text{O} > \text{EA}$ scope, but also reconstructed $\text{EA} > \text{O}$ scope, while the direct only allows $\text{EA} > \text{O}$.

- (8) a. [**John**(?'s) seeming / being likely *t* to win] will only spur Bill on.
 b. I was surprised at [**it**(?'s) seeming that John might not win].
 c. I was irked at [**advantage**(?'s) being taken of John's situation].
 d. This justified [**much**(?'s) being made of Calvin's foresight.]
 (cf. Abney 1987: 177, 205, 208)
- (9) a. [_{DP} John_i 's_{D°} [_{IP} PRO_i not seeming *t_i* to be tired]]
 b. [_{CP} DP_k C° [_{IP} PRO_{i/j}^k [EA_i ... V ... O_j]]] where DP_k/PRO_k is the pivot

The second diagnostic (6)b is cross-clausal obviation. Subjects of adjunct clauses are obviative if the pivot of the matrix clause is a 3rd person animate proximate. This is reflected as the morpheme *ini* on the verb of the adjunct clause in (10). The pivot is again the highest of EA, O on the 2 > 1 > 3 hierarchy in the independent order, 3.PROX/AN > 3.OBV/INAN in both orders. Thus in the 3_{EA}→1_O conjunct order in (10)a, the EA is the pivot because there is no 2 > 1 > 3 PH interaction in the conjunct. Being a 3rd person animate proximate, it triggers cross-clausal obviation on the adjunct verb, signalled by *ini*. (10)b differs from (10)a by being in the independent order. Here the 2 > 1 > 3 PH interaction is operative, as signalled by the prefix. Therefore, the 1st person O rather than the EA is the pivot. Not being 3rd person, the pivot does not trigger cross-clausal obviation; hence no *ini*. For the same reasons there is no cross-clausal obviation in (10)c. The pivot is the 1st person EA, not the 3rd person animate proximate O. Replacing the 1st person EA by a 3rd person inanimate in (10)d lets the 3rd person proximate animate O win on the hierarchies 3PROX/AN > 3OBV/INAN. The 3rd person animate O then controls the adjunct's subject's obviation marked by *ini*.⁸

- (10) a. Miish naagshinig giishamid. (3→1, EA pivot in conjunct)
 mii-sh naagoshi-*ini*-g gii-asham-i-d.
 then be.evening-OBV-3INAN PAST-feed-1.O-3.SU
 Then, in the evening-OBV, **he** fed me.
- b. Naagshinig ngiishamig. (3→1, O pivot in independent)
 naagoshi-**ini*-g ni-gii-asham-igo.
 be.evening-OBV-3INAN 1-PAST-feed-INV
 In the evening-**OBV*, he fed **me**.
- c. Naagshinig ngiishamaa. (1→3, EA pivot in independent)
 naagoshi-**ini*-g ni-gii-asham-aa.
 be.evening-OBV-3INAN 1-PAST-feed-3ANIM.O
 In the evening-**OBV*, **I** fed him.
- d. Naagshinig wgiibzikaagon. (3INAN→3ANIM, O pivot in independent)
 naagoshi-*ini*-g o-gii-bizikaw-igo-n doopwin
 be.evening-OBV-3INAN 3-PAST-strike-INV-O table
 In the evening-OBV, the table fell on **him**.
 (Rhodes 1994: 440f., pivot in bold)

⁸*Ini* is optional when possible in these sentences, because all are also compatible with a matrix 3rd person animate non-topic pivot which would not trigger it, as well as a topic one. This is not relevant to the argument, which turns on the possibility of *ini*.

Obviation is a syntactic property, both in Ojibwa where it matters for the Ban on Inanimates (note 5), and elsewhere in Algonquian as mentioned earlier from Bruening's (2001) work. Therefore, when PH-interaction determines obviation status, it affects syntax. As in the preceding diagnostic, there is a tight coupling between morphology and syntax. Only in the independent order is the $2 > 1 > 3$ PH-interaction morphologically visible, and only there does it matter for syntactic obviation. As for the mechanism of cross-clausal obviation, there are various possibilities. One is that the winner on the PH-interaction moves to the highest A-position, and from there triggers obviation of the adjunct subject, either syntactically, or through the information-structural prominence thus attained.⁹

The last diagnostic is cross-clausal agreement. Certain matrix verbs like 'think' agree with a designated argument α in their clausal complement as if it were their own O (Dahlstrom 1986, Branigan and MacKenzie 2001, Bruening 2001, Lochbihler 2008 in Algonquian, and generally Polinsky 2003). The situations of interest are those where α can interact with another argument on the $2 > 1 > 3$ hierarchy. The embedded clauses are conjunct, so the $2 > 1 > 3$ PH interaction does not occur, and α is always the EA (Rhodes 1994: 438f.). However, if the matrix clause is in the independent order, α does interact with its EA. Bruening (2001) shows that in the Algonquian language Passamaquoddy, this interaction has syntactic consequences. If α is lower-ranked than the matrix EA according to $2 > 1 > 3$ hierarchy (matrix direct context), α must link to a movement gap within the embedded clause, by a path free of islands, and if it appears overtly, it is at the edge of the embedded clause. Thus in (11), the EA wins the $1_{EA} \rightarrow 3_O$ EA- α interaction, as seen by the prefix 1st person *n-* on 'know', and therefore the 3rd person α 'who' cannot come from an adjunct island within the embedded clause. In (12) on the other hand, α outranks the matrix EA in the $3_{EA} \rightarrow 1_O$ and $1_{EA} \rightarrow 2_O$ combinations, controlling the prefixes 1st person *n-* and 2nd person *k-* on 'know'. Then α links to a resumptive pronoun in the embedded clause, in disregard of islands, and may appear overtly within the matrix clause itself.¹⁰

- (11) a. N-kosiciy-a [wen elomi-ya-t [mesq Mali mace-ntu-hk]].
 1-know.TA-DIR who IC.away-go-3.CJ not.yet M. start-sing-3.CJ.NEG
 I_{EA} know who _{α} t_α left before Mary started singing.

⁹See further Bruening (2001), Mühlbauer (2008) on obviation. Superficially, the alternation in the obviation of the adjunct subject is reminiscent of that between anaphor types in sentences of the type *Lynn_i found Kate_k tired when x_{i/jk} came home*, in languages like Spanish, Finnish, or German. If x_i picks up the subject, it tends to be *pro* rather than a pronoun, or a pronoun rather than a demonstrative, and inversely if x_k picks up the object (Turan 1996, Arnold 1998, Kaiser 2003).

¹⁰The 3.PROX > 3.OBV PH-interaction, which applies in the conjunct as well as independent order, matters both for determining α in the lower clause and for Bruening's generalization.

- b. *N-kosiciy-a [wen elomi-ya-t Mihku [mesq t mace-ntu-hk]].
 1-know.TA-DIR who IC.away-go-3.CJ M. not.yet start-sing-3.CJ.NEG
 I_{EA} know who_α Mihku left before t_α started singing.
 (Bruening 2001: 268, matrix pivot EA in bold)

- (12) a. N-kosiciy-oq al nikuwoss [eli psi = te wen
 1-know.TA-INV uncertain 1.mother C all = EMPH someone
 uci-maceha-t [mesq mace-ntu]].
 from-leave-3.CJ not.yet start-sing.1.CJ.NEG
 (I wonder if) my mother_{EA} knows (about me_α) that everyone left before
 I_α started singing.
 b. K-piluwitaham-ul Mihku [keti-maceha-t ['sami sakhip-huk-ihin]].
 2-suspect-1/2 M. IC.FUT-leave-3CJ because bring-drive-2.CJ
 I_{EA} suspected (about you_α) that Mihku would leave when you_α drove up.
 (Bruening 2001: 275f., 277, matrix pivot O in bold)

Thus the morphological PH-interaction of the EA and α in the matrix clause correlates with whether α relates to a movement gap or to a resumptive in the embedded clause. The difference between movement and resumption is syntactic, not morphophonological, so the $2 > 1 > 3$ PH-interaction has a syntactic correlate.¹¹ Bruening (2001: 279ff.) proposes the following account:

- The matrix clause may agree with α at the edge of the embedded clause.
- α may be base-generated at this edge and linked to a resumptive, but only with a feature P that requires it to undergo further A-movement.
- In Passamaquoddy, O A-moves over the EA if and only if O wins the EA-O PH-interaction (inverse). Thus if α outranks the matrix EA on the $2 > 1 > 3$ hierarchy, it undergoes A-movement over the EA and satisfies P.
- Otherwise, α cannot A-move over the EA. Consequently, it cannot be base-generated the lower edge, because its P could not be satisfied. The only source of α is movement from within the embedded clause to its edge. There it agrees with the matrix clause without further A-movement.

The three diagnostics reviewed for Algonquian show that the PH-interactions signalled by the morphology have syntactico-semantic correlates, at least for the $1/2 > 3$ subset of the hierarchy. The Araucanian language Mapudungun corroborates the Algonquian evidence. EA-O PH-interactions in Mapudungun are analysed by Arnold (1994, 1997). She finds that they govern not only verbal morphology, but also the licensing of overt subjects in nonfinite clauses, more clearly syntactic. The relevant morphology of the finite verb is given synoptically in Table 3.3. Agreement is controlled by the winner of EA-O PH-interaction on the $1 > 2 > 3$.PROX $>$ 3.OBV hierarchy: EA in direct $1_{EA} \rightarrow 2_O$,

¹¹More precisely, the $1/2 > 3$ portion of the hierarchy does. (12)b shows that in the $1_{EA} \rightarrow 2_O$, O wins and creates an inverse, but there is no data on $2_{EA} \rightarrow 1_O$ (Bruening 2001: 277 note 10).

Table 3.3 Mapudungun finite agreement (Arnold 1994, 1997, Zuñiga 2002: 229)

$X_{EA} \rightarrow 3_O$ (direct)	(-fi) (3.O) + person _{EA} - number _{EA}
$3_{EA} \rightarrow X_O$ (inverse)	-e (INV) + person _O - number _O + -(m)ew
$1SG_{EA} \rightarrow 2SG_O$	-e (INV) + 1DU
$2SG_{EA} \rightarrow 1SG_O$	-e (INV) + 1SG
$1_{EA} \rightarrow 2_O$ (rest)	-w (REFL) + 1PL
$2_{EA} \rightarrow 1_O$ (rest)	-mu (INV) + 1PL

Legend: Inverse shaded dark, unclear ('middle') shaded light

$1/2_{EA} \rightarrow 3_O$, $3.PROX_{EA} \rightarrow 3.OBV_O$, O in inverse $2_{EA} \rightarrow 1_O$, $3_{EA} \rightarrow 1/2_O$, $3.OBV_{EA} \rightarrow 3.PROX_O$. Inverse contexts are further marked by the inverse affixes *e* and *mu* (*e* except in $2_{EA} \rightarrow 1_O$ combinations of more than two participants, where *mu* is found).¹²

The morphological direct-inverse contrast extends to non-finite (subordinate) verbal forms in Table 3.4, ignoring for now the columns headed *overt*. In them person and number agreement is replaced by the infinitival *el* or *lu* morphemes. However, there remain the inverse markers *e*, *mu*, along with *mew*. Their distribution partitions the paradigm into direct $1/2_{EA} \rightarrow 3_O$ (and $3.PROX_{EA} \rightarrow 3.OBV$) and inverse $3_{EA} \rightarrow 1/2_O$ (and $3.OBV_{EA} \rightarrow 3.PROX_O$), with unclarity for $1 \leftrightarrow 2$.

Arnold finds one syntactic correlate of the EA-O PH-interactions: the winner of the EA interactions is realized as the overt argument of nonfinite clauses, the EA in direct contexts, the O in inverse ones. This is schematised in Table 3.4 in the columns headed *overt*. Example (13) illustrates with the overt pronoun (underlined) for one direct and one inverse context of the *el*-infinitive. On Arnold's analysis, it is subjecthood that determines which argument is overt, much as it determines the overtness, form, and position in English non-finite clauses: *for you*

Table 3.4 Direct/inverse in Mapudungun nonfinite forms (Zuñiga 2002: 229f)

	-EL ₁	Overt	-EL ₂	overt	-LU	Overt
$X \rightarrow 3$ (direct)	(-fi)-el	EA	(-fi)-el	EA	(-fi)-lu	EA
$3 \rightarrow X$ (inverse)	-e-t-ew	O	-e-t-ew	O	-e-lu-mew	<i>O</i>
$1SG \rightarrow 2SG$	-fi-el	O	-fi-el	<i>EA O</i>	-fi-lu / -e-lu-mew	<i>O</i>
$2SG \rightarrow 1SG$	-fi-el	EA	-fi-el	<i>EA O</i>	-e-lu-mew	<i>O</i>
$1 \rightarrow 2$ other	-w-fi-el	O	(-fi)-el	<i>EA O</i>	-w-lu	<i>O</i>
$2 \rightarrow 1$ other	-mu-fi-el	EA	(-fi)-el	<i>EA O</i>	-mu-lu	<i>O</i>

Note: *Overt* forms are personal pronouns if italics, possessive pronouns otherwise

¹²The $3.PROX$ - $3.OBV$ distinction is inferred solely from the existence of two agreement patterns for $3 \leftrightarrow 3$ interactions. The $1_{EA} \rightarrow 2_O$ combinations are special; Arnold calls them 'middle'. Historically and in the Huichille dialect, there are transparent inverse forms, *pe-e-ymi-Ø* 'see-INV-2SG.SU -1.O' 'I see you'. However, modern Mapudungun forms in the Tables 'opaquely' express 'I see you (SG)' by 'We (two) see you', and 'I/we see you' (total number of participants greater than two) by 'We (plural) see each other' (see Chapter 2).

to see her, **PRO** to see her, **your/you** seeing her. These are syntactic properties of the designated subject position [Spec, TP/FinP]. Mapudugun is special because what occupies this position is determined by the EA-O PH-interaction (cf. Baker 2003). For $1 \leftrightarrow 2$ combinations, both the morphology and the syntactic facts are unclear. Thus as in Algonquian, the Mapudungun evidence establishes that the $1/2 > 3$ portion of the PH hierarchy has a syntactic correlate.¹³

- (13) a. mule-y **mün** allkü-tu-ñma-ya-fi-el ñi dungu (*direct*)
 have-3SG your(PL) listen-?-SRC-FUT-OBJ-VN his word
 You must listen to his word.
 b. fey muna kutran-ka-w-üy **mi** trem-üm-a-t-ew (*inverse*)
 she very illness-FAC-REFL-3SG your(SG) grow-CAUS-FUT-INV-
 VNOM-3(O)
 She made a lot of sacrifices in order to raise you.
 (Arnold 1994: 38, 1997 ex. 46, 47)¹⁴

Algonquian and Mapudungun make a robust case for syntactico-semantic correlates to PH-interactions. The correlates closely track the morphological manifestation of the PH-interaction, strikingly so in the Algonquian independent-conjunct contrast. The morphological and syntactic PH-interactions thus clearly reflect the same mechanism.

The languages reviewed here are not alone in having potential syntactic correlates of PH-interactions, but rather the ones where the evidence is clearer and bears specifically on phi-features rather than on notions like obviation. Agreement and case-marking have been excluded as evidence, since their syntactic or morphological character is precisely the issue, in the face of theories that would put them into an enriched morphology, one that can span the phrase-structural distances seen in cross-clausal agreement (Marantz 2000, Halle and Marantz 1993, Bobaljik 2008). Also excluded for the same reason have been phenomena where PH-interaction affects only the presence, order, or shape of affixes or clitics. In Cavineña for instance, the $1 > 2 > 3$ hierarchy determines the order of second position enclitics for the subject and the direct object (Guillaume 2006), while in French, the $1/2 > 3$ hierarchy determines the

¹³In $1 \leftrightarrow 2$ scenarios, Arnold (1994: 38, 1997) observes that the EL-forms choose 2nd person in $1_{EA} \rightarrow 2_O$ and $2_{EA} \rightarrow 1_O$, which Zuñiga (2002: 235) qualifies. Other syntactic correlates of the EA-O interaction in Mapudungun bear on or have only been tested for $3.PROX > 3.OBV$. For instance, *wh*-movement applies to the O of morphologically direct and to the EA of morphologically inverse clauses, recalling the cross-linguistically common ban on ergative extraction and its repair in some Mayan languages by demotion to absolutive (Berinstein 1985, 1990, Davies and Sam Colop 1990, Hale 2001, Aissen 1999, Béjar and Rezac 2007: Appendix).

¹⁴The inverse *e* is missing by assimilation to *a* (Arnold 1994: 40 note 10, 1997 note 14). The gloss of *mün* has been changed from *you* to *your* on the basis of Arnold's discussion.

order of object proclitics to the verb (Laenzlinger 1993).¹⁵ Similar phenomena appear to be more clearly syntactic in some systems. There is great potential for enriching the set of syntactic correlates of PH-interactions.¹⁶

3.3 Theories of PH-Interactions

Syntactic correlates of EA-O PH-interactions demonstrate that the interactions play a role in deciding which syntactic structures are grammatical. Most analyses conclude that syntax accesses the necessary distinctions among phi-features, for instance to move 1st/2nd person to a different position than 3rd. However, it remains analytically possible that PH-interactions only filter syntactic structures without themselves being syntactic. These options and their limits are discussed in this section, leading to the more robust evidence of Arizona Tewa in the next.

A common implementation of PH-interactions envisages that the clause is partitioned into regions dedicated to a particular interpretation.¹⁷ The person hierarchy is a hierarchy of layers in the nonthematic region of the clause, each defined by a phi-feature class. For a $1/2 > 3$ hierarchy, there would be a 1st/2nd person layer above one for 3rd person as in (14), for instance Déchaine's (1999) PersonP above NumberP or Bianchi's (2006) Speech Act Participants Phrase SAPP above 3rd person Phrase 3P. The layers may be suitably elaborated, for instance $2 > 1 > 3.PROX > 3.OBV$ for Algonquian.

¹⁵I am grateful to A. Guillaume for discussion of Cavineña and providing me with his work.

¹⁶For instance, in Movima, Haude (2006: 7.1–5), the winner of EA-O PH interaction must be overtly expressed and enclitic to the verb, with direct/inverse verbal markers indicating whether it is the EA or the O, according to the hierarchy $1SG > 1INCL/EXCL > 2SG > 2PL > 3 \text{ human} > 3 \text{ non-human}$. This constraint ranges over both enclitics and full 3rd person DPs, making it appear syntactic rather than morphological. Moreover, the generalization has exceptions where the 2nd person in $1 \leftrightarrow 2$ combinations is enclitic, but then the 1st person must still obey the constraint by being overt as a free pronoun, also suggesting a generalization going beyond clitics (Haude 2006: 278). In syntactic terms, the winner of the PH-interaction might move to a designated subjecthood position, which must be overt and control enclisis. Fascinating PH-interactions that fail to be clearly syntactic include Lakämper and Wunderlich (1998) for Quechua, and Dixon (2000), Farrell (2005: 77ff.) for Jarawara; an example of a PH-interaction that has turned out to be spurious is Nichols' (1998: Chapter 2) reanalysis of Zuni from Nichols (1996), Albizu (1997b).

¹⁷For other types of syntactic theories where phi-feature distinctions condition movement, see Laka (1993a), Johns (1993), Nash (1997), Hale (2001), Béjar (2003), Béjar and Rezac (2009), Baker (2008). Reference to phi-features may be under other terms. For Bruening (2001: 2.4.5), A-movement occurs through the feature $[+P]$, but the 1st/2nd-3rd person distinction governs the distribution of $[+P]$: 1st/2nd person is inherently $[+P]$, a 3rd person must not be $[+P]$ if coargument of 1st/2nd person, while for two 3rd person coarguments one and one only is $[+P]$.

- (14) a. [PersonP **1/2:EA** [NumberP ... t_{EA} ... 3:O ...]] *direct* (1/2→3)
 b. [PersonP **1/2:O** [NumberP ... 3:EA ... t_O ...]] *inverse* (3→1/2)

Arguments map to the appropriate layers by movement. 1st person moves to the 1st/2nd person layer whether EA or O, 3rd person stays lower. Only EA and O are affected, since DPs in PPs are typically inaccessible to the relevant clausal (A-)movement (Nichols 2001, cf. Chapter 5). As a result of the movement, EA and O end up differentiated in structural prominence according to their phi-features, rather than according to their base-generated arrangement $EA > O$. The result of the movements is usable by syntax, interpretation, and morphology. The argument that ends up highest may then be the one to raise to a special CP layer where cross-clausal obviation or agreement occur, or the one first seen by a post-syntactic top-down spell-out algorithm. Two more tools are needed. First, in order to account for direct-inverse morphemes, there must be some way to distinguish direct contexts, where the EA occupies the highest phi-layer, e.g. $1_{EA} \rightarrow 3_O$, and inverse ones, where the O crosses over the EA, $3_{EA} \leftarrow 1_O$. A technical solution is to attribute the EA a feature like Adger and Harbour's (2007: 21f.) [control]. Direct morphology is then used if the highest argument has [control]. Second, during movement to the appropriate phi-layers, arguments sometimes interact according to their phi-features. For instance, in some languages $1/2_{EA} \rightarrow 2/1_O$ combinations are direct while $3_{EA} \leftarrow 1/2_O$ inverse, indicating that a 1st/2nd person O moves over a 3rd but not a 2nd/1st person EA (cf. Table 3.1). Such phi-interactions are suitably modelled by feature-relativized locality, whereby arguments of the same phi-feature class like 1st/2nd person cannot cross each other, and thus retain the base-generated $EA > O$ order (cf. Bianchi 2006, Béjar and Rezac 2009).

To drive argument movement to the appropriate layers, feature-checking or specifier-head criteria have been proposed (Bianchi 2006). They are analogous to those for left-peripheral movements, like focus and *wh*-movement (Rizzi 1997): 1st/2nd person checking beside *wh*-checking. The latter movements have been usually grounded in interpretive requirements such as *wh*-scope. Phi-driven movements may perhaps be so as well. The *Mapping Hypothesis* of Heim (1982), Diesing (1992) has provided one interpretive motivation for the movements in (14), elaborated in Jelinek (1993), Diesing and Jelinek (1995), Jelinek and Carnie (2005), Rice and Saxon (1994). According to the Mapping Hypothesis, the clause is divided into the interpretive layers in (15).

- (15) a. [Presupposed (C') **1/2:EA** [Nuclear (vP) t_{EA} ... 3:O ...]] *direct* (1/2→3)
 b. [Presupposed (C') **1/2:O** [Nuclear (vP) 3:EA ... t_O ...]] *inverse* (3→1/2)

Highest is a quantifier layer, next a layer that maps into the restrictor of the quantifiers and associated with presupposed (topical, old) information, and lowest a nuclear scope layer associated with new information. The way to integrate phi-features into this theory is to associate them with *grammaticalized*

presuppositionality. In a language with $1/2 > 3$ person hierarchy, 1st/2nd person are grammaticalized as presuppositional, and 3rd persons are not. Interpretation will then require that all and only presuppositional information, 1st/2nd but not 3rd person, end up in the presuppositional layer of the clause. Other theories discussed in [Chapter 6](#) posit commensurable interpretive motivations, such as the need for 1st/2nd person to move to functional heads that relate the utterance to context. Cross-linguistic variation may be modelled through variation in grammaticalized presuppositional features, causal functional architecture, and so on.

If the motivation of phi-driven movement is interpretive, syntax might ultimately be dispensed of all reference to phi-features and move arguments around freely, as is also true for focus, *wh*, and so on. If syntax does not establish the interpretively needed configuration, interpretation simply fails. 1st person ends up higher than 3rd person on the only successful interpretation, and that is the configuration seen by obviation, cross-clausal agreement, spell-out. We may call this idea *LF Filtering*. An LF requirement filters syntactic structures so as to leave only those that satisfy it. Syntax never has to see the features involved, including the phi-features of PH-interactions.

Exactly the same logic can be applied to model PH-interactions on the PF side, *PF Filtering*, as in Albizu's (1997a) *Generalized Person Case Constraint* (16). It is a morphological condition that requires syntax to furnish PF with structures where more 'referential' person features, 1st/2nd person, c-command less referential ones, 3rd person. If syntax does not do so, morphology cannot realize it. The net result is the same as in LF-filtering. Syntactic computation may operate blind to phi-features. If it fails to meet (16), it does not produce a legitimate LF-PF pairing. PF/LF-filtering lets syntax operate blind to phi-features, yet it gives them syntactic consequences, by filtering the output of syntax according to syntax-external constraints on phi-features.

- (16) Generalized Person Case Constraint: A Person-morphosyntactic feature P_1 must be less referential than, or as equally referential as, a Person-morphosyntactic feature P_2 that c-commands it at MC [the Morphological Component in Distributed Morphology].

(Albizu 1997a)

LF and PF filtering likely both exist in their own right, eliminating syntactically legitimate structures by giving them no interpretation or realization, as in the case of the morpho(phono)logical gaps discussed in [Chapter 2](#). This does not mean that PF/LF-filtering have the scope to capture PH-interactions. Various aspects of the syntactic movements described above refer to phi-features in a way that may be irreducible to independent aspects of PF or LF, such as feature-relativized locality. There also appear to be mismatches between the phi-features of arguments seen by syntax, including by PH-interactions, and those seen by PF and LF, discussed in [Chapter 6](#); the notion of *grammaticalized* presuppositionality is among them.

Finally, uncertainly but intriguingly, there may be a difference in the mechanical profiles of PH-interactions and PF-filtering (perhaps extensible to LF-filtering). Secure instances of PF-filtering arise from the arbitrary properties of the spell-out items or rules of a language: the absence of the past participle of *stride* in English, of $2\text{PL}_{\text{EA}} \rightarrow 1\text{PL}_{\text{O}}$ phi-features in Bermeo Basque agreement morphology (Chapter 2). Such gaps could yield an Ojibwa-type system *accidentally*. There is some PF-detectable property that differentiates direct structures from inverse ones, for instance whether the highest argument is [+control]. This property governs the distribution of inverse morphemes in languages that have them. An Ojibwa-type system could then be created by one set of PF gaps in the paradigm of inverse-marked verbs, for $1/2_{\text{EA}} \rightarrow 3_{\text{O}}$ combinations, and another in the paradigm of direct-marked verbs, for $3_{\text{EA}} \rightarrow 1/2_{\text{O}}$. Beside it, other systems should occur where the set of gaps is arbitrary and non-complimentary, because such is the empirical nature of arbitrary gaps: for instance, $1\text{PL}_{\text{EA}} \rightarrow 2_{\text{O}}$ direct, $1_{\text{EA}} \rightarrow 2\text{SG}_{\text{O}}$ inverse. Yet syntactically visible EA-O PH-interactions appear to be governed by simple person hierarchies like $1/2 > 3$, not by arbitrary gaps. These in their turn are syntactically inert. If this is systematic, different mechanisms underlie the arbitrary spell-out gaps established for PF-Filtering, and the principles that govern PH-interactions.

If PH-interactions are attributed to PF, they call for principles like (16), rather than arbitrary gaps. However, such principles are not self-evidently justified. The arbitrary spell-out items and rules of a language belong to Chomsky's (1995: 222f.) 'bare' output conditions, necessary to realize syntactic structures. Filters like (15) call for an additional computational system interposed between syntax and realization, whose existence is more dubious. It is the core distinction between approaches to morphology that view it as an extension of syntax to the arbitrary properties of the lexicon, as in Distributed Morphology, and those that attribute it an independent, distinctive computational component.¹⁸

The logic of PF/LF-filtering leads to a different way to distinguish it from a syntactic approach to PH-interaction. PF/LF-filtering dispenses with syntactic reference to phi-features by positing that syntax freely generates two structures, the direct one where EA is more prominent than O, and the inverse one where O is more prominent than EA. A simple LF or PF constraint C like (16) then filters the two structures to ensure that the prominence of EA and O matches the person hierarchy. This turns out to be inadequate for the PH-interaction seen next.

¹⁸The same issues appear to be reflected in the following claim for postsyntactic, realizational approaches to phi-agreement and case, which would be undermined by a PF principle like (15) to PH-interactions: "Syntactic ungrammaticality will not result from the realization of case and agreement. In particular, there is always a default case realization." (Marantz 2000: 20)

3.4 PH-Interactions and Repairs in Tanoan

Arizona Tewa is a language of the Tanoan group (Kroskrity 1985, Klaiman 1992, Zuñiga 2002). It is convenient to approach its PH-interaction by passing through those of other Tanoan languages, Southern Tiwa (Allen and Frantz 1983, 1986, Allen et al. 1990, Rosen 1990) and Picuris (Nichols 2001). In that way is best revealed the property of Arizona Tewa that is difficult for PF/LF-filtering, while something of the variation and evolution of PH-interactions appears.

The common features of PH-interactions in these languages are resumed in (17). Direct contexts on the $1/2 > 3$ hierarchy, $1/2_{EA} \rightarrow 3_O$, look like plain actives, with bare, agreeing EA and O. Inverse $3_{EA} \rightarrow 1/2_O$ contexts look more like passives, with an oblique EA, absent or impoverished EA-agreement, and sometimes an inverse morpheme on the verb. $3_{EA} \rightarrow 3_O$ combinations can be direct or inverse and are not further pertinent here. The status of $1/2_{EA} \rightarrow 2/1_O$ as direct or inverse varies by language, and will prove crucial.¹⁹

- (17) a. *Person Hierarchy*: $1/2 > 3$
 (i) $1 \leftrightarrow 2$: inverse in Arizona Tewa, direct in Southern Tiwa, Picuris.
 (ii) $3 \leftrightarrow 3$: direct or inverse.
 b. *Direct*: EA and O unmarked for case (bare), EA and O agreement.
 c. *Inverse*: EA oblique, O primary agreement controller.
 (i) Arizona Tewa: oblique EA agrees, more poorly than in direct.
 (ii) Southern Tiwa, Picuris: oblique nonagreeing EA; inverse verb affix.

Southern Tiwa shows clearly the passive-like quality of the inverse. In direct $1/2_{EA} \rightarrow 3_O$, (18), as well as $1/2_{EA} \rightarrow 2/1_O$, (19), the EA and O must be bare DPs and control agreement. In inverse $3_{EA} \rightarrow 1/2_O$ (20), the EA must appear in a PP (or oblique) glossed INSTR (-*ba*), fails to agree like other PPs, and the verb bears the inverse morpheme glossed PASS (-*che*). (The gloss A refers to the morphological class of 'child' that is a mixture of number and animacy.)

¹⁹ $3 \rightarrow 3$ combinations might reflect direct $3.PROX_{EA} \rightarrow 3.OBV_O$ vs. inverse $3.OBV_{EA} \rightarrow 3.PROX_O$, as in Arnold (1994) for Mapudungun (cf. Kroskrity 1985: 315f.). Applicative constructions might shed more light on this. They treat the applicative object IO like the direct object of plain transitives (Allen and Frantz 1983: 308, Allen et al. 1990: 347). However, while $3_{EA} \rightarrow 3_O$ combinations can be direct or inverse and $1/2_{EA} \rightarrow X_{IO} \rightarrow 3_O$ are direct, $3_{EA} \rightarrow 3_{IO} \rightarrow 3_O$ can only be inverse in Southern Tiwa (Rosen 1990: 2.3). This is consonant with person-like properties of even 3rd person applicative objects discussed in Section 5.2. (The IO prevents O from being 1st/2nd person in Southern Tiwa and Algonquian by the Person Case Constraint of Chapter 5, even when it is 3rd person and loses the PH-interaction to a 1st/2nd person EA; see Béjar and Rezac 2009: 46 note 6 for one approach, as well as Albizu 1997b, Lochbihler 2008, Boeckx 2008b.).

marked by *-di* glossed OBL. However, the inverse is used not only for $3_{EA} \rightarrow 1/2_O$ as in Southern Tiwa, but also for $1/2_{EA} \rightarrow 2/1_O$, (22)c. Thus there can be no Participant Chômeur Ban, because 1st/2nd person EA can be a *di*-marked PP, in $1/2_{EA} \rightarrow 2/1_O$. Nevertheless, the EA must be prevented from being oblique in $1/2_{EA} \rightarrow 3_O$, calling for another constraint that applies in this PH-combination. Thus there end up being two structures each constrained by PH-interactions: the active-like one for $1/2_{EA} \rightarrow 3_O$, when the EA outranks the O, the passive-like one otherwise.

- (22) a. Né'i k^{wi}yo dó-tay [1_{EA}→3_O, direct]
 this woman 1SG→3(Set II)-know
 I know this woman.
- b. na: sen-e-di / 'u-di dí-k^wek^{hw}ξ [3/2_{EA}→1_O, inverse]
 I man-PL-OBL you-OBL 2/3→1(Set III)-shot
 I was shot by the men / by you.
- c. ,u na:n-di wí-tay [1_{EA}→2_O, inverse]
 you we-OBL 1→2(Set III)-know
 You are known (or recognized) by us.
- ((a) Zuñiga 2002: 184, (b), (c) Kroskrity 1985: 311²⁰)

There are further differences between the two languages, incidental to this key contrast, though of great interest in themselves. In Arizona Tewa, the oblique-like *di*-marked EA controls agreement, unlike in Southern Tewa. Table 3.5 summarizes the agreement situation: Set I agreement prefixes are used for the subject of intransitives, Set II for direct EA→O combinations and reflect the phi-features of both EA and O, Set III for inverse EA→O combinations and likewise reflect both EA and O, although the set of phi-distinctions contributed by the EA is poorer than in Set II. By agreeing, the *di*-marked EA differs from the homophonous *di*-oblique in (23) used for instruments, comitatives, sources, benefactives, but not agents. Arizona Tewa inverse

Table 3.5 Arizona Tewa agreement (Kroskrity 1985: 308, Zuñiga 2002: 184)

EA/S	1SG	1DU	1PL	2SG	2DU	2PL	3SG	3DU	3PL
S Set I	ʰo-	ga-	gi-	ʰu-	da-	ʰi-	na-	da-	di-
3.O Set II	dó-	ʰán-	ʰi:-	ná:-	den-	ʰóbí:n-	mán-	den-	dí-
3.O Set III	-	-	-	-	-	-	ó:-	ʰó:bén-	ʰó:bé-
2.O	wí-	wí-	wí-	refl.	refl.	refl.	wó:-	wó:bén-	wó:bé-
1.O	refl.	Refl.	refl.	dí-	dí-	dí-	dí-	dí-	dí-

Legend: Inverse = Shaded

²⁰Kroskrity's agreement prefix glosses are modified in line with Zuniga 2002, as in Table 3.5.

configurations also lack an inverse affix on the verb. There is an independent passive, marked by the affix *ti*: in (23), but it cannot express the EA at all, and its thematic object agrees as the subject of a regular intransitive, by Set I not Set III. Overall, the inverse of Arizona Tewa resembles an active rather than a passive as in Southern Tiwa. Its EA looks like an agreeing ergative, rather than a full PP invisible to agreement.

- (23) (na:-bí ciyó-dí / *hẹ'i sen-di) hẹ'i tú na-c'á:la-tí: [passive]
 I-GEN knife-OBL that man-OBL that meat 3SG(Set I)-cut-PASS
 The meat was cut (with my knife / *by that man)
 (Kroskrity 1985: 310)

The Arizona Tewa situation contrasts with the ones seen so far because the distribution of the direct and inverse is not plausibly filtered by some PF/LF constraint *C* like (16) that ensures that syntactic prominence matches a post-syntactic person hierarchy. Let us suppose that direct $1/2_{EA} \rightarrow 3_O$ configurations are simple active transitives where the EA c-commands O. *C* (16) properly restricts this structure to $1/2_{EA} \rightarrow 3_O$ configurations and forbids it to $3_{EA} \rightarrow 1/2_O$, where a 1st/2nd person would be c-commanded by an argument with lesser or equal person value. There is also a distinct inverse structure, with an oblique-like EA. *C* properly allows $3_{EA} \rightarrow 1/2_O$ and $1/2_{EA} \rightarrow 2/1_O$ to be realized by this inverse structure, if we suppose that its oblique EA does not count for *C*, so that O is left as the sole and highest argument. However, this inverse structure cannot be freely base-generated. It is only licensed if O outranks or is equal to the EA, when the direct structure is unavailable, not when EA outranks O, although *C* would also be met in the latter case. To restrict the inverse, another constraint *C'* referring to PH-interactions is needed, a mirror of *C*, but stated over the inverse structure. *C'* states that the inverse structure with its quasi-oblique EA is limited to $EA \rightarrow O$ combinations where the O is equal to or outranks the EA, or alternatively, that the inverse is a last-resort structure licensed only when the direct is unavailable.

In Ojibwa or Southern Tiwa, only *C* of type (16) is needed. Their inverse respects *C* by ensuring that a 3_{EA} is not more prominent than $1/2_O$, moving O higher in Ojibwa and making it oblique in Southern Tiwa. They do not face the conundrum of blocking the inverse for $1/2_{EA} \rightarrow 2/1_O$. In Ojibwa, 1st and 2nd person arguments go to separate clausal positions on the hierarchy is $2 > 1 > 3$, so an elaboration of *C* (16) uniquely determines the position for each EA–O combination. In Southern Tiwa, $1/2_{EA} \rightarrow 2/1_O$ combinations are direct, satisfying a version of *C* (16) that allows a person feature to c-command another equally prominent one, and the inverse may be ruled out by a constraint like the Participant Chômeur Ban (21)b that does not refer to PH-interaction. Arizona Tewa needs both *C* (16) and a second PH-interaction constraint *C'* (24) tailored to inverse structures, or some stipulative elaboration of *C* like (25) referring to both person and EA/O status.

- (24) C': 1st/2nd person EA cannot be oblique if O is 3rd person.
 (25) 1/2.O is bare/highest, 1/2.EA is bare/highest with 3.O but not 1/2.O.

The existence of two PH-interaction constraints, C to restrict the direct and C' the inverse structure, or the equivalent, removes the appeal of filtering approaches. LF/PF-filtering is attractive because it seeks to ground PH-interactions in a natural LF or PF postulate like C (16): 1st/2nd person is hierarchically higher than 3rd person. A mirror image C' (24) of C tailored to inverse structures returns to an arbitrary stipulation. It gains nothing over syntax in analytical simplicity, and makes appeal to no independent property of the interfacing systems. The reverse rather is true. The constraints would be extra-syntactic yet need to refer to the syntactic primitives of EA vs. O, DP vs. PP, c-command, to the enrichment of PF, and ad-hoc for LF. The regulation of the direct and inverse of Arizona Tewa is the province of syntax.

Syntax then needs to refer to the phi-features in PH-interactions, for instance to drive movement specific to 1st/2nd person. For Arizona Tewa, a simple system may be sketched once such reference is available, (26). EA is base-generated as an agreeing oblique in [Spec, ν P], (26)a, as on inherent or quirky-case approaches to the ergative (Woolford 1997, Legate 2008). O Object-Shifts to the edge of the ν P above it. Next, the inverse and the direct are derived by movement of the closest 1st/2nd person to the higher functional head T. O moves if it is 1st/2nd person because it c-commands EA, in (26)b. Otherwise EA is the closest goal, subextracting from its PP, (26)c. This is not the view of PH-interactions that will ultimately be developed in Chapter 5, where the inverse will rather be a last-resort response to the unavailability of the direct. However, it illustrates the primitives that need to be referred to, and their syntactic character: 1st/2nd vs. 3rd person, and EA vs. O in the form of the O > EA c-command produced by movement.²¹

- (26) a. [TP T_{1/2 probe} [α P O [ν P [PP P EA] $\nu \dots \Theta \dots$]]]
 b. [TP EA_{1/2} T_{1/2 probe} [α P O₃ [ν P [PP P EA_{1/2}] $\nu \dots \Theta_3 \dots$]]]
 c. [TP O_{1/2} T_{1/2 probe} [α P $\Theta_{1/2}$ [ν P [PP P EA_{1/2/3}] $\nu \dots \Theta_{1/2} \dots$]]]

This brings us to the evidence that Arizona Tewa PH-interactions are syntactic in the first place. If the difference between its direct and inverse were only in the morphological realization of one and the same syntactic structure, their complementarity would fit a familiar pattern of PF phenomena discussed in

²¹See Medová (2009), Caha (2009) for work developing the idea that unmarked structural Case is due to movement from richer PP-like structures. The story can equally be explored in reverse according to another view of the ergative: the EA is base-generated bare, T attracts all EAs unless a 3rd person O intervenes, and it is movement to T that results in the assignment of an ergative oblique-like case (cf. Rezac 2003).

Chapter 2 for synthetic-analytic alternations like the English comparative.²² PF phenomena are invisible to syntax and interpretation (Chapter 2). This is the touchstone by which a syntactic phenomenon may be told.

For Arizona Tewa, Kroskrity (1985: 313f.) presents two good arguments that the direct and the inverse reflect two different syntactic structures, not two spell-outs of the same one. The first is that the inverse structure prevents relativization on its oblique EA, while the direct structure allows relativization on its unmarked EA. This is shown in (27). The sentence is the inverse $3_{EA} \rightarrow 2_O$ *you_O were helped by him/her_{EA}*. The O may be relativized to be the subject of *may ... be happy*, but the EA cannot, unlike in the direct (although there is no example to cite). Accessibility to relativization is usually viewed as a syntactic fact. Thus the oblique-like EA of inverses but not the bare EA of direct occurs in a syntactic structure that prevents relativization.

- (27) wó:k^hege-n-ʔi na-hik^yan-mí
3SG→2(Set III)-help-PROG-REL IMPV-happy-OBLIG
a. May you **who** are helped be happy! (**O** of inverse)
b. *May he/she **who** has helped you be happy! (**EA** of inverse)
(Kroskrity 1985: 313)

The other argument comes from a constraint on cross-clausal anaphora or conjunction reduction, an important subjecthood diagnostic (cf. Zaenen, Maling and Thráinsson 1985, Bickel 2007). In (28), there is a gap for the intransitive subject of the main clause, which is bound or controlled by an antecedent in the preceding embedded clause. That antecedent can be the EA of direct and the O of inverse contexts, but not the oblique EA of inverse contexts. English behaves the same way: in the translation of (28)b, *by the man* cannot be the antecedent of the gap.

²²A PF mechanism that would then lend itself well to Arizona Tewa is lower-copy spell-out due to a PF constraint, along the lines developed by Bobaljik and Branigan (2006) for Chukchi (cf. Section 4.4). Both direct and inverse configurations would involve the same structure, (ia). The fully agreeing bare EA of direct combinations is the spell-out of the copy of the EA in [Spec, TP], (ib), forced when possible. A morphological constraint like (16) that the person of AGR_{EA} outrank AGR_O prevents this in 3_{EA}→1/2_O and 1/2_{EA}→2/1_O combinations. It is resolved in (ib) by impoverishing AGR_{EA} with consequent lower-copy spell-out of the EA in [Spec, vP], *di*-marked.

- (i)
- | | | | |
|---|--|----------------|--|
| a | [EA O V+T | [EA ... O ...] | <i>Syntax</i> |
| b | [EA O AGR _{EA} +AGR _O +V+T | [EA ... O ...] | <i>Spellout</i> AGR _{EA} > AGR _O |
| c | [EA O AGR _{EA} +AGR _O +V+T | [EA ... O ...] | <i>Spellout</i> otherwise |

where top-copy EA spell-out is bare, lower-copy *di*-marked, and AGR_{EA} is impoverished if lower copy spell-out of EA occurs

- (28) a. hẹ'i sen hẹ'i k^wiyó mán-k^{hw}éđi-dí 'i né'é na-pówá.
 that man_i that woman 3SG→3(Set II)-hit-SUBJ he here 3SG.I-come
 That man_i hit that woman and ___i came here.
 b. hẹ'i sen-di hẹ'i k^wiyó 'ó:-k^{hw}éđi-dí 'i né'é na-pówá.
 that man-OBL that woman 3SG→3(Set III)-hit-SUBJ he here 3SG(Set I)-come
 That woman_i was hit by the man and ___i came here.
 (Kroskrity 1985: 314; indexing added from description)

These diagnostics indicate a syntactic difference between the direct and inverse structures. At the same time, more would be desirable to rule out alternative accounts of them.²³ It is the task of the next chapter to introduce a PH-interaction in French with a profile similar to that of Arizona Tewa, and to establish its syntactic status more robustly than can be done here.

3.5 The Limits of Syntactic PH-Interactions

In Arizona Tewa, the direct and inverse are distinct syntactic structures in a complementary distribution governed by EA-O PH-interaction: the direct occurs if EA outranks O on the $1/2 > 3$ hierarchy, the inverse otherwise. The other PH-interactions considered in this chapter fit a similar description. Elsewhere morphologically similar systems are widespread, although it is rare that syntactic correlates have been demonstrated. Variation occurs in the person hierarchy, in the direct or inverse treatment of combinations on the same point in the hierarchy, and in the overt expression of direct and inverse contexts. There is an overall coherence to such systems and intermediate steps in the variation that suggest a unified treatment, attempted in various works including Béjar and Rezac (2009). Kashmiri and Mohawk, for instance, have a three-step person hierarchy like Ojibwa (albeit $1 > 2 > 3$), but in the fashion of Arizona Tewa signal the inverse by otherwise unavailable case-marking or agreement. A particularly nice illustration of the gradations of variation is provided by Southern Tiwa, Arizona Tewa, and Yurok. Southern Tiwa and Arizona Tewa differ minimally in the direct vs. inverse treatment of $1/2_{EA} \rightarrow 2/1_O$ combinations and in the expression of the inverse (cf. (16)). Yurok, in (29), like Southern Tiwa differentiates direct $1/2_{EA} \rightarrow 3_O$ from inverse $1/2/3_{EA} \rightarrow 1/2_O$ by richer case-marking on one of the arguments, but the argument affected is the object (Georgi 2009, comparing other similar systems).

²³For instance, both relativization and conjunction reduction might need PRO rather than a gap in Arizona Tewa, and there might not be an oblique PRO in the language.

- (29) a. keʔl nek ki newoh-paʔ [direct]
 you.NOM me.NOM FUT see-2→1SG
 b. yoʔ nek-ac ki newoh-peʔn [inverse]
 he.NOM me.ACC FUT see-3SG→1SG
- (Georgi 2009: 3)

Chapter 5 briefly returns to the syntactic treatment of such systems, in a theory of direct-indirect alternations where inverse structures are last-resort repairs when direct ones are unavailable. First however, Chapter 4 examines in detail a system where the syntax of a phi-conditioned alternation between structures is open to detailed inspection, the Person Case Constraint and its repair in French.

Although some EA-O PH-interactions belong to syntax, others likely do not. Chapter 2 has considered some of the latter as ‘opaque agreement’, where an arbitrary set of EA-O combinations redistributes, reduces, or simply bans (gaps) the phi-features of agreement or clitics in a phrase-structurally small domain. There is some superficial resemblance between opaque agreement and the syntactic PH-interactions of this chapter. Chukchi deletes object agreement in $3SG_{EA} \rightarrow 1SG_O$ and $2_{EA} \rightarrow 1_O$, Foru Basque subject agreement in $1PL_{EA} \rightarrow 2SG/PL_O$, while Bermeo Basque gaps the $2PL_{EA} \rightarrow 1PL_O$ agreement combination. All could be viewed as subsets of inverse contexts on the $1/2 > 3$ hierarchy. Inversely, Ojibwa could be forced into the mould of opaque agreement through one set of gaps for EA-O combinations in direct syntactic structures and another in inverse ones, as seen in Section 3.3.

Yet there is a wide gulf between the opaque agreement of Chapter 2 and the PH-interactions of this chapter, and there is no reason to bridge it. Opaque agreement has been seen to have a fully morphological signature, including inertness to syntax and limitation to a small domain. The PH-interactions of this chapter have a syntactic signature, including syntactico-semantic visibility that has been the focus of discussion, and operation over phrase-structurally large distances as in Algonquian cross-clausal agreement in Section 3.2. A striking difference between the two types phenomena is the set of phi-features and phi-feature combinations to which they must refer. Known syntactic PH-interactions make only a very limited reference to phi-features, the 1st/2nd – 3rd person distinction, in the natural hierarchy $1/2 > 3$. It is susceptible to modeling by independent syntactic tools, including movement through probes for individual person features and/or feature-relativized locality (Béjar and Rezac 2009). By contrast, the EA-O phi-interactions of opaque agreement need to refer to wholly arbitrary lists of EA-O combinations seen in Chapter 2 for Basque and Chukchi, or equivalently, to arbitrary hierarchies, carving out no natural classes.

It may be, as Chapter 2 suggests, that only morphology has the tools to state such arbitrariness. A hint in this direction is the syntactic inertness of arbitrary

hierarchies where the $1/2 > 3$ hierarchy is syntactically active. In Plains Cree, closely related to Ojibwa, the control of suffix agreement falls to EA or O according to the hierarchy in (30)a, and Ojibwa has its own version of it. Yet Rhodes' inquiry finds syntactic consequences in Ojibwa only to the $1/2 > 3$ subset of the $2 > 1 > 3$ hierarchy governing control of the agreement prefix. If syntax in generally does not track arbitrary hierarchies or EA-O combinations like (29) or the lists in [Chapter 2](#), it is an important finding about the limits of syntactic devices or the articulation of phi-features they see (cf. [Section 2.2](#) on opaque cliticization, 4.6 on the 'weak' PCC).²⁴

- (30) a. Plains Cree suffix agreement hierarchy: 1PL > 1PL inclusive / 2PL > 3 animate > 1SG/2SG > 3 inanimate.
 b. Kiowa hierarchy agreement: non-SG indirect / extended object (IO) > 2SG dative / 1SG EA > non-SG EA > 1SG/3SG IO > 2SG/3SG EA (Zuñiga 2002: 90–2, 211f.)

References

- Abney, Steven Paul. 1987. The English noun phrase in its sentential aspect. Doctoral dissertation, Cambridge, MA: MIT.
- Adger, David, and Daniel Harbour. 2007. Syntax and syncretisms of the Person Case Constraint. *Syntax* 10: 2–37.
- Aissen, Judith. 1997. On the syntax of obviation. *Language* 73: 705–750.
- Aissen, Judith. 1999. Agent focus and inversion in Tzotzil. *Language* 75: 451–485.
- Albizu, Pablo. 1997a. Generalized Person-Case Constraint: A case for a syntax-driven inflectional morphology. In *Theoretical issues on the morphology-syntax interface*, ed. Myriam Uribe-Etxebarria and Amaya Mendikoetxea, 1–33. Donostia: UPV/EHU.
- Albizu, Pablo. 1997b. The syntax of person agreement. Ms., University of Southern California, Los Angeles.
- Allen, Barbara J., and Donald G. Frantz. 1983. Advancements and verb agreement in Southern Tiwa. In *Studies in Relational Grammar 1*, ed. David M. Perlmutter, 303–316. Chicago: University of Chicago Press.
- Allen, Barbara J., and Donald Frantz. 1986. Goal advancement in Southern Tiwa. *IJAL* 52: 388–403.
- Allen, Barbara J., Donald Franz, D. B. Gardiner, and David Perlmutter. 1990. Verb agreement multistratal representation in Southern Tiwa. In *Studies in Relational Grammar 3*, ed. Paul Postal and Brian Joseph, 321–383. Chicago: University of Chicago Press.
- Anderson, Stephen. 1992. *A-morphous morphology*. Cambridge: Cambridge University Press.
- Arnold, Jennifer. 1994. Inverse voice marking in Mapudungun. In *Proceedings of the BLS 20*, 28–41. Berkeley, CA: Berkeley Linguistics Society.
- Arnold, Jennifer. 1997. The inverse system in Mapudungun and other languages. *Revista de Lingüística Teórica y Aplicada* 34: 9–48.
- Arnold, Jennifer. 1998. Reference forms and discourse patterns. Doctoral dissertation, Stanford, CA: Stanford University.
- Baker, Mark. 2003. On the loci of agreement: inversion constructions in Mapudungun. In *Proceedings of NELS 33*, 25–49. Amherst, MA: GLSA.

²⁴Even so, the status of many hierarchies would remain unclear, for instance the rather natural classes defined by the interaction of person and number in Dummi (Trommer 2006).

- Baker, Mark. 2008. *The syntax of agreement and concord*. Cambridge: Cambridge University Press.
- Béjar, Susana. 2003. Phi-syntax: A theory of agreement. Doctoral dissertation, Toronto, ON: University of Toronto.
- Béjar, Susana, and Milan Rezac. 2003. Person licensing and the derivation of PCC effects. In *Romance linguistics: Theory and acquisition*, ed. Anna-Teresa Pérez-Leroux and Yves Roberge, 49–62. Amsterdam: Benjamins.
- Béjar, Susana, and Milan Rezac. 2007. Cyclic Agree. Ms., University of Toronto, Toronto, Ont., and Université de Nantes. On-line: <http://www.umr7023.cnrs.fr/sites/sfl/IMG/pdf/BR2005.pdf>. Accessed September 4 2010.
- Béjar, Susana, and Milan Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40: 35–73.
- Berinstein, Ava. 1985. *Evidence for multiattachment in K'ekchi Mayan*. New York: Garland.
- Berinstein, Ava. 1990. On distinguishing surface datives in K'ekchi. In *Studies in Relational Grammar 3*, ed. Paul M. Postal and Brian D. Joseph, 3–48. Chicago: University of Chicago Press.
- Bianchi, Valentina. 1999. *Consequences of antisymmetry: Headed relative clauses*. Berlin: Mouton de Gruyter.
- Bickel, Balthasar. 2007. Grammatical relations typology. Ms. Leipzig: University of Leipzig.
- Bobaljik, Jonathan David. 2008. Where's phi? In *Phi theory*, ed. Daniel Harbour, David Adger, and Susana Béjar, 295–328. Oxford: Oxford University Press.
- Bobaljik, Jonathan David, and Phillip Branigan. 2006. Eccentric agreement and multiple Case checking. In *Ergativity: Emerging issues*, ed. Alana Johns, Diane Massam., and Juvenal Ndayiragije, 47–77. Dordrecht: Kluwer.
- Boeckx, Cedric. 2008b. The Person-Case Constraint and patterns of exclusivity. In *Agreement restrictions*, ed. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 87–102. Berlin: Mouton de Gruyter.
- Branigan, Phil, and Marguerite MacKenzie. 2001. Altruism, $\bar{A}$ -movement, and object agreement in Innu-aimûn. *Linguistic Inquiry* 2002: 385–407.
- Bruening, Benjamin. 2001. Syntax at the edge: Cross-clausal phenomena and the syntax of Passamaquoddy. Doctoral dissertation, Cambridge, MA: MIT.
- Burzio, Luigi. 1986. *Italian syntax: A Government-Binding approach*. Dordrecht: D. Reidel.
- Caha, Pavel. 2009. The nanosyntax of Case. Doctoral dissertation, University of Tromsø / CASTL.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Dahlstrom, Amy. 1986. Plains Cree morphosyntax. Doctoral dissertation, University of California at Berkeley.
- Davies, William D., and Luis Enrique Sam-Colop. 1990. K'iche' and the structure of antipassive. *Language* 66: 522–549.
- Déchaine, Rose-Marie. 1999. What Algonquian morphology is really like: Hockett revisited. In *Papers from the Workshop on Structure and Constituency in Native American Languages, MIT Occasional Papers in Linguistics 17*, ed. Leora Bar-el, Rose-Marie Déchaine, and Charlotte Reinholtz, 25–72. Cambridge, MA: MIT, Department of Linguistics and Philosophy, MITWPL.
- Delancey, Scott. 1981. An interpretation of split ergativity and related patterns. *Language* 57: 626–657.
- Diesing, Molly. 1992. *Indefinites*. Cambridge, MA: MIT Press.
- Diesing, Molly, and Eloise Jelinek. 1995. Distributing arguments. *Natural Language Semantics* 3: 123–176.
- Dixon, R. M. W. 1994. *Ergativity*. Cambridge: Cambridge University Press.
- Dixon, R. M. W. 2000. A-constructions and O-constructions in Jarawara. *International Journal of American Linguistics* 66: 22–56.
- Farell, Patrick. 2005. *Grammatical relations*. Oxford: Oxford University Press.

- Georgi, Doreen. 2009. Local modelling of global Case splits. MA thesis, Leipzig: University of Leipzig.
- Guillaume, Antoine. 2006. Revisiting 'split ergativity' in Cavineña. *International Journal of American Linguistics* 72: 159–192.
- Hale, Kenneth. 2001. Eccentric agreement. In *On Case and agreement*, ed. Pablo Albizu and Beatriz Fernández, 15–48. Bilbao: UPV/EHU.
- Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The view from building 20*, ed. Kenneth Hale and Jay Keyser, 111–176. Cambridge, MA: MIT Press.
- Haude, Katharina. 2006. A grammar of Movima. Doctoral dissertation, Nijmegen: University of Nijmegen.
- Heim, Irene. 1982. The semantics of definite and indefinite noun phrases. Doctoral dissertation, Amherst: University of Massachusetts.
- Jelinek, Eloise. 1993. Ergative 'splits' and argument type. In *MIT working papers in linguistics* 18, 15–42. Cambridge, MA: MITWPL.
- Jelinek, Eloise, and Andrew Carnie. 2003. Argument hierarchies and the mapping principle. In *Formal approaches to function in grammar*, ed. Andrew Carnie, Heidi Harley, and MaryAnn Willie, 265–296. Amsterdam: Benjamins.
- Jelinek, Eloise, and Richard Demers. 1983. An agent hierarchy and voice in some Coast Salish languages. *International Journal of American Linguistics* 49: 167–185.
- Jelinek, Eloise, and Richard Demers. 1994. Predicates and pronominal arguments in Straits Salish. *Language* 70: 697–736.
- Johns, Alana. 1993. The occasional absence of anaphoric agreement in Labrador Inuttut. In *Microparametric syntax and dialect variation*, ed. James R. Black and Virginia Montapanyane, 121–143. Amsterdam: Benjamins.
- Kaiser, Elsi. 2003. The quest for a referent. Doctoral dissertation, Philadelphia, PA: University of Pennsylvania.
- Klaiman, Mimi H. 1992. Inverse languages. *Lingua* 88: 227–261.
- Kroskrity, Paul V. 1985. A holistic understanding of Arizona Tewa passives. *Language* 61: 306–328.
- Laenzlinger, Christopher. 1993. A syntactic view of Romance pronominal sequences. *Probus* 5: 241–270.
- Laka, Itziar. 1993a. The structure of inflection. In *Generative studies in Basque linguistics*, ed. José Ignacio Hualde and Jon Ortiz de Urbina, 21–70. Amsterdam: Benjamins.
- Lakämper, Renate and Dieter Wunderlich. 1998. Person marking in Quechua – A constraint-based minimalist analysis. *Lingua* 105: 113–148.
- Legate, Julie. 2008. Morphological and abstract case. *Linguistic Inquiry* 39: 55–101.
- Lesourd, Philip. 1976. Verb agreement in Fox. In *Harvard studies in syntax and semantics*, vol. 2, ed. Jorge Hankamer and Judith Aissen, 445–528. Cambridge, MA: Department of Linguistics, Harvard University.
- Lochbihler, Bethany. 2008. Person licensing: The Algonquian-Romance connection. In *Proceedings of Canadian Linguistics Association 2008*. On-line: <http://www.chass.utoronto.ca/~cla-acl/actes2008/actes2008.html>. Accessed September 4 2010.
- Marantz, Alec. 2000 [1991]. Case and licensing. In *Arguments and Case*, ed. Eric Reuland, 11–30. Amsterdam: Benjamins.
- Medová, Lucie. 2009. Reflexive clitics in the Slavic and Romance languages. Doctoral dissertation, Princeton, NJ: Princeton University.
- Mühlbauer, Jeffrey. 2008. The representation of intentionality in Plains Cree. Doctoral dissertation, Vancouver, BC: University of British Columbia.
- Nash, Léa. 1997. La partition personnelle dans les langues ergatives. In *Les pronoms: Morphologie, syntaxe et typologie*, ed. Anne Zribi-Hertz, 129–150. Saint-Denis: Presses Universitaires de Vincennes.

- Nichols, Lynn. 1996. A constraint on A-positions and the Projection Principle. In *Proceedings of ESCOL 95*, 224–235. Ithaca: Cornell Linguistics Club.
- Nichols, Lynn. 1998. Topics in Zuni syntax. Doctoral dissertation, Cambridge, MA: Harvard University.
- Nichols, Lynn. 2001. The syntactic basis of referential hierarchy phenomena. *Lingua* 111: 515–537.
- Noyer, Rolf R. 1992. Features, positions, and affixes in autonomous morphological structure. Doctoral dissertation, Cambridge, MA: MIT.
- Piggott, Glyne. 1989. Argument structure and the morphology of the Ojibwa verb. In *Theoretical perspectives on Native American languages*, ed. Donna B. Gerdts and Karin Michelson, 176–208. New York: State University of New York Press.
- Polinsky, Maria. 2003. Non-canonical agreement is canonical. *Transactions of the Philological Society* 101: 279–312.
- Rezac, Milan. 2003. The fine structure of cyclic Agree. *Syntax* 6: 156–182.
- Rhodes, Richard. 1976. The morphosyntax of the Central Ojibwa verb. Doctoral dissertation, Ann Arbor, MI: University of Michigan.
- Rhodes, Richard. 1993. Syntax vs. morphology: A chicken and egg problem. *Proceedings of BLS 19, Special session on syntactic issues in Native American languages*, 139–147. Berkeley, CA: Berkeley Linguistics Society.
- Rhodes, Richard. 1994. Valency, inversion, and thematic alignment in Ojibwe. *Proceedings of BLS 20*, 431–446. Berkeley, CA: Berkeley Linguistics Society.
- Rice, Keren, and Leslie Saxon. 1994. The subject position in Athapaskan languages. In *MIT working papers in linguistics* 22, 173–195. Cambridge, MA: MITWPL.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar*, ed. Liliane Haegeman, 281–337. Dordrecht: Kluwer.
- Rosen, Carol. 1990. Rethinking Southern Tiwa: The geometry of a triple-agreement language. *Language* 66: 669–713.
- Silverstein, Michael. 1986. Hierarchy of features and ergativity. In *Features and projections*, ed. Peter Muysken and Henk van Riemsdijk, 163–232. Dordrecht: Foris.
- Trommer, Jochen. 2001. Distributed Optimality. Doctoral dissertation, Potsdam, NY: University of Potsdam.
- Trommer, Jochen. Hierarchy-based competition and emergence of two-argument agreement in Dumi. *Linguistics* 44: 1011–1057.
- Turan, Umit Deniz. 1996. Null vs. overt subjects in Turkish discourse. Doctoral dissertation, Philadelphia, PA: University of Pennsylvania.
- Woolford, Ellen. 1997. Four-way Case systems: Ergative, nominative, objective, and accusative. *Natural Language and Linguistic Theory* 15: 181–227.
- Zaenen, Annie, Joan Maling, and Höskuldur Thráinsson. 1985. Case and grammatical functions: The Icelandic passive. *Natural Language and Linguistic Theory* 3: 441–483.
- Zúñiga, Fernando. 2002. Inverse systems in indigenous languages of the Americas. Doctoral dissertation, Zürich: University of Zurich.

Chapter 4

Person Case Constraint Repairs in French

4.1 Introduction

Chapter 3 concludes on a syntactic person hierarchy interaction in Arizona Tewa, in which the external argument alternates between a bare and an oblique DP, according to whether it outranks the direct object on the hierarchy 1st/2nd > 3rd person. Under a similar description falls a crosslinguistically widespread class of alternations in argument coding illustrated by French (1)¹.

- (1) a. Lucille *la* *leur* présentera.
 b. *Lucille *la* présentera à elles.
 c. Lucille *la* présentera à ELLES / aux filles.
 Lucille her.A them.D will.introduce to them to.the girls
 Lucille will introduce her to *them/THEM/the girls.
 d. *Lucille *te/se* *leur* présentera.
 e. Lucille *te/se* présentera à elles.
 f. Lucille *te/se* présentera à ELLES / aux filles.
 Lucille you/SE.A them.D will.introduce to them to.the girls
 Lucille will introduce you/herself to them/THEM/the girls.

¹In the examples, clitics are in *italics*; CAPS signal semantic focus; to draw attention, underline is used for strong pronouns and **bold** generally; the glosses A, D, N abbreviate ACC, DAT, NOM. The French described corresponds to Lambrecht's (1981: Chapter 1) or Schwegler's (1990: 94) 'Informal (Standard) French' or 'Spoken French', an informal middle-class variety of metropolitan France. It is a fiction. Deep splits exist within it, some pertinent here, including dative-locative syncretisms and behaviour (notes 4, 7), dative antecedence of floating quantifiers (note 20), deletions, gaps, and order in the clitic cluster (ex. (40), q.v. Section 2.4, ex.(76), Rezac 2010a). Yet the fiction is convenient, since on the distribution of strong dative and accusative pronouns, I have found almost no variation. All the French data in this work have been first either drawn from the literature and checked, or directly constructed, with the aid of a native speaker of Nantes French, M. Jouitteau. Most were then discussed with speakers from Nantes, Paris, Geneva, Toulouse, Brittany, and Iparralde. A questionnaire was then drawn up covering all the key contrasts and submitted to eleven other speakers (three linguists). Variation has been noted whenever found (for examples from the literature sometimes by % after the citation).

In French, the coding of dative and accusative pronouns is ordinarily determined semantic focus. If unfocussed, they are clitics attached to T + V, e.g. *leur* ‘them.D(AT)’ in (1)a vs. (1)b (henceforth in italics). If focussed, they are in the VP, along with nonpronominal arguments, such as accusative DPs and dative *à* ‘to’ PPs, e.g. *à elles* ‘to them’ in (1)c. PPs other than dative *à* ‘to’ PPs host both focussed and unfocussed pronouns, among them locative *à* ‘at, to’ PPs. The paradigm (1) reveals the exception to this generalization: if there is an accusative 1st/2nd/reflexive clitic, even an *unfocussed* pronoun dative must be an *à* PP, (1)d–(1)e, as if it were a focussed dative but without semantic focus, or a locative but with dative meaning. Thus the coding of unfocussed pronoun datives as clitic (regular) or *à* PP (exceptional) depends on the person of the accusative: 1st/2nd/reflexive versus 3rd.

The description can be simplified if 1/2/reflexive/dative clitics belong to a phi-feature class that excludes other 3rd persons (Laenzlinger 1993: 256, Burston 1983: 264). This grouping has considerable morphological, syntactic, and interpretive support. It is henceforth adopted and called the [+person] class, in (2). Chapter 6 returns to what [+person] might truly be.²

- (2) a. [+person] in French = 1st, 2nd person, *se* reflexive, dative clitics
 b. [-person] = nonreflexive, nondative 3rd person clitics

Given the [+person] class, the similarity of the French paradigm (1) to Arizona Tewa shines out. The coding of an unfocussed pronoun dative alternates between the DP-like dative clitic and the *à*-phrases PP according to whether the direct object is lower or not on the hierarchy [+person] > [-person], that is, whether there is a 3rd or 1st/2nd/reflexive direct object. A description that will be more useful decomposes the paradigm into the two elements in (3). One, (3)a, is a person-sensitive ban on the requirement that dative and accusative pronouns cliticize, henceforth the *Person Case Constraint* or *PCC* of Bonet (1991). The other, (3)b, is the emergence of an otherwise unavailable structure where the cliticization requirement of datives is suspended, henceforth the *PCC repair(s)*.

- (3) *Person Case Constraint and its repair* (first approximation):
 a. PCC: *[+person] accusative clitic + argumental dative clitic.
 b. Repair: *dative *à* + unfocussed pronoun, save in PCC context.

²For the personhood of reflexive *se*, see Bonet (1991: 1.2.4, 2.1), Kayne (2000: Chapter 8), Alboiu et al. (2004), and Appendix 1; cf. Reuland (2001). *Se* patterns with 1st/2nd against 3rd person on such properties as dative-accusative syncretism (affecting ellipsis, Morin 1978: 359f., and coordination, Burston 1983: 254), clitic compatibility (Morin 1979b: 7 note 2), and clitic climbing (Cinque 2004: note 27). For the [+person] of datives, which is less directly pertinent to the discussion that follows, see note 7 and references there.

PCC repair by *à* + strong pronoun is string-identical with the independent use of strong pronouns under semantic focus, which needs to be controlled for. The *y*-repair is string-identical only with the independent use of *y* for locative arguments, which is a very salient meaning difference.⁴

- (5) a. [¥] Lucille *la/*vous* *leur* présentera
 b. [¥] Lucille **la/vous* *y* présentera
 c. [¥] Lucille **la/vous* présentera *à elles*
 Lucille her/you.A them.D/LOC will.introduce to them
 Lucille will introduce her/you to them.
 (y ok as locative: Lucille will introduce her/you *there*.)
 (PCC/non-PCC, Postal 1990: 127, adapted)

- (6) a. [¥] On *leur* a jeté Paul dans les bras.
 b. [¥] *On *me* *leur* a jeté dans les bras.
 c. [¥] *On *m'* *y* a jeté dans les bras.
 d. [¥] *On *m'* a jeté dans les bras *à elles*.
 one me.A them.D/LOC has thrown Paul into the arms to them
 One threw Paul/*me into their arms.
 (y ok as locative: One threw Paul/me *there*.)
 (possessor dative, Couquaux 1975: 58)

- (7) a. [¥] *Cela ne *se* *lui*_i dit pas , à Louise_i.
 b. [¥] *Cela ne *s'* *y*_i dit pas , à Louise_i.
 c. [¥] *Cela ne *se* dit pas *à elle*.
 this NEG SE her.D/LOC says not to her to Louise
 One does not tell her (Louise) such a lie.
 (y ok as locative: One does not tell such a lie *there*.)
 (mediopassive, Postal 1990: 167, adapted)

The paradigms (5)–(8) illustrate the parallelism of the strong pronoun and *y*-repairs. The first line of each example is with a dative clitic, the second replaces it with the locative clitic *y*, the third with an unfocussed strong pronoun. The two repairs come and go together. They are available to fix the PCC (5), but not for certain datives like possessors (6), and not for problems with dative clitics in contexts that are not the PCC, like mediopassives (7). All are discussed with other structures that make the same points in Sections 4.5 and 4.6. The repairs are not general responses to clitic unavailability. This will be seen to be so even for clitic clusters surface-identical to those banned by the PCC, and even if the repair creates a string that is itself legitimate, as is the case in all the above examples on the true locative reading of *y* rather than its use as a repair for the dative.

⁴To be categorically distinguished are varieties with other dative-locative syncretisms, like Morin (1979b), Auger (1994), Lambrecht (1981), Schwegler (1990), compared in Rezac (2010c).

The subtle distribution on the PCC and of its repairs is used in this chapter to understand their internalist character. This subtle distribution is also excellent grounds for setting aside pragmatic and functionalist accounts (Tasmowski 1985, García 2001). These depart from such observations as the high topicworthiness that 1st/2nd person clitics share with dative but not locative clitics, and the preference for salient antecedents to be picked up by more grammaticalized expressions like clitics rather than strong pronouns. Such insights may well help explain the factors contributing to the creation of this or that synchronic person hierarchy interaction or its repair (cf. Haspelmath 2004). However, they provide neither an explanation nor an account of the subtle synchronic state of affairs (cf. note 47 and Chapter 6).

The PCC and its repair give a first impression of a division of labour between clitics and strong pronouns. Cliticization occurs if it can, and strong pronouns take over otherwise. The availability of the strong pronoun thus seems to refer to that of the clitic, in a ‘transderivational’ or ‘global’ comparison:

The obligatory character of [cliticization] can therefore be loosened . . . in certain cases where its application would lead to unacceptable clitic combinations.

(Kayne 1975: 174)

Kayne [1975:] 172–6 takes a position which has never been given an intelligible interpretation internal to any precise theoretical framework. That is that Clitic-Placement is optional in some contexts and obligatory in others. Kayne’s idea is that somehow Clitic-Placement would not apply when it would yield a banned clitic sequence[.]

(Postal 1981: 308 note 25)

However, the subtle constraints on the repair belie this initial appearance, as is underlined by the same investigations that observe it, especially Kayne (1975: 2.17, 4.3, 4.6, 2000: Chapter 9) and Blanche-Benveniste (1975). Blanche-Benveniste perspicuously describes the *problematique* thus. Clitic clusters are subject to different constraints, some interpretive, some realizational, and (to add to her words) some syntactic. One of them, the PCC, comes with its own repair. The others result in sentences that are ‘unspeakable’, yet often not ‘unthinkable’ (Blanche-Benveniste 1975: 44f.). If there is a global mechanism responding to the unavailability of clitics by the PCC repair, its domain must be chiselled out of the mass of syntactic and extrasyntactic impossibilities of cliticization into a natural and sharply bounded class. Chapter 5 develops such a mechanism. The present chapter lays the groundwork in establishing the scope and limits of the Person Case Constraint and its repairs in French.

The interest of these phenomena is raised by their cross-linguistic replication. Bonet (1991) establishes analogues of the French PCC and its repair for a wide variety of languages, and proposes the universal character of the PCC. Section 5.2 reviews the evidence and the theory of the PCC adopted here, the Agree/Case approach in (8). It proposes that the PCC arises in French when a dative intervenes in the syntactic dependency Agree between the Agree/Case-locus *v* and its [+ person] goal, depriving the latter of Case licensing by accusative Case.

- (8) *Person Case Constraint* (Agree/Case approach): A goal G cannot Agree for [+person] ϕ -features if X intervenes between it and its Agree/Case locus, where X is of a type to intervene in the Agree/Case system, to which belong applicative datives but not full PPs. If G has no other means of licensing its [+person], it fails the Case Filter.

- (9)
$$\begin{array}{c} \nu > \text{DAT} > \text{GACC} [+person] > \text{is } c\text{-command} \\ \text{*Agree/Case} \end{array}$$

This formulation represents one view of the PCC. Here, it serves as the background through which the facts of French may be profitably approached.

Along with the PCC often go dedicated *repairs*, as in French and the other languages in Table 4.1. Chapter 5 is dedicated to them. They are remarkable as structures that only occur in contexts where the PCC bars the usual ones, not otherwise. Unfocused pronoun datives in French must be clitics, save when the accusative is a 1st/2nd/reflexive clitic, and so it is for nonagreeing datives in Basque, ergative and accusative in Basque and Finnish unaccusatives, and so on.

This is an unusual state of affairs for syntax. Ungrammatical structures do not usually come with repairs. When *wh*-movement is blocked, **Who did she see ___ and Ilmarinen?* ‘Who is such that she saw him and Ilmarinen’, there is no otherwise unavailable structure that emerges into grammaticality as repair, **Who did she see him and Ilmarinen?* Only independently available paraphrase can be used, *Who did she see ___ along with Ilmarinen?* For the PCC, repairs do

Table 4.1 PCC repairs

	Person-Case Constraint (α^* banned iff [+person])	Repair (bold element changes)
Transitive Applicative (IO-O)		
French	DAT _{clitic} - ACC _{clitic} [*] (?DAT _{SE(INH)} - ACC _{clitic} [*])	ACC _{clitic} [*] - DAT _{PP} / LOC _{clitic} DAT _{SE(INH)} - ACC _{strong} [*])
West. Basque	DAT _{agr} - ABS _{agr} [*]	ABS _{agr} [*] - DAT _{PP}
Georgian	DAT _{agr} - ABS / ACC _{agr} [*] DAT _{agr} - ABS / ACC _{agr} [*]	ABS / ACC _{agr} [*] - DAT _{PP} DAT _{agr} -[agr ’s self]. ABS / ACC _{3SG} [*]
Unaccusative Applicative (IO-S)		
Basque (dial.)	DAT _{agr} - ABS _{agr} [*]	ERG _{agr} [*] -DAT _{agr}
Chinook	ABS _{agr} - ABS _{agr} [*]	ERG _{agr} [*] - ABS _{agr} [*]
Finnish	OBL _{Appl} - NOM _{agr} [*]	OBL _{Appl} - ACC [*]
Transitive (EA-S)		
Arizona Tewa	bare _{agr} -bare _{agr} [*]	ERG _{agr} -bare _{agr} [*]
Yurok	NOM - NOM [*]	NOM - ACC [*]

Legend: S unaccusative subject, EA transitive subject, O direct object, IO applicative object.

Note: Yurok 1/2→2/1 combinations are NOM-NOM; see Section 5.9

exist. Constructions in language after language are dedicated to that which the PCC bars. It might not be surprising for extrasyntactic domains to behave so. Morphology has superficial analogues of repairs discussed in [Chapter 2](#), like the English comparative where *more* takes over just when an affixal *-er* is unavailable, *quicker*/**apter* – *more apt*/**quick*. A principal result of this chapter is to establish the syntactic character of the PCC and its repair in French, keeping the mystery intact.

The following sections draw on the relatively rich understanding of the syntax of French to establish the properties of the PCC and the PCC repair in it:

- Section 4.2 presents the background on clitics and the relevant aspects of applicative and prepositional syntax.
- Section 4.3 sets out in detail the repair of the PCC by unfocussed strong pronouns in simple and complex constructions.
- Section 4.4 demonstrates the syntactic rather than morphological character of the repair: the syntax of the repair differs from that of clitics.
- Section 4.5 establishes the character of the repair. It creates full PPs outside the clausal Agree/Case system. The result is incompatible with applicative interpretations, so that applicative datives like (6) are irreparable. (Appendix 1 examines the inversely related ECM constructions).
- Section 4.6 demonstrates the unavailability of the PCC repair for clitic problems other than the PCC, in and out of syntax, elaborating (5)–(7).

Section 4.7 brings the chapter to the following conclusions: The PCC repair is created by a syntactic mechanism that responds specifically to the PCC as a syntactic problem, and enriches a dative defective PP to full locative-like PP independent of the clause and invisible to the PCC. In [Chapter 5](#), the mechanism of the enrichment is developed for the repairs in [Table 4.1](#) generally.

4.2 French Clitics

This section presents those aspects of French that prove essential here. French proclitics usually occur in the cluster in (10) filled by the clitics in (11). They attach to the finite verb, the infinitive, and the gerund / present participle. [Table 4.2](#) situates them in the overall pronominal system.⁵

- (10) Proclitic cluster: 1/2/SE-3.DAT-3.ACC-GEN-LOC
 (11) a. 1st/2nd/*se* clitics: 1SG *me*, 2SG *te*, 1PL *nous*, 2PL *vous*, SE *se*
 b. 3rd person accusative clitics: 3SGM *le*, 3SGF *la*, 3PL *les*
 c. 3rd person dative clitics: 3SG *lui*, 3PL *leur*
 d. Adverbial clitics: locative LOC *y*, genitive GEN *en*

⁵Enclitics in imperatives have different forms and order but obey the same PCC (Morin 1979a, b).

Table 4.2 French pronouns

	Strong	Possessive (-concord)	Weak subject	Clitic object	
1SG	moi	m-on/a/es	je	me	} DAT/ACC, disjoint/reflexive
2SG	toi	t-on/a/es	tu	te	
1PL	nous	notre(s)	nous, on	nous	
2PL	vous	votre(s)	vous	vous	
3SGM	lui	s-on/a/es	il	ACC le,	} DAT lui; DAT/ACC refl. se
3SGF	elle	s-on/a/es	elle	ACC la	
3PLM	eux	leur-Ø/s	ils	ACC les, DAT leur, DAT/ACC refl. se	
3PLM	elles	leur-Ø/s	elles		

1st/2nd person clitics are syncretic for dative and accusative, but their case can be determined from linked elements like floating quantifiers, and is included in glosses. They may be disjoint or reflexive. The SE clitic *se* serves as the dative and accusative reflexive for 3rd persons, also an inherent (idiomatic), intransitive (e.g. anticausative), and mediopassive formant, discussed in Sections 3 and 6.

Accusative clitics correspond to direct objects, whose nonclitic form is an unmarked DP. The nonclitic form of dative and locative arguments is a PP headed by *à*. Datives have the grammatical functions of basic indirect objects, as in *Je lui présente Pierre* ‘I introduce to.her Pierre’, *Je lui parle* ‘I talk to.her’, *Je lui_i attribue notre réussite, à ce manifesto_i* ‘I attribute to.it_i our success, to this manifesto_i’, and of causee, possessor, and benefactive.⁶ Locatives are adjuncts and arguments of location, as in *J’y habite*, *J’y vais*, *J’y dors* ‘I live, I go, I sleep there’, but also the arguments of verbs like *J’y pense*, *J’y fait attention* ‘I think about.it/him/her, I pay attention to.it/him/her’. The verbs in these examples strictly select a dative or a locative argument, whether the referent is inanimate, animate, human. Beside them stand several classes of dative-locative alternations. Some operate according to animacy, e.g. *répondre* ‘reply to a person (dative), to a question or need (locative)’. Some use subtler criteria of individuation, control, and concreteness, for instance *appartenir* ‘belong’ with dative of possession (*She belongs to the team*) and locative of a part-whole relations (*She is part of the team*, *It is part of the table*); or *obéir* ‘obey’, with locative in *A sunflower obeys Kepler’s laws*, but dative in *A temporary resident obeys these laws (dative)*.⁷

⁶There is also the non-argumental *ethical dative* in (4)a (Leclère 1976, Jouitteau and Rezac 2008). It has no nonclitic form, and very different properties from argumental datives, such as invisibility to auxiliary selection, binding, and the PCC. It is set aside here.

⁷Dative-locative alternations are studied in Couquaux (1975), Kayne (1975: 151), Blanche-Benveniste (1978), Barnes (1980), Gaatone (1984), Herslund (1988). Datives are often animate, but not always, as in (i), and then continue to participate in the PCC and its repair, (ii). Such inanimate datives do not belie the [+person] character that datives share with 1st/2nd but not 3rd person accusatives or its role in the PCC, insofar as they entail control, individuation, and a relationship to the perspective or consciousness centre (see esp. Benveniste,

Dative and locative *à* preposition or case-marker have the same morphology (Miller 1992: 4.5.5.4, 248 note 14, Roberge and Troberg 2007). However, the two correspond to morphologically distinct clitic series and have different syntax. These differences are set out in the following list under several headings. They will be important throughout this chapter. Their usual theoretical interpretation is through a DP-PP distinction originating with Kayne (1975: 2.II–III). It is preliminarily set out in (12), and further articulated in Section 4.7. Locative arguments are *full* PPs and their clitics are pro-PPs, (12)c. Accusatives and accusative clitics are (pro-)DPs, (12)a. Datives are in between, especially dative clitics. Their P_{DAT} *à* is ‘weaker’ than the full preposition P_{LOC} *à*, and in clitics perhaps need not project over D, (12)b. They are *defective* PPs. (Genitives pattern with locatives.)

- (12) a. ACC: D DP b. DAT: [_{D/P?} P_{DAT} D] [_{PP?} P_{DAT} DP] c. LOC: [_P P_{LOC} D] [_{PP} P_{LOC} DP] (clitic) (nonclitic)

Gaätone, Ruwet; cf. Burston 1983, Boeckx 2000). This matches morphological patterning, both in French (e.g. Morin 1978: 12 note 7) and cross-linguistically (Section 5.2).

- (i) a Il faut *leur_i* passer une couche de peinture, à ces volets_i.
It is necessary to pass (= give) *them.D_i* a coat of paint, to these shutters_i.
b Un résident temporaire doit *leur_i* / (?) *y_i* obéir, à ces dispositions légales_i.
A temporary resident must obey *them.D_i* / (?) *LOC_i*, to these legal measures_i.
(Couquaux 1975: 35, Blanche-Benveniste 1978: 6)
(ii) Le département_i de breton a besoin d’une secrétaire. Il ne nous reste que Claire/toi. On
va {*la/*te lui* attribuer} / {*t’/*l’attribuer à lui*} pour un an.
The department(M)_i of Breton needs a secretary. We have only Claire/you left. We will
attribute {*her.A/*you.A it.D_i*} / {*you.A/*her.A to him.D_i*} for one year.

Genuine locations do not permit the locative clitic to refer to humans and need *à* + strong pronoun, e.g. *venir* ‘come to’, *amener* ‘bring (someone) to’. A class of verbs selects locative arguments with a less clearly locative meaning and their clitics may then refer to humans, with some variation: e.g. *penser* ‘think about’, *réfléchir* ‘reflect on’, *songer* ‘dream about’, *habituer* ‘habituate to’, *intéresser* ‘interest in’, *s’attacher* ‘attach oneself to’, *faire attention* ‘pay attention to’, *faire peur* ‘frighten’ (Kayne 1975: 106–9, 2008, Gaätone 1984, Herslund 1988: 2.3, 3.2.1, Jones 1996: 262; CNRTL s.v. *y*² II.B.2.a remarque 1, Grevisse and Goosse 2008: §678.2°, Pinchon 1972: 2.III, Nyrop 1925: §221). One set of grammars permits the *y* of such verbs to refer to humans and even 1st/2nd person provided they are not the subject of consciousness (Ruwet 1990: 80f., 1991, Pica 1994; cf. Blanche-Benveniste 1978, Lamiroy 1990, 1991, Zribi-Hertz 2000). Another freely permits human reference (Couquaux 1975, Lambrecht 1981: 35). See Rezac (2010c) for a comparison and relationship to the PCC repair. Matters are similar for the genitive clitic *en*, save that it admits human reference freely as partitive.

- *Agreement and Case*: Only accusatives participate in the nominative-accusative Case alternation or, as clitics, control participle agreement.⁸

- (13) a. Il les_i (lui) a dit-es_i.
He.N them(PLF).A him.D has told-PLF
He told them (to him). (e.g. *les nouvelles* ‘the news(PLF)’)
- b. Il (le) $leur_i$ a dit(*-es_i).
He.N him.A them(PLF).D has said(*-PLF)
He told (it) for them. (e.g. *aux filles* ‘to the girls(PLF)’)
- c. Elles_i (lui) ont_i été dit-es_i.
they(PLF).N (him.D) were been told-PLF
They were told (to him). (e.g. *les nouvelles* ‘the news(PLF)’)
- d. *Elles_i (l') ont_i été dit(-es_i).
they(PLF).N (him.A) were been told-PLF
They were told (it), It was told to them.
(*dative vs. accusative Case and agreement*)

- *Floating quantifiers*: In French as in English, there are preparticipial bare floating quantifiers licensed by DPs but not PPs in a c-commanding (A-)position, as in *The birds_i had all_{i/*j} gathered on the branches_i* vs. *On the branches_j had (*all_{ij}) gathered the birds_i*. (14) shows that dative clitics license them like accusative clitics do, but locative clitics do not. Dative clitics are DP-like on this test. There are also postparticipial floating quantifiers in (14). Dative license them in the form *à* + quantifier. By requiring this *à*, dative clitics are PP-like, unlike accusative clitics whose floating quantifiers are bare (and usually float to the preparticipial position). Yet their PP-hood is ‘weaker’ than that of locative clitics, which do not license postverbal floating quantifiers in any form. Nonclitics do not

⁸On participle agreement, see Kayne (1989), D’Alessandro and Roberts (2008). Reflexive clitic datives exceptionally agree for some speakers, (i): Grevisse and Goosse (2008: §953), Medová (2009: 5.3, 6.3.2), vs. Burzio (1981: 482, 446), Kayne (2000: 24 note 21); cf. for Italian, Belletti (2005: 2.2), D’Alessandro and Roberts (2008: 484 note 8). Reflexive clitics are syncretic for dative and accusative, although differentiated by linked elements such ‘each other’ in (i), but nonreflexive 1st/2nd person clitics are also syncretic yet agree only if accusative. The participle agreement of reflexive accusative and dative reflexive clitics has been related to the fact that through reflexivity their phi-features are the same as those of the subject, and the perfect auxiliary involved in reflexives is BE rather than HAVE, so it is really the subject of BE that controls participle agreement, as the subject of BE does generally elsewhere. Nonreflexive dative clitics do sporadically control participle agreement elsewhere in Romance (Haiman and Benincà 1992: 139f., D’Alessandro and Roberts 2010: note 1; cf. generally Rezac 2008a, b).

(i) Elles se sont décrit^(%es) l’une à l’autre.
They(F) SE are described^(%PLF) one to the other

- *Cliticization Requirement*: Without semantic focus, dative and accusative pronouns must be clitic, while locative ones may be clitic or strong, as in (17) (Blanche-Benveniste 1975: 103, 160, Kayne 1975: 2.16–7, 2000: Chapter 9; Section 4.4 discusses the semantic focus involved). This difference between datives and other PPs figures largely in what follows, and relates to the richer structure or content of full PPs (Section 4.7).¹⁰

- (17) a. Je connais cette fille_i. Je *lui*_i parle souvent. (*dative*)
 Je connais cette fille_i. Je parle (*à elle_i) souvent (*à elle_i).
 I know this girl. I her.D speak to her often to her
- b. Je connais cette fille_i. J' *y*_i pense souvent. (*locative*)
 Je connais cette fille_i. J' pense (à elle_i) souvent (à elle_i).
 I know this girl. I LOC think to her often to her
 (*Cliticization Requirement*; for human *y* see note 7)

- *Placement*: Locative clitics have greater freedom of placement with respect to adverbs, and of clitic climbing in raising, ECM, and causatives, than dative and accusative clitics, suggesting different landing sites or mechanisms. This too may follow from the greater richness of pro-full-PPs, and is perhaps to be related to the greater freedom of weak than of clitic pronoun placement (see Section 4.7 and Appendix 1).¹¹

¹⁰Additional works on the Cliticization Requirement are Couquaux (1975), Morin (1979a), Postal (1984), Zaring (1991), Auger (1994), Cardinaletti and Starke (1999), Zribi-Hertz (2008), with the history in De Kok (1985) and Nyrop (1925). For semantically focussed strong pronouns, many speakers require clitic-doubling of datives, more of accusatives, and yet more but not all of 1st/2nd person accusatives: Sandfeld (1970: 72), Kayne (1975: 173f., 183, 2000: 166f., 180 note 13), Blanche-Benveniste (1975: 87, 209), Burston (1983: 269), Tasmowski (1985: 245), Postal (1990: 178), Cardinaletti and Starke (1999), Schwegler (1990: 229 note 49), Zribi-Hertz (2008: 599, 600 note 11, 619). Analytical options are discussed in Kayne (2000: 179 note 11), Cardinaletti and Starke (1999: 222 note 35). Thus the differences in (i) vs. (ii):

- (i) a Il téléphone autant à moi qu'à Jacques. b ?*Il aime autant moi que Jacques.
 He phones as.much to me as to Jacques He likes as.much me as Jacques [does]
 (Tasmowski 1985: 245)
- (ii) a J'ai parlé beaucoup à Maï, et elle à moi. b J'ai salué Maï, (?*et elle moi).
 I have spoken much to Maï, and she to me I have greeted Maï, and she me
 (but Kayne 2000: 170 gives a variant of (b) as ?)

¹¹For the greater freedom of climbing, see Kayne (1975: 4.5–6). For the greater freedom of *y*, *en* placement, in literary French, see Kayne (1975: 79 note 7, 1991: 653 note 18), Tasmowski (1985: 259 note 18), Cinque (2002). In clitic climbing, accusative and dative clitics are subject to the same restrictions and so inseparable, although see note 17, but locative and genitive clitic often can be separated from them, Kayne (1975: 427–430), Rouveret and Vergnaud (1980: 153ff.), Postal (1981: 316f., 1983: 409f., 1990: 166), Tasmowski (1985: 231 note 5, 295 note 23, 365 note 3). Cf. Cardinaletti and Shlonsky (2004: 526 note 6), and Appendix 1.

- (18) a. *Je me lui_i donne entièrement, à sa sœur_i.
I me.A her.D give entirely to his sister
b. Je m' y_i attache / intéresse trop, à sa sœur_i.
I me.A LOC(=to/in.her) attach / interest too.much to his sister
c. Cette photo me fait penser à toi_i
This photo makes me think of you
et elle m' y_i fera toujours penser.
and it me.A LOC(=about.you) will.make always think
d. Vous vous foutez de nous?_i “You don’t give a damn about us?”
Vous ne vous en_i foutrez pas longtemps.
you NEG you(INH).A GEN(=about.us) (idiom) not for.long
You won’t keep on not giving a damn about us for long.
- (for 1st/2nd person *y* see note 7)

From floating quantifiers have been drawn important conclusions about the structural position of dative clitics. Dative clitics but not *à*-phrases license *bare* floating quantifiers in the preparticipial position, (14)–(15). Accordingly, Anagnostopoulou (2003: 281–4) has argued that dative clitics are in the applicative construction, akin to English *give them (all) candy*, and nonclitics in the prepositional construction, *give (*all) candy to them* (extending the more reserved proposal of Kayne 1975: 2.14). The relevant distinction between the two constructions is the structural height of the dative in (19), eschewing other details (see Section 5.2).

- While the applicative-prepositional distinction proves immensely useful later, a much weaker view of its relationship to clitichood is adopted here. It is clear that some nonclitic datives in French do participate in the applicative construction, above the object (e.g. Kayne 1975: 137, Pijnenburg and Hulk 1989: 260). Section 4.5 discusses a particularly salient class, causees. It is

possible as well that some clitic datives derive from the prepositional construction, including indirect objects (Roberge and Troberg 2007), and datives subcategorized by adjectives, as in (20).

- (20) Je *leur*_i ai (tous_i) été [(in)fidèle *t*_i].
I them.DAT have all been (un)faithful

(cf. Appendix 1)

The link between cliticization and applicativity is thus not strong in French, as it is for instance in Spanish (Cuervo 2003a, b). Bare floating quantifiers only show that dative clitics pass through an A-position above the quantifier, and suggest that nonclitic datives do not. Such an A-position is independently needed in order for accusative clitics but not nonclitics to license floating quantifiers. It seems analogous to the Object Shift position in the Germanic languages, and from it further cliticization may take place, as further discussed in Section 4.7. The following hypotheses will thus be adopted:¹²

¹²The diagnostics for the applicative and prepositional construction of English (Larson 1988, Pesetsky 1995, Harley 2002) are presently inconclusive for French.

Neutral word order: Dative *à*-phrases follow direct objects, whether indirect objects, benefactives, psych-experiencers, or causees, which certainly do not all have the same structural relationship to the direct object. The same holds of Spanish, where *c*-command diagnostics yet clearly distinguish high applicative and low prepositional datives (Cuervo 2003a, b, Demonte 1995).

C-command symmetries: Quantifier-variable binding from the direct object into a following indirect object *à*-phrases is generally fine. The reverse is however true as well (ia) (cf. Harley 2002), but it is often available with PPs in general (ib) (cf. Zubizarreta 1998: 12–15, 147, but not always restricted by *d*-linking and focus). Binding of *lui-même* ‘him-self’ type reflexives and *l’un-l’autre* ‘each other’ type reciprocals from the direct object into the following *à*-phrase is fine, less so in the reverse direction, particularly for 1st/2nd person (Postal 1989: Chapter 1). English too allows some backward binding and scope from PPs (Burzio 1986: 203, Williams 1994: 254, Pesetsky 1995: 6.3.2.). In contrast to indirect objects, applicative dative *à*-phrases asymmetrically *c*-command the preceding direct object (Boneh and Nash 2010).

Interpretation: The restriction that the indirect object be a potential possessor of the direct object, which holds of the applicative but not the prepositional construction in various languages, in French constrains dative but not locative clitics with verbs like *envoyer* ‘send’. Some *à*-phrases have readings that in English characterize the double object but not various prepositional constructions, as in (ii), although in English this can be overturned by information structure (Harley 2002, Krifka 2004; cf. Kayne 1975: 137f.; cf. Larson 1988: 377 note 44, Harley 2002 ex. 10).

- (i) a On a rendu son_k livre à chaque enfant_k / personne_k (sans *le*_k prévenir d’abord).
We returned his_k book to each child_k / no one_k (without warning him_k first).
b On a déposé son_k avis de mission chez chaque fonctionnaire_k / chez personne_k (sans *le*_k prévenir d’abord).
We delivered his_k assignment at each civil servant_k’s / no one’s_k place (without warning him_k first).
(ii) Marie a donné un coup de pied à la table.
Mary has given a kick to the table
Marie gave the table a kick / *a kick to the table.

(Pijnenburg and Hulk 1989: 260)

- Dative clitics can originate in the applicative construction, and perhaps also in the prepositional construction (cf. Section 4.5, and Appendix 1).
- Some nonclitic datives can also originate in the applicative construction, such as causees, while others originate in the prepositional construction, including indirect objects (Section 4.5).
- Whether or not dative clitics originate in the prepositional construction, they pass through a high A-position above VP from which they license floating quantifiers. Nonclitic datives from the prepositional construction remain below this position. For convenience of the Agree/Case analysis of the PCC in (8), this high A-position will be spoken of as being below ν , but due to ν -to-T raising this is inessential, as shown by Anagnostopoulou (2003: 5.3).

With this background on French clitics, the next section proceeds to set out in detail the PCC, prior to establishing its syntactic character.

4.3 The PCC repair and the Cliticization Requirement

This section sets out the relationship between the Cliticization Requirement and the strong pronouns of the PCC repair, giving the following generalizations:

- *Cliticization Requirement* (Section 4.2): Outside the PCC context, unfocussed dative and accusative pronouns must be clitic, and ($\hat{a}_{\text{DAT}} +$) strong pronouns require semantic focus. In contrast, locatives (and genitives) may be clitic or $\hat{a}_{\text{LOC}} +$ strong pronoun without focus.
- *PCC repair*: When a dative clitic is impossible through the PCC, $\hat{a} +$ strong pronoun is perfect in its stead without semantic focus, for indirect objects (other datives are addressed in Section 4.5).
- *Accusatives*: An accusative strong pronoun is impossible in the PCC context or out of it, whether the PCC repair for the dative is available or not, save to an unclear extent when the dative clitic is an inherent reflexive.

The Cliticization Requirement requires semantically unfocussed accusative and dative pronouns to be clitic, while strong pronouns must have semantic focus. The semantic focus that may license strong pronouns comes about through: (i) ostension; (ii) contrast, where the contrasted alternatives may be silent or explicit, as in *Il parle à LUI (et non à MOI)* ‘He talks to HIM (and not to ME)’, *Il parle à LUI (plutôt qu’à MOI)* ‘He talks to HIM (rather than to ME)’, (iii) focus associated with elements such as *aussi* ‘also’. A nondislocated dative or accusative strong pronoun must have such a focussed reading, a clitic cannot. From semantic focus must be carefully distinguished prosodic accent. Zribi-Hertz (2008) argues that strong pronouns in French do not undergo deaccenting even when semantically unfocussed, unlike in English. The meaning of the French and English sentences in (21) is the same: *jealous* has narrow focus and *of her* has none. Thanks to the absence of focus, *of her* can be realized as the genitive clitic *en* in French. However, it can also be realized as the genitive

strong pronoun *d'elle*. In that case, it retains prosodic accent, despite lack of focus, in contrast to English.¹³

- (21) a. Pourquoi est-ce que Jean passe son temps à critiquer Marie_k? Parce qu'il en_k est **JALOUX** / Parce qu'il est **JALOUX d'elle_k**.
 b. Why does John keep criticizing Mary_k? Because he is **JEALOUS** of her_k.
 (Zribi-Hertz 2008: 616; caps = semantic focus, bold = prosodic accent)

Uniquely in a PCC context, where the dative clitic is ungrammatical, unfocussed strong dative pronouns are perfect. This is the subject of Blanche-Benveniste (1975), introduced through the paradigm (22). The focus-only reading of *à vous* in (22)b contrasts with the unfocussed *à toi* in (22)c.

- (22) a. Roger *vous les* avait recommandés.
 Roger you.D them.A had recommended
 Roger recommended them to you.
 b. Roger *les* avait recommandés à VOUS, pas à Jean.
 Roger them.A had recommended to you, not to Jean
 Roger recommended them to you, not to Jean.
 c. *Roger *nous t'* avait recommandés.
 Roger *nous* avait recommandés à toi.
 Roger us.A you.D had recommended to you.
 Roger recommended us to you.
 (Blanche-Benveniste 1975: 43; caps added)

All verbs with dative indirect objects behave in this manner, including *décrire* 'describe', *dénoncer* 'denounce', *mentionner* 'mention', *recommander* 'recommend', *vendre* 'sell', *montrer* 'show', *présenter* 'introduce', as well as verbs alternating between datives for animate goals and locatives for inanimate goals or locations, including *amèner* 'bring', *associer* 'associate', *donner* 'give', *sacrifier* 'sacrifice', *soumettre* 'submit', *substituer* 'substitute', *affilier* 'affiliate', *imposer* 'impose', *confier* 'confide', *promettre* 'promise', *assujettir* 'subject' (Blanche-

¹³Inversely, prosodic accent may be hard to detect under certain conditions such as second occurrence focus (but see Beaver et al. 2007). Distinct from focus is the construction *ne...que* 'only', as in *Il ne parle qu'à moi* lit. 'He NEG speaks than to me', meaning 'He is speaking only to me' (Cardinaletti and Starke 1999, Kayne 2000: 159 note 68, 170). *Que* behaves as if it were a preposition: it licenses undoubled accusative strong pronouns even for those that cannot license them otherwise, blocks clitic doubling, and allows coreference with the local subject. Perhaps related should be Postal's (1990: 161f.) ability of comparative *plus...que* 'more...than' to license strong pronouns for certain applicative datives where regular contrastive focus will not (not all speakers have those contrasts). For metalinguistic accentuation of clitics, see Morin (1982: 19 note 6), Cardinaletti and Starke (1999: 153), Zribi-Hertz (2008: 627 note 22).

Benveniste 1975: 235ff., Blanche-Benveniste et al. 1984: 89ff.). Applicative datives like possessors are taken up in Section 4.5.¹⁴

The literature on the subject draws the same picture as Blanche-Benveniste (1975), including Kayne (1975), Couquaux (1975), Morin (1979a), Postal (1981, 1983, 1984, 1990), Auger (1994), among many others. Usually, they report the focus facts, rather than control for them. To native speakers the judgments are clear; for some, focussed strong pronouns require clitic doubling, so that (22)b is ungrammatical on any reading (note 10). To examine focus structure better, one may construct contexts with wide focus on the sentence, or narrow focus on another element, as in (23). The dative strong pronouns in PCC context are perfectly grammatical unfocussed, while those outside it must be heavily focussed. In contrast, the locative argument of *penser* ‘think about’ can be either strong pronoun or clitic when unfocussed (modulo other factors, note 7).

- (23) [You think they_i don’t know her_j/you_k? Of course they_i know her_j/you_k.]
 a. Je *la*_j *leur*_i ai présentée hier/HIER.
 b. Je *l’*_j ai présentée *à eux_i/EUX_k hier/HIER.
 c. *Je *vous*_k *leur*_i ai présentée hier/HIER.
 d. Je *vous*_k ai présentée à eux_i/EUX_k hier/HIER.
 I her_j/you_k.A them_i.D have introduced to them/THEM yesterday.
 e. Ils_i y_{%j}/y_{%k} pensent tout le temps.
 f. Ils_i pensent tout le temps à elle_j/toi_k.
 they LOC_{j/k} think all the time to(=about) her_j/you_k

¹⁴Blanche-Benveniste (1975: 208 note 1, 1978: 13f.) notes a class of verbs for which human 3rd person accusative clitics appear to act exceptionally as 1st/2nd person, (i). Here belong e.g. *amener* ‘bring’, *assimiler* ‘assimilate’, *associer* ‘associate’, *attacher* ‘attach’, *comparer* ‘compare’, *sacrifier* ‘sacrifice’, *soumettre* ‘submit’, *substituer* ‘substitute’. Cross-linguistically the PCC does sometimes treat 3rd person humans as 1st/2nd person (Chapter 6), but this is not the right analysis here. Gaatone (1984: 133) finds the key. These are alternations between a locative argument for spatial motion towards the theme and a dative argument for more figurative motion emphasizing interest to/for/of the theme. The humanness of the accusative clitic is relevant only insofar as only human themes allow the latter, and is independent its being clitic (Cf. also Barnes 1980: 278ff., 289 note 26). (i) thus belongs with (ii)–(iv).

- (i) a Je *les*_i (**lui*) attire (à *lui*), les amis_i. b Je *les*_k (*lui*) attire (*à *lui*), les ennuis_k.
 I attract them_{i/k} to him.D, ((a): dative clitic) the friends_i / ((b): à + strong) the annoyances_k.
 (ii) a Je vais *lui* appeler un médecin_i. b Je vais appeler à *lui* tous ses partisans_k.
 I will call to him ((a): dative clitic) a doctor_i / ((b): à + strong) all his supporters_k.
 (iii) a Je *le*, *lui* renvoie (le manuscrit à l’auteur_i) b Je *le*_k renvoie à *lui* (le critique à l’auteur_k)
 I am sending it_i back to him ((a): dative clitic: his manuscript to the author_i).
 I am sending it_i back to him ((b): à + strong: the critique to the author.)
 (iv) a Je *te* reviens (dit par un soldat à sa femme) b Je reviens à *vous* dans un instant.
 I will come back to you ((a): dative clitic: said by a soldier to his wife).
 I will get back to you in a moment ((b): à + strong).

Complementing constructed examples are abundant naturalistic ones. The following selection of PCC contexts has been adapted from various sources and then submitted to grammaticality judgments including focus. The strong pronoun datives (underlined) are perfect without focus. Outside PCC contexts, corresponding unfocussed strong pronouns are impossible. Attempts to create them in (24)d'' and (24)e'' lead to ungrammaticality.¹⁵

- (24) a. [Film synopsis:] L'étrange Frédérique séduit les gens_i sans ***se donner à eux_i***.
The strange Frédérique seduces people_i without ***giving herself to them_i***.
b. Pour eux_i, la photographie est d'abord un loisir et l'autochrome leur_i offre un moyen de satisfaire leur plaisir de reproduire avec exactitude les motifs qui ***s'offrent à eux_i***, de conserver des souvenirs de leurs_i missions.
[Museum description of early amateur photographers:] For them_i, photography is in the first place a leisure activity and the autochromatic process offers them_i a means of satisfying their_i pleasure of reproducing with precision the motives which ***offer themselves to them_i***, of preserving memories of their_i missions.
c. Le soir de Noël, j'ai été invité dans la famille_i de ma copine, pour qu'elle ***me présente à eux_i***.
Christmas Eve, I was invited into the family_i of my girlfriend, in order for her ***to introduce me to them_i***. (wide focus)
d. Alain leur_i a proposé que nous_k partions tous_k plus tard pour pouvoir voyager avec eux_i; il ***nous_k a présentés à eux_i***, et nous_k avons découvert qu'ils_i étaient charmants.
Alain proposed to them_i that we_k all_k leave later in order to be able to travel with them_i; he ***introduced us_k to them_i***, and we_k discovered that they_i were charming.
d' ***nous_k les_i a présentés*** (modification)
introduced them_i to us_k (clitic)
d'' ****les_i a présenté à nous_k*** (modification)
introduced them to us_k (strong)
e. Il est 12h00 quand j'atterris à l'aéroport. Ma famille_i d'accueil m'attend à la porte A. Je réussis à les_i trouver puisqu'il y a une dame de l'agence qui est avec eux_i. Je ***me présente à eux_i***. La famille compte 3 personnes.

¹⁵The context of naturalistic examples mitigates factors that may render constructed examples clumsy, including the pragmatic division of labour between clitics and strong pronouns in picking discourse antecedents (Tasmowski 1985, Ariel 1990, Delfitto 2002), and the preference for aligning phrase-final accented expressions with focus (as in English: *Kate walked in; I showed {her the book} / {the book to her} / {the book to her right away}*, the second being less natural.)

It is 12h00 when I landed at the airport. My host family_i is waiting for me at the gate. I succeeded in finding them_i because there is a lady from the agency who is with them_i. **I introduce myself to them_i.**

They are a family of three.

e' Elle **me présente à eux_i** (modified)

She introduces me to them_i.

e'' *Elle **les_i présente à moi** (modified)

She introduces them_i to me.

The strong pronouns of the repair have the same properties as strong pronouns generally, save for the focus of dative ones. They may serve as quantifier-bound variables, (25). They control regular 1st/2nd person agreement, (26).¹⁶ In varieties with grammatical resumption, they serve as resumptives, (27). The perfect status of the PCC repair in all these contexts sets it apart from pronouns judged ungrammatical though produced, such as the 'intrusive' resumptives of English (Ferreira and Swets 2005, Alexopoulou and Keller 2007).

(25) Personne_i ne / Chacun_i veut que je *te* présente à lui_i.
No one_i / Everyone_i wants that I introduce *you.A* to him_i.

(26) Regardez comme il s'adresse à vous_i qui êtes_i venus!
Look how he addresses *himself* to you who are.2PL come!

(27) C'est un petit gars_i que n'importe qui s'adaptait à lui_i.
It's a little boy_i that anybody adapted *himself* to him_i.
(Lefebvre and Fournier 1978: 275, Auger 1994: 228)

The repair may occur at a considerable surface distance from the clitic cluster affected by the PCC. This occurs in causatives with clitic-climbing. In (28), the arguments involved probably first form a clitic cluster in the embedded clause, undergo repair there, and then climb higher. The surface cliticization site is far from the surface repair site.¹⁷

¹⁶In this example, the *comme* 'how' clause is a useful way of controlling for focus: it is new information and material in it tends to lack narrow focus of its own (Zribi-Hertz 2008: 614).

¹⁷Pertinent is (i), for the y -grammar ^{y} . Some speakers permit a dative clitic to climb out of a causativized infinitive with the reflexive clitic *se*, in contrast to the usual clitic cohesion reported in note 11. This occurs in (i), cf. inversely (ii). In (i-a), such climbing avoids the PCC **se lui*. So also in (i-b), but here the PCC has been repaired by y within the lower clause first.

- (i) a^y Marcel *lui* a fait [_{se_i} présenter _{t_{lui}} Lucille_i].
Marcel made Lucille introduce *herself.A* (*se*) to *her.D* (*lui*).
b^y ?On y_k a fait [_{se_i} décrire _{t_y} Philippe_i, à Louise/elle_k].
We made Philippe describe *himself.A* (*se*) $LOC_{k=to,her}$ (y), to Louise_k / her_k.
(Postal 1990: 166, 130, cf. 1983: 408)
- (ii) Elle me_i la_j (? lui_k) laissera t_i (lui_k) dire t_j t_k .
She will have *me.D_i* (*me*) tell *it.A_j* (*la*) to *him.D_k* (*lui*).

(Conceição 2007: 92 note 16)

- (28) *Il *me lui* fera [~~*me lui*~~ présenter par ses parents].
 Il *me* fera [~~*me lui*~~ présenter à elle par ses parents].
 he me.A her.D will.make introduce to her by his parents.
 He will have me introduced to them by his parents.
 (Kayne 1975: 297)

More telling are causatives where the two clitics never form a cluster. In (29) and (30), the clitics represent the embedded accusative object and the dative causee-subject. This type of causativization is discussed further in Section 4.5. Here it is pertinent that while the accusative can exceptionally cliticize within the infinitive, the causee never can, indicating that the two clitics are only brought together in the matrix clause. The resulting cluster is barred by the PCC. Yet the repair leaves the causee in-situ as a strong pronoun, perhaps quite low as will be seen in Section 4.5. Thus the PCC and its repair are referring to arguments at least as far apart as the internal and external argument, coming together into a single cluster in the matrix clause far from the site of the repair.

- (29) a. [¥] *Jean *me leur* a fait connaître , à ses amis.
 b. [¥] Jean *m' y* a fait connaître , à ses amis.
 c. Jean *m'* a fait connaître à eux.
 Jean me.A LOC/them.D has made know to them to his friends
 Jean made them (, his friends,) get to know me.
 ((a,b) Couquaux 1975: 46, (c) Kayne 1975: 298 note 25, adapted)

- (30) Je n'ai pas postulé pour le job qu'ils_i proposaient,
 I did not apply for the job they_i were proposing,"
 *mais je *me leur_i* suis fait connaître par d'autres moyens.
 mais je *me* suis fait connaître à eux_i par d'autres moyens.
 but I me.A them.D am made know to them by other means
 but I made myself known to them in other ways (e.g. rumour).
 (cf. discussion of (67))

So far only datives have assumed the strong form in PCC repair. The accusative cannot be an unfocussed strong pronoun, (31) (Blanche-Benveniste 1975: 209, Kayne 1975: 173f., Couquaux 1975: 53, Morin 1979a: 296, Burston 1983: 269, Postal 1990: 178f.). This is so equally for those who do and who do not tolerate accusative strong pronouns under focus without clitic doubling (note 10). Moreover, even if the dative is itself irreparable, the accusative still cannot be repaired, leaving an ineffable structure. In Section 4.5 it will be seen that datives like possessors and causees cannot under the PCC repair. Nevertheless, in (32), (33) the unfocussed strong accusative pronoun remains unavailable.

- (31) a. Elle *te* *leur* présentera.
 b. *Elle *leur* présentera toi.
 c. %Elle *leur* présentera TOI, pas ton frère.
 she you.A them.D will.introduce you not your brother
- (32) a. *Je *me* *lui* fais photographier.
 b. *Je *me* fais photographier à lui.
 c. *Je *lui* fais photographier moi.
 I me.A him.D make photograph to him / me
 I made him photograph me.
 (Blanche-Benveniste et al. 1984: 196 note 36)
- (33) a. On *te* *leur* jettera dans les bras.
 one you.A them.D will.throw into the arms
 We will throw you into their arms.
 b. On *te* jettera (*à elles/%ELLES) dans les bras (*à elles/%ELLES).
 We will through you into the arms to *them/THEM.
 c. On *leur* jettera (*toi/%TOI) dans les bras (*toi/%TOI).
 We will through *you/%YOU into their arms.

There is only one context where the accusative might undergo the PCC repair: when the dative is an inherent clitic. An inherent clitic is an idiom chunk lexicalized with the verb. In *s'imaginer* + ACC 'imagine, picture (Kate.ACC in her youth)', *s'attaquer* + DAT 'take it out on, attack (Kate.DAT)', *se* cannot be replaced by anything else (to give a meaning 'have (someone) attack (Kate.DAT)'). Among such inherent clitics, *se* is the only one that is [+person]. For the PCC, inherent *se* behaves like true reflexive *se*. When *se* combines with a dative, the dative is repaired by an unfocussed strong pronoun in the usual manner. When *se* combines with a 1st/2nd person accusative, (34), no repair is possible for some speakers. For others, this is the sole context where a strong accusative pronoun is to some extent possible without the very heavy focus it would require otherwise. Nevertheless, something extra is usually required, such as the modifying material in (34) (Perlmutter 1971: 56, Blanche-Benveniste 1975: 209–11, Couquaux 1975: 53, 64, Morin 1979a: 296, 1981 :05, Postal 1990: 178).¹⁸

- (34) Je *me* rappelle vous *(dans un beau costume de bain).
 I SE(INH) remember you *(.quand vous aviez quinze ans)
 in a beautiful bathing suit.
 when you were fifteen
 (Perlmutter 1971: 225)

¹⁸For the range of inherent clitics, see Morin (1981: 95f.) for French, Bonet (1991: 61f.) for Catalan. For a handful of verbs, inherent *se* does not participate in the PCC for some speakers: *s'arracher* 'fight over' + ACC in %On *se l'*.m'arrache 'One fights over him/?me', *se casser* 'leave' in %Il ne faut pas que je *me lui* casse 'It must not be that I leave on him' (Heger 1966: 28, Blanche-Benveniste 1975: 43, De Kok 1985: 384n, Schwegler 1990: 99). *Se* has then ceased to be argumental or [+person] (Albizu 1997a, Bonet 1991: 192f. for Catalan and Spanish, where this appears to be far more common).

Perhaps accusatives are indeed repairable to strong pronouns in a PCC context with an inherent dative. One might make sense of the additional requirement in (34) if strong accusative pronouns have a deficiency over that of strong datives that modifiers rectify, perhaps having to do with prosody. They are at any rate more resistant than datives to bearing focus without clitic doubling and to gapping (note 10). Nothing will rescue an accusative as repair if the dative is not inherent.¹⁹

To sum up this section, the PCC repair obviates the Cliticization Requirement for datives by turning them into unfocussed strong pronouns in the PCC context. The result is identical in all but focus to dative strong pronouns, and in all but thematic meaning to locative strong pronouns. In only one of the contexts where datives cannot be affected by the repair, when the dative is an inherent clitic, can the accusative also be an unfocussed strong pronoun, perhaps. The repair may occur at a considerable distance from the clitic cluster banned by the PCC. These conclusions will be used to build a theory of the repair. The next section establishes its domain: syntax rather than morphology.

4.4 The Syntactic Character of the Repair

4.4.1 Introduction

In the PCC repair, a strong pronoun appears where a clitic would be expected. The alternation has been analyzed both as morphological, by Bonet (1991), and to be somewhat anachronistic, Blanche-Benveniste (1975, esp. chapter 4), and as syntactic, by Couquaux (1975), Postal (1990), Ormazabal and Romero (1998), Rezac (2007). The core prediction separating the two lines of approach follows from modularity: a morphological clitic-strong alternation affects only form and not syntax or its interpretation. In this section, the need for a syntactic analysis is demonstrated, because the strong pronouns of the repair do not have the syntactic properties of the clitics they replace, but those of strong pronouns.

The stage may be set through Bonet's (1991: 201–9) elegant morphological analysis. Bonet proposes that the repair is exceptional lower-copy spell-out in

¹⁹For the true reflexive clitic *se*, the repair may be regular strong pronouns, which are immune to Condition B (Section 4.4), or their intensified forms with *même* 'self', which to a first approximation behave like regular strong pronouns as far as focus and the PCC repair goes, and finally the highly restricted *soi* '(one)self' (Zribi-Hertz 1980, 1995, 2003, 2008, Kayne 2000: Chapters 8, 9). When a 3rd person direct and indirect object would both be reflexive to the subject **se*_{DAT} *se*_{ACC}, the dative *se* is usually affected, as expected, *Elle_i s'est décrit-e_i à elle-même_i* 'She has described-SGF herself (se) to her-self (elle-même)' (Postal 1990: 129, Blanche-Benveniste 1975: 210). A 3rd person accusative *se* may perhaps also be repaired, *?Elle_i s'_iest décrit(-e_i) elle-même_i*, although the focus facts are unknown (Kayne 1975: 372, Postal 1989: 132 note 15, 1990: 195 note 62; the optional participle agreement in this example is independently available for dative *se*, note 8, but for some speakers the only reading is with an implicit dative).

response to the PCC as a morphological problem with top-copy spell-out, (35). A dative pronoun is base-generated within the VP and moves outside. Its top copy is usually spelled out as a clitic, (35)a. The PCC is a morphological constraint on clitic sequences that bars the spell-out if there is a 1st/2nd/SE accusative clitic, (35)b. In response, the copy spell-out algorithm realizes the lowest, VP-internal copy. The form of this copy is *à* + strong pronoun, (35)c.

- (35) a. Elle *les* *leur_i* présentera ~~*à eux_i*~~
 b. Elle *vous* *leur_i* présentera ~~*à eux_i*~~ *PCC →
 c. Elle *vous* ~~*leur_i*~~ présentera *à eux_i*
 she them.A/you.A them.D will.introduce to them

The use of lower copy spell-out triggered by morphophonological problems has been convincingly developed independently, notably in the work reviewed in Bošković and Nunes (2007). In Romanian, *wh*-phrases must front, (36)a, except when a sequence of two identical *wh*-words would result. Then the lower *wh*-word is exceptionally pronounced lower, (36)b. Bošković (2002) proposes that in the syntax, the lower *wh*-word moves, for syntax should be blind to morphophonological repetition. However, upper copy spell-out runs into a ban on repetition, and the response is to realize a lower copy, (36)c.

- (36) a. Cine (ce) precede (*ce)?
 b. Ce (*ce) precede (ce)
 c. [ce_i ee_k precede ee_i ce_k]
 who/what what precedes

(Romanian)

Lower copy spell-out makes the following key prediction:

- (37) The spell-out of the higher or lower copy of a chain has no consequences for syntax or its interpretation, because it occurs in realization.
 (cf. Polinsky and Potsdam 2006, Bobaljik and Branigan 2006: 71f.)

The prediction is a basic consequence of the modular architecture of the syntax, realization, and interpretation components explored in Chapters 1 and 2. For the lower copy spellout in (36), Bošković (2002: 374f.) shows that the in-situ *wh*-word in (36) licenses parasitic gaps as if it had moved in the syntax. Polinsky and Potsdam (2001, 2006) use the same logic to show that ‘backward’ raising and control involves DP-movement to a higher clause, although the DP is spelled out in a lower clause; they contrast simple cross-clausal agreement where the DP remains in the lower clause for all syntactico-semantic purposes.

The prediction (37) is the touchstone that puts the PCC-governed clitic-strong alternation into syntax. In French, clitics and strong pronouns differ

on various syntactico-semantic properties other than focus: floating quantifiers, right dislocation, binding, and perhaps phi-features. For each, the strong dative pronoun of the PCC repair has a syntactic structure distinct from that of a dative clitic.

4.4.2 Floating Quantifiers

Dative clitics license bare preverbal floating quantifiers, (38). To do so, they pass through an A-position above them (Section 4.2). The *à* + pronoun of the PCC repair fails to license a bare floating quantifier. It behaves like focussed strong pronoun datives and like all locatives, not like a dative clitic.

- (38) a. Elle *la* *leur*_i a **tous**_i présentée (à EUX_i).
 b. Elle *l'* a (***tous**_i). présentée à EUX_i/*à eux.
 c. Elle *s'/m'* a (***tous**_i). présentée à eux_i.
 she her/SE/me.A them.D has all introduced to them
 (for (c), cf. Kayne 1975: 6 note 9, Ruwet 1982: 309 note 54)

Dative clitics continue to license floating quantifiers when doubling a focussed strong pronoun, as in (38)a, or rather the contextualized (39).²⁰

- (39) D'abord nous avons contacté les victimes, puis les témoins. Quand on {*les*_i a **tous**_i interrogés EUX_i / eux_i aussi} / {*leur*_i a **tous**_i parlé à EUX_i / eux_i aussi}, on a clos l'enquête.
 First we contacted the victims, then the witnesses. When we {*them.A* have **all** interrogated THEM / them too} / we {*them.D* have **all** spoken to THEM / them too}, we closed the investigation.
 (Rezac 2010b: 501)

Morphological accusative clitic deletion does not affect floating quantifier licensing in grammars where it can affect 3PL *les*, as discussed in Chapter 2:

- (40) Je *les/Ø*_i *lui* ai **tous**_i déjà présentés.
 I them.A her.D have all already introduced
 (Chapter 2)

Clitic doubling and clitic deletion closely control for any surface requirements to which floating quantifiers might be sensitive. The failure of the

²⁰The questionnaire for (39) indicates nearly perfect acceptability for the accusative for most speakers, but the dative splits into the same score for four speakers, sharp degradation for two, and medium for three. Further inquiry indicates that the degradation is due to the failure of datives to license floating quantifiers and not the doubling, reflecting the dialectal split in note 9.

4.4.3 Condition B

[illegible]

(42) L'organisateur_k *le/Ø_i/*_k/*_m* *lui_m/*_k/*_i* présentera demain.
the organiser him.A him.D will.introduce tomorrow

²¹Doubled strong pronouns control for the possibility that floating quantifier licensing would be interfered with by a linked DP following the quantifier (P. Svenonius p.c.; cf. Belletti 2005, Rezac 2010b). Clitic deletion controls for sensitivity to a surface-overt antecedent. It bears on a point due to D. Pesetsky (p.c.): floating quantifiers are not licensed by covert A'-movement even when licensed by overt A'-movement (as in McCloskey 2000). Fitzpatrick (2006) develops a comprehensive analysis where A-licensed floating quantifiers are anaphoric adverbials whereas A'-licensed ones are stranded adnominal ones. On it, Pesetsky's point might be related to the lack of need for covert movement to pied-pipe (Chomsky 1995, but cf. Pesetsky 2000). Other overt-covert differences could be responsible, such as the ability of covert movement to move over longer distances and so skip the floating site (cf. Richards 2001: Chapter 2).

Morin (1978: 356f.) observes that the strong pronoun introduced by PCC repair is not subject to Condition B, unlike an overt or silent clitic:²²

- (43) Jean_i *s'* est attaqué à lui_i, pensant s'attaquer aux autres.
 Jean SE is attacked to him, thinking to attack others.
 (Morin 1978: 357, cf. 1982: 13)
- (44) Jacques_i *nous/*les* a assigné à lui_i DES L'AEROPORT.
 Jacques us/*them.A has assigned to him as.soon.as the airport.

For the Binding Theory then, the syntax and interpretation of the strong pronouns of the repair appears to be like that of other pronouns and unlike that of clitics. However, the argument is weakened by two possibilities. When the focussed dative in (41)a is clitic doubled, the reflexive and disjoint reading are differentiated by the clitic, *Jacques_i s'/_lui_j achète des billets à LUI_{ij}*. The reflexive versus disjoint readings in the repair *à lui* in (43) could then be analyzed as the spell-out of corresponding structures with a covert *se* and a covert *lui*. Alternatively, Condition B may be viewed as consequence of the availability of a dedicated reflexive like *se*, and so absent when *se* is unavailable due to the PCC (Burzio 1989, 1991, Déchaine and Manfredi 1994, Williams 1997, Kiparsky 2005).

These possibilities can be controlled for by *overlapping reference*, as in **We saw me/myself*. A reflexive is impossible, but a plain pronoun must remain disjoint (Büning 2005: 9.2–4). The judgments on English strong pronouns are not as robust as one should like. For French clitics, they are categorical: neither the reflexive nor the disjoint clitics are possible, either in 3rd person where they are distinguished, or in 1st/2nd persons where they are not (Blanche-Benveniste 1975: 213, Morin 1978: 347, Kayne 2002: 143–6, Rooryck 2006, Zribi-Hertz 2008).²³ Strong pronouns allow the overlapping reading generally, whether as locatives, focussed datives, or datives created by PCC repair, as shown in (45) and (46).

- (45) a. *Vous *t'* avez chacun donné cinq euros (à TOI)?
 b. Vous avez chacun donné cinq euros à TOI / *toi?
 you(PL) you(SG).D have each given five euros to you(SG)

²²A test suggested by B. Spector, p.c., ameliorated by M. Jouitteau, J. Rooryck, E. Schoorlemmer p.c. As Morin (1978: 358) and M. Jouitteau (p.c.) point out, context is needed: *I introduced him/you to myself (me)* is just not the way to say *I introduced myself to him/you* in French or English. Beside strong pronouns like *lui* 'him' exists the suffixed *lui-même* 'himself' type. Couquaux (1975: 62), Blanche-Benveniste (1975: 206–213), less so Blanche-Benveniste et al. (1984: 102), dislike all plain strong pronouns reflexive to the local subject or objects, whether PCC repair or locative. They antecede the work that established this use and its difference from *même* 'self'-forms, Morin (1978), Zribi-Hertz (1980, 1995, 2003, 2008).

²³So reports the literature; most speakers concur. A few permit overlapping reference for collective readings, as in English: *Nous m'avons (*chacun) choisi* 'We have (*each) chosen me.A'.

(Context: putting money into a common fund for a night out.)

So you(PL) gave each ten euros to YOU/*you(SG)?

Context for *TOI*: But YOU always lose things!

Context for **toi*: But that won't even cover the drinks!

(dative outside the PCC context)

- (46) a. ??C'est que Pierre_i et Véronique_j ont dévoués toute leur énergie à lui_i, pendant DIX ans déjà. C'est le tour de Véronique.

The fact is, Pierre_i and Véronique_j have devoted all their energy to him_i for TEN years already. It's Véronique's turn.

(dative outside the PCC context; clitic *se/lui* impossible)

- b. C'est que Pierre_i et Véronique_j *se* sont dévoués à lui_i pendant DIX ANS déjà. C'est le tour de Véronique.

It's that Pierre_i and Veronique_j have devoted *themselves.A* to him_i for TEN YEARS already. It's Véronique's turn.

(dative in the PCC context; clitic *se/lui* impossible)

- (47) a. ??Ca fait dix ans déjà que Véronique et toi avez dévoué à toi TOUTE VOTRE ENERGIE. Il est temps d'en reparler.

It's ten years now that Véronique and you(SG) have devoted to you(SG) ALL YOUR ENERGY. It's time to talk about it again.

(dative outside the PCC context; clitic *te* impossible)

- b. Ca fait dix ans déjà que Véronique et toi *vous* êtes dévoué à toi AVEC TOUTE VOTRE ENERGIE. Il est temps d'en reparler.

It's ten years now that Véronique and you(SG) have devoted *yourselves(PL)* to you(SG) WITH ALL YOUR ENERGY. It's time to talk about it again.

(dative in the PCC context; clitic *te* impossible)

An interesting aspect of these examples is that the unavailability of a clitic due to overlapping reference does not by itself render an unfocussed dative pronoun good; only the PCC repair does (for related points, cf. Kayne 2000: 150, 159f. note 67, and Schütze 1997: 4.1.1.6 for irreparability of the PCC in Icelandic by a non-anaphor). Section 4.6 returns to this and similar facts.²⁴

4.4.4 Right Dislocation

Right dislocation is compatible only with clitics and not strong pronouns, whether focussed datives or unfocussed locatives. Couquaux (1978: 213 note 6) observes that the unfocussed strong pronoun dative of the PCC repair aligns with other strong pronouns against clitics. The source of this constraint is

²⁴Questionnaire results bear out the contrast in (47) reported by linguist speaker judgments, but not as sharply as for other gaps; hence the notation ?? rather than *. Controlling for a focussed strong pronoun here is difficult.

4.5 Applicative Datives

4.5.1 Introduction

Not all datives can undergo the PCC repair. So far, only indirect objects have been examined: the internal arguments of verbs like *présenter* ‘introduce’. They correspond to datives that may appear in English in both the prepositional construction, *give X to Y*, and the applicative one, *give Y X*. French also has datives such as possessors and causees that can only appear in the applicative construction cross-linguistically. The difference assumed between the two constructions is repeated below as (19). The c-command relationships of the A-positions in the ν P are all that matters here, and they are shared by various approaches, as such Anagnostopoulou (2003), Cuervo (2003a, b); Baker (1988, 1996, 1997), Ormazabal and Romero (1998, 2010b); Den Dikken (1995, 2006b).

- (19) a. prepos. dat.: $T^\circ \dots \nu^\circ \dots$ [DP_{object} ... [P[°] DP]]
 b. applic. dat.: $T^\circ \dots \nu^\circ \dots$ [DP(.DAT) [DP_{object} ...]]

Purely applicatives datives like causees aid greatly in understanding the PCC and its repair. First, they cannot be repaired. From this may be deduced that the repair relies on the prepositional construction, and is unavailable for datives that cannot appear in it, following Couquaux (1975). Second, they create the PCC both as clitics and $\hat{a}$ -phrases. This fits the characterization of the PCC in (8) as the intervention of an applicative object between a DP and its Case/Agree head ν . It is the only position available to purely applicative dative $\hat{a}$ -phrases like causees, (19)b, whereas indirect object dative $\hat{a}$ -phrases avoid creating the PCC because they can occur in the prepositional construction, (19)a. All dative clitics also create the PCC, because they pass through an A-position between ν and the direct object in cliticization, as concluded in Section 4.2 and again in Section 4.7.

The applicative-prepositional distinction is a syntactic one. It is neutralized in Romance morphology, where both types of datives use the same clitics and $\hat{a}$ -phrases. It is also invisible to morphological processes, as discussed for opaque cliticization in Chapter 2. Yet it conditions the PCC and its repair. Thus, they refer to syntactic primitives, confirming their syntactic character.

The story may begin with possessor datives, (50). They can be clitics but usually not $\hat{a}$ -phrases, and cannot undergo the PCC repair by strong pronoun or y .

- (50)[¥] a. On *leur* a jeté Paul dans les bras (, à ces filles).
 b. *On a jeté Paul dans les bras à ces filles.
 one them.D has thrown Paul into the arms to these girls
 One threw Paul into their(, the girls',) arms / *the arms of the girls.

- c. *On *me leur* a jeté dans les bras.
 d. *On *m'* a jeté dans les bras à elles / ces filles.
 e. *On *m' y* a jeté dans les bras.
 one me.A them.D / LOC has thrown into the arms to them / these girls
 One threw me into their/the girls' arms.
 (possessor; Couquaux 1975: 58, 60, cf. Postal 1990: 140–2, 154)

Couquaux (1975: 58–61) introduces this paradigm. He correlates the general restriction of possessor datives to clitics, and their specific unavailability to the PCC repairs. Both are related to Kayne's (1975: 2.14) suggestion that possessor datives must appear in an analogue of the English double object (applicative) construction. Couquaux's proposal furnishes the key to understanding which datives may undergo the PCC repair. Work in Romance and cross-linguistically has confirmed that possessor datives must appear in the applicative construction. It has also given a plausible explanation. The possessor raises out of or binds into the possessum. It must therefore c-command the possessum, and cannot be embedded inside a regular PP (Landau 1999, Pytkäinen 2002: 43–57, Cuervo 2003a; Kayne 1975: 2.14, Couquaux 1975: 60). Couquaux's hypothesis about the PCC repair is that it turns datives into locative PPs, structurally analogous to the prepositional datives of (19)a. Thus it cannot affect possessors (cf. Albizu 1997b). A generalization of this proposal is (51).

- (51) The PCC repair can only affect datives that can occur in the prepositional construction, not those that must be in the applicative construction.

(51) correlates the applicative status of a dative and its inability to undergo the PCC repair. Unlike Couquaux's proposal, it does not correlate applicativity and cliticization. Some applicative datives like the possessor in (50) must indeed cliticize in French, but not all, unlike what Cuervo (2003a, b) shows for Spanish. Yet even those purely applicative datives that can be (non-clitic-doubled) *à*-phrases and *à* + strong pronouns resist the PCC repair. The repair refers to the applicative-prepositional distinction directly; it constrains *à*-phrases only indirectly.

4.5.2 Possessive, Dessus, and Benefactive Datives

Among applicative datives in French are possessors, *dessus*-datives, benefactives, experiencers, and causees. Possessor and *dessus*-datives pattern similarly (Kayne 1975: 2.12, 2.14). Like possessors in (50), *dessus*-datives cannot be *à*-phrases and have no PCC repair. Kayne (1975: 2.15) shows that

they are applicative datives; the preposition takes a *pro* complement that the dative binds.²⁵

- (52) Elle *le/*me* *leur_i* a (tous) jeté dessus *pro_i*.
 *Elle *m'* a jeté dessus (*à) *eux / *Jean.
 she him/me.A them.D has all thrown onto to them Jean
 She threw {him/*me on them} / {*him/*me on Jean}.
- (*dessus-dative*)

Benefactive datives are applicative on comparative grounds (e.g. Cuervo 2003a: 194ff. for Spanish). In French they are often restricted to clitics, as in (53) (Blanche-Benveniste 1975: 99, Rouveret and Vergnaud 1980: 170, Leclère 1976).

- (53) a. On *le/*me* *lui* a dévalisé / écrasé.
 b. *On *l'/m'* a dévalisé / écrasé à Jean / lui
 one him/me.A him.D has robbed / crushed to Jean / him
 They robbed him/*me on him/*Jean.
- (*benefactive*)

However, there are apparent benefactive *à*-phrases. In (54), the verb *acheter* takes an optional indirect object with a source ‘from’ interpretation, or a benefactive dative with a ‘for’ interpretation. Both can be realized as dative clitics or *à*-phrases, (54)a, although speakers vary on the benefactive reading for *focussed* strong pronouns, (54)c. Both readings are ruled out as dative clitics in the PCC context, (54)b. Under the PCC repair in (54)b, only the indirect object source reading remains for *à* + *unfocussed* strong pronoun, for all speakers consulted.

- (54) a. Philippe *vous* achètera à ce colon.
 Philippe will buy *you.A* (*vous*) for/from this colonist (*à ce colon*).
 b. Philippe *vous* (**lui*) achètera (*à lui*).
 Philippe will buy *you.A* (from/*for him (*à lui*)).
 c. J’ai acheté cela à Jacques/LUI et pas à Louise.
 I bought this {from Jacques/HIM} / {for Jacques/%HIM} and not L.
 (Postal 1990: 131f., 153, with only *for HIM in (c))

²⁵Possessors of direct objects can be *à*-phrases as well as clitics (Kayne 1975: 2.14–5, Rouveret and Vergnaud 1980: 176 note 52, Rooryck 1988a: 383), as can rarely some others (Kayne 1975: 175 note 126, 159 note 106, 170 note 121, Postal 1990: 141). Perhaps such *à*-phrases are ‘low’ applicatives that need the direct object (Baker 1988, McGinnis 2001, Pylkkänen 2002, Cuervo 2003a). The PCC cannot be tested for them since a clitic direct object cannot have a possessor. The name *dessus*-datives is due to Postal (1990).

Rooryck (1988a) finds that even for benefactives that may be *à*-phrases, the possibility vanishes under various transformations such as direct object cliticization (but (54) is an exception). He proposes that benefactive *à*-phrases are not in the same configuration as benefactive clitics, but involve rather another use of *à*-phrases akin to ‘for’ adjuncts. Any such theory that puts them above the *v*P would exclude them from creating the PCC in (54)b according to (8), making them irrelevant to the PCC (cf. Cuervo 2003a: 4.2–3, Roberge and Troberg 2009, and for a parallel in Warlpiri, Simpson 1983: 2.3.3.2).²⁶

4.5.3 *Causee Datives*

The next two applicative kinds, causees and *falloir*-experiencers, show that applicative datives create the PCC whether clitic or *à*-phrases, in accord with (8). The causatives of interest belong to the cross-linguistically common type of *restructuring causative* in (55) (cf. Gibson and Raposo 1986, Guasti 2005). The causative and causativized verb form a single domain for Case, agreement, A-movement, and cliticization. The causee is dative if it is the external argument of a transitive, (55)a–d, accusative if the subject of an unaccusative or passive, (55)e–f. All clitic arguments of the embedded verb must climb into the matrix clause. Beside this causative stands the *ECM causative* in (56), which behaves more like the ECM structures in English or French. The causee is accusative, and clitic arguments of the lower verb stay with it in the infinitive clause.

- (55)
- | | | | | | | |
|-----------|---|------------|--------|---------|--------------|---------------------|
| a. Azenor | <i>lui</i> | | fait | manger | les gâteaux. | |
| b. Azenor | | | fait | manger | les gâteaux | à Nelson. |
| c. Azenor | <i>lui</i> | <i>les</i> | fait | manger. | | |
| d. Azenor | | <i>les</i> | fait | manger | | à Nelson. |
| | Azenor | him.D | them.A | makes | eat | the cakes to Nelson |
| | Azenor made him/Nelson eat the cakes. | | | | | |
| | (restructuring causative of active transitive) | | | | | |
| e. Azenor | | | fait | manger | les gâteaux | (par Nelson). |
| f. Azenor | <i>les</i> | | fait | manger | | par Nelson |
| | Azenor | | them.A | makes | eat | the cakes by Nelson |
| | Azenor made the cakes be eaten (by Nelson). | | | | | |
| | (restructuring causative of passive transitive) | | | | | |

- (56)
- | | | | | | | |
|-----------|---|--------|--------|----------------|--------|----------------|
| a. Azenor | (* <i>les</i>) | laisse | Nelson | (<i>les</i>) | manger | (les gâteaux). |
| | Azenor lets Nelson eat the cakes/ <i>them.A</i> (<i>les</i>). | | | | | |

²⁶The matter is complicated by speaker variation: Rooryck (1988a: 384) contrasts with Postal (1990) on *acheter*, Postal (1990: 191 note 31) notes variation on reflexive benefactives, and M. Jouitteau (p.c.) differs from Postal (1990: 161f.) in allowing benefactives under conjunctive as much as comparative contrast (albeit not in reduced relatives, Postal 1990: 15f., cf. (92)b).

- b. Azenor *le* (**les*) laisse (*les*) manger.
 Azenor lets *him.A* (*le*) eat *them.A* (*les*).
 c. Azenor *les* laisse être mangés (par Nelson)
 Azenor lets *them.A* (*les*) be eaten (by Nelson)

(ECM causative)

The restructuring causative will be pertinent at several junctures. Its properties are laid out briefly below, with reference to (57) and (58).²⁷

- (57) Restructuring causative (causee in bold, clitic sites in brackets)
 a. Causer (cl_i cl_k) *v*_{ACC} *faire* **EA**.DAT_i *V*_{trans}.INF O.ACC_k
 b. Causer (cl_i) *v*_{ACC} *faire* *V*_{intr}.INF **S**.ACC_i
- (58) ECM causative (causee in bold, clitic sites in brackets)
 a. Causer (cl_i) *v*_{ACC} *laisser* **EA**.ACC_i [*v*_{ACC} (cl_k) *V*_{trans}.INF O.ACC_k]
 b. Causer (cl_i) *v*_{ACC} *laisser* *V*_{intr}.INF **S**.ACC_i

- The causative verb (*faire*) takes an infinitival complement in both causatives. The infinitive is structurally poor in the restructuring causative, without negation, temporal, and passive auxiliaries, all possible in the ECM causative.

²⁷For French causatives, see esp. Kayne (1975: Chapters 3, 4, 1991), Rouveret and Vergnaud (1980), Quicoli (1980), Postal (1981, 1983, 1984, 1989), Tasmowski (1985), Zubizarreta (1985), Gibson and Raposo (1986), Santorini and Heycock (1988), Roberts (1991), Miller (1992: Chapter 5), Miller and Sag (1997), Guasti (1996, 1997, 2005), Bobaljik and Branigan (2006), Folli and Harley (2007). Among issues not immediately pertinent but occasionally referred to are:

- Failure to climb in the restructuring causative for inherent clitics (Kayne 1975: 6.6, Miller 1992: 5.5.4.3); failure to climb for *se* reflexive to the infinitive's subject, which also makes the infinitive behave as if unergative if *se* is its direct object (Kayne 1975: 6.1, 6.5, Reinhart and Siloni 2005); climbing in causatives with modals (Postal 1981: 293 note 15); rare climbing in the ECM causative (Postal 1990: 168, 196 note 69, Tasmowski 1985: 314, 362 note 7).
- The poorly understood *mixed causative* of transitives, with a dative causee but no clitic climbing (and the concomitant binding pattern of (59)a), available variably, usually when the embedded verb (potentially) takes an indirect object, alongside the regular restructuring causative, but also when the latter is impossible e.g. due to clitic cluster restrictions (Kayne 1975: 295 note 23, Milner 1982: Document 2, Postal 1981: 315, 1983, 1984, Tasmowski 1985: 287, 315f., 330, 363f., Baschung and Desmets 2000: 214).
- Verb preferences for different causative types and coercion (Miller 1992: 5.5.5–6, Abeillé, Godard and Miller 1997, Tasmowski 1985; Kayne 1975: 295 note 22, Postal 1981: 315).
- Factors and variation in the coding of the causee of unergatives as dative or accusative (Morin 1980, Postal 1981, 1983, 1984, Blanche-Benveniste et al. 1984: 192–5, Tasmowski 1985, Reed 1992, Abeillé, Godard and Miller 1997, Baschung and Desmets 2000). Cf. Section 4.6.

- The two infinitives differ in their Case domains and their effect on the causee. The causee is the highest argument of the embedded verb. In the ECM causative, all causees are structural accusatives, and the Case domain of the matrix clause ends at them. The infinitive has a separate domain for its remaining arguments. In the restructuring causative, there is a single Case domain for both predicates, explaining the dative-accusative coding of the causee. The causee of unaccusatives and passives is accusative. However, transitives already have an accusative object, so their causee is dative. This causee dative appears to be an inherent Case, like other datives: where the restructuring causative can be passivized, it is the accusative direct object that becomes nominative, while the causee remains dative (Burzio 1986: 258, 232, Santorini and Heycock 1988: 5.1, 5.4). The coding of the internal arguments of the infinitive is unaffected.²⁸
- The foregoing Case-domains correlate with domains for clitic climbing and binding, (23). The causee must always cliticize upstairs. In the ECM causative, the internal arguments of the infinitive cliticize downstairs. In the restructuring causative, they must cliticize upstairs, in a single cluster with the causee. The direct object of the infinitive can be coreferential with the causer if it stays downstairs, in ECM, but not upstairs, in restructuring.

- (59) a. Mai_i la*_i laissera la_i dessiner. (*ECM causative*)
 Mai her.A will.let her.A draw.
- b. Mai_i la*_i lui*_i fera dessiner. (*restructuring causative*)
 Mai her.A her.D will.make draw.
 Mai will make her draw her.
- (cf. De Kok 1985: 598 note 2, Morin 1978: 358f.)

- In both causatives, the causee c-commands the direct object. This is patent for the ECM causative where the two are in different clause-like domains, as in (59)a. In the restructuring causative, evidence comes from effects attributed to the Specified Subject Condition (Kayne 1975: 3.5, 3.9, 4.2–3, Rouveret and Vergnaud 1980, Zubizarreta 1985, Jones 1996: 9.3–4). The dative causee acts as the antecedent for reflexive *se* and inalienably possessed nouns in (60), along with other anaphora and secondary predicates; it intervenes in anaphora binding by the causer; and it blocks cliticization of lower locatives, genitives, and datives, unless itself

²⁸The French restructuring causative cannot passivize, least of all with an overt *à*-causee, so the argument have been made from the similar Italian restructuring causative. There the direct object becomes nominative, in minimal contrast to Japanese where the dative causees does. See Folli and Harley (2007: Section 7) for a counter-analysis claiming that passives of restructuring causatives are unavailable in Italian as well, and their work and Bobaljik and Branigan (2006) for a structural Case analysis of dative causees. For other applicative datives, passivization clearly shows them never to become nominative.

cliticized, as shown in (61) and (62). These effects require c-command by the DP of the dative into the clause. The examples also show that the *par* ‘by’-phrase agent of causativized passives has none of these properties. It is a richer PP that prevents its DP from c-commanding into the clause, discussed at the end of this section.

- (60) a. Pierre fera *s'* acheter une montre *à/*par* Marie.
 Pierre will.make SE.D buy a watch to/*by Marie
 Pierre will make Marie buy herself a watch.
 b. Elle fera lever la main *à/*par* Jean
 she will.make raise the hand to/*by Jean
 She will have Jean_i raise his_i hand. (*par* ok for ‘the hand’)
 ((a) Miller 1992: 250, (b) Kayne 1975: 236f.)
- (61) a. Jean fera [comparer cette sonatine à Paul à une symphonie].
 Jean will.make compare this sonata to Paul to a symphony.
 Jean will have Paul compare this sonata to a symphony.
 b. *Jean *y* fera [comparer cette sonatine à Paul *t_y*].
 Jean will have Paul compare this sonata *LOC*=to.it (*y*).
 c. Jean *leur y* fera [comparer cette sonatine *t_{leur}* *t_y*].
 Jean will have *them.D (leur)* compare this sonata *LOC*=to.it (*y*).
 (Rouveret and Vergnaud 1980: 178, adapted; literary for some)
- (62) a. Paul *les lui* fera [porter *t_{les}* à sa femme] *t_{lui}*.
 Paul them.A him.D will.make carry to his wife
 Paul will have him carry them to his wife.
 b. Paul *les (*lui)* fera [porter *t_{les}* *t_{lui}*] à son fils.
 Paul will have his son (*à son fils*) carry them (*to *her.D (lui)*).
 c. Paul *les lui* fera [porter *t_{les}* *t_{lui}*] par son fils.
 Paul will have them carried to her by his son (*par son fils*).
 (Kayne 1975: 290, adapted)

Causees create the PCC not only as clitics, but also as *à*-phrases. Consider the paradigm (63). In the restructuring causative, the matrix + infinitive complex is a single Case, cliticization, and binding domain, and the dative causee c-commands the direct object. When the two are brought together in the clitic cluster, the PCC occurs in (63)c (Postal 1981: 312). Nothing happens in the ECM causative, where they remain in separate clauses, (63)g. However, 1st/2nd/reflexive accusative clitics are in fact barred in the restructuring causative *even if* the causee is an *à*-phrase, (63)d, in contrast to the *par* ‘by’-phrase agent in (63)f (Postal 1989). In consequence, the PCC in (63)c cannot be repaired by *à* + strong pronoun for the clitic, (63)e: the *à*-phrase causee incurs the PCC just like the clitic.

- (63) a. Marcel a fait choisir/dessiner Maï à Ilse.
 b. Marcel *lui* a fait choisir/dessiner Maï
 c. Marcel *l'/*vous* *lui* a fait choisir/dessiner
 d. Marcel *l'/*vous* a fait choisir/dessiner à Ilse.
 e. *Marcel *vous* a fait choisir/dessiner à nous
 Marcel her/*you.A her.D has made choose/draw Maï to Ilse/us
 Marcel had Ilse/her/%HER choose/draw her/Maï/*you.
 (restructuring caus. of active)
 f. Marcel *l'/vous* a fait choisir/dessiner par Ilse
 Marcel had her/you drawn by Ilse/her.
 (restructuring caus. of passive)
 g. Marcel *l'a fait vous* choisir/dessiner.
 Marcel made her.A (*l'*) choose/draw you.A (*vous*).
 (ECM caus.)

Postal (1989) is a detailed study of this constraint, widely but briefly noted elsewhere, for instance Bissel (1944: 331), Kayne (1975: 241 f.), Milner (1982: 152–4), Tasmowski (1985: 350–3), and the references given in Postal (1989). Example (64) is constructed so as to maximize the pragmatic felicity of cliticization and *à*-phrase causees set out in Tasmowski (1985) (cf. (103)). Nevertheless, the *à*-phrase causee of the active is always judged sharply and irredeemably ungrammatical; the *par*-phrase agent of the passive is perfect or nearly so.²⁹

²⁹The restructuring causative is sometimes degraded with 3rd person direct objects that are animate *or* specific *or* clitic, depending (i) on the choice of verb, good being e.g. *embrasser* 'kiss', *épouser* 'marry', *oublier* 'forget', *photographier* 'photograph', worse *tuer* 'kill', *marrier* 'marry', *effleurer* 'graze', (ii) the coding of the causee, 3.ACC_{anim}... *à*-causee being worse than clitics 3.ACC_{anim} 3.DAT_{causee} (Bissel 1944: 331, Kayne 1975: 241 f., Milner 1982: 152–4, Tasmowski 1985: 350–3, Postal 1989: 9, 12, 120 note 5). Only one of these factors affects the badness of 1st/2nd person accusative clitics, and then inversely: they are more ungrammatical if the causee is a clitic, thus forming **me-lui* clusters, rather than an *à*-phrase (cf. Section 4.6.5, and *à*-phrases causees of *connaître* verbs below to which coercion might be available). The two phenomena are also divorced in the results of García (2001), examining accusative clitic climbing in French, Spanish, and Italian. There is considerable variation for 3rd person animates, sharp unacceptability for 1st/2nd person clitics. It seems likely the degradation of 3rd person animates is a different phenomenon from the PCC, perhaps along the essentially pragmatic/parsing-based lines of Tasmowski (1985) and García (2001), with competition between the clitic and *à*-phrase for topichood and agentivity; cf. note 47. If it falls under the PCC, climbing somehow sometimes forces an otherwise absent [+person] specification on animates (found in other languages, Chapter 6).

- (i) a Je *te* (**lui*) ai fait inviter (*à Paul).
 b Je *la* (*lui*) ai fait inviter (*à Paul).
 c Je (*lui*) ai fait inviter (*à Paul) ta sœur.
 I you/her.A him.D have made invite to Paul your sister
 ((b), (c) Milner 1982: 152, 154 note 1)

- (64) Mais comment te faire inviter malgré les restrictions budgétaires? Et par qui? Qui trouver qui serait assez stupide pour ne pas s'en apercevoir quand il signe les documents. Ah! On **te fera inviter *au / √par le chef de personnel**. Il est toujours bourré.

But how to get you invited despite the budget restrictions? And by whom? Who can we find that would be stupid enough not to realize it when he is signing the documents. Ah! We'll ***have the head of personnel invite you (active) / √ get you invited by the head of personnel (passive)**. He is always drunk.

The Person Case Constraint in (8) unifies the ban on 1st/2nd/SE accusative clitics in the context of a dative clitic and of a dative *à*-phrase causee alike. They arise through the intervention of an applicative dative between a [+person] clitic and its accusative Agree/Case locus *v* (Rezac 2007). Causee *à*-phrases are by far the clearest instantiation of the configuration in (8)/(9), repeated here:

- (9) $v > \text{DAT} > \text{GACC [+person]} > \text{is } c\text{-command}$
*Agree/Case

Because the causee dative represents the agent of the embedded verb, it can be securely pegged between the direct object and the *v* of the matrix clause, (57)a. The theory of the PCC in (8)/(9) then predicts that it should give rise to the PCC, whether clitic or *à*-phrase. Other dative *à*-phrases seen so far have been either indirect objects, which may or must stand in the prepositional construction below the direct object, or applicative datives that either cannot be *à*-phrases at all or whose position is unclear. We may exclude the possibility that causee *à*-phrases create the PCC through a silent clitic that doubles them. (65) demonstrates that the causee *à*-phrase fails to license floating quantifiers, as both overt dative clitics and morphologically deleted accusative clitics do (see (14), (40)). Thus causees create the PCC both as dative clitics, and as undoubted *à*-phrases.

- (65) Elle a (*tous_i) fait (*tous_i) manger (*tous_i) la tarte aux enfants_i.
 she has (*all) made (*all) eat (*all) the cake to.the children
 She made the children (*all) eat the cake.

The behaviour of dative causees-agents of active transitives makes for a nice contrast with that of *par/de* 'by'-phrase agents of passives. *Par*-phrase agents are invisible to the PCC, as in (64). The passives of some verbs also admit *de* 'of' phrase agents, which may cliticize as the genitive clitic *en* (Kayne 1975: 238; often only literary). Both *de*-phrases and *en*-clitics are also invisible to the PCC, (66), unlike *à*-phrases and dative clitics in (63). It is natural to introduce all these agents above the direct object, perhaps in [Spec, *v*PP] (cf. Collins 2005, Goodall 1997, Watanabe 1997: 3.4.1, Mahajan 1994). The differences lie in PP structure.

Par/de-phrases and genitive clitics are full PPs like locatives on the diagnostics in Section 4.2. They host unfocussed strong pronouns, fail to license floating quantifiers, and are inert for the PCC. Their full PP also prevents them from participating in the clausal relationships discussed for (60)–(62), such as the antecedence of anaphora. For all these phenomena, dative *à*-phrases and clitics are transparent PPs. Their PP is defective. Section 4.7 returns to the theory of this difference between PP types.

- (66) Paris_i tombe amoureux d'Hélène_j, s'_j' en_i fait aimer,
 Paris falls in.love of Helene SE GEN makes love,
 s'_i' en_j fait accompagner, et l'_j installe à Troie.
 SE GEN makes accompany and her.A installs at Troy
 Paris falls in love with Helene, makes her (*en*) fall in love with him, makes
 her (*en*) follow him, and installs her in Troy.
 (literary; * with *lui* or *à lui* for *en*)

4.5.4 Connaître-class Causee Datives

There is a handful of verbs that appear to contravene the generalizations so far, mostly *connaître* 'know' and *voir* 'see', as in (67). They combine 1st/2nd/reflexive accusative clitics with causee *à*-phrases but not with dative clitics, and they permit the PCC repair by strong pronouns and locative clitics.³⁰

- (67) a. Jacques vous/se fera connaître / voir à ses chefs.
 Jacques you/SE.A will.make know / see to his bosses
 Jacques will get **his bosses** to see/become aware of you/himself.
 b. On pourrait vous faire voir/connaître à ELLE mais pas à LUI.
 one could you.A make see/know to her but not to him
 One could get HER but not HIM see/become aware of you.
 c. *Jean me leur a fait connaître.
 Jean m' y a fait connaître.
 Jean m' a fait connaître à eux.
 Jean made *them.D (*leur*) / LOC (*y*) / them (*à eux*) know me.A (*me*).
 ((a) Postal 1989: 4, adapted; (b), (c) resume (30), (29))

According to the PCC in (9), dative *à*-phrases that do not create the PCC should be either too high or too low to intervene between *v* and the direct object. Postal (1989) undertakes a detailed study of the *connaître* class of verbs, and

³⁰The repair by strong pronoun is subject to an independent factor. Some do not allow even focussed *à* + strong pronoun to code causees, while others do (Postal 1981: 312, 1984: 122, 1990: 174; Kayne 1975: 296 note 24, 298 note 25). Those that do not then also do not allow the repair. Most speakers surveyed do allow such causees; on the questionnaire, 9/10 speakers report it as natural or only slightly unnatural in their French. Similarly in (63)a, replacing *à Ilse* with *à NOUS* 'to US' gives rise to variation, although it is less commonly good.

shows that precisely these verbs allow a special low position for *à*-causees, below the direct object, and require it when the direct object is a 1st/2nd/reflexive accusative clitic. One of the reflexes of this that Postal uncovers is in control into *sans* ‘without’ adjuncts, (68). Their controller can be the transitive subject but not the direct or indirect object. Causees also can control, including for the *connaître* class. However, when the *connaître* class combines a 1st/2nd/reflexive accusative clitic with an *à*-phrase causee, the causee loses the capacity to control.

- (68) a. Cela *les* fera connaître/choisir à Hervé_i (sans PRO_i le regretter).
That will make Herve_i know/choose *them.A* (without PRO_i regretting it).
- b. Cela *vous* fera connaître/*choisir à Hervé_i (*sans PRO_i le regretter).
That will make Herve_i know/*choose *you.A* (*without PRO_i regretting it).
(Postal 1989: 95f.; %)

The causee of the *connaître*-class ceases to have the prominence to control into adjuncts precisely when there is a 1st/2nd person accusative clitic. The relevant notion of prominence has been argued to be c-command at LF (Landau 2010: 8.1; cf. Legendre 1989a: 771 note 23, 777 note 26). Thus the *à*-phrase causee of the *connaître* class escapes the PCC because it can be lower than regular *à*-causees, below the direct object, as (9) predicts. These low causees may be prepositional datives, but there are other options, such as low applicative datives in the minimal domain of the direct object. The possibility is lexically limited, and not shared even by other experiencer-agent verbs like *aimer* ‘like, love’.³¹

4.5.5 Experiencer Datives

The behaviour of regular causees is found also with another applicative dative, the experiencer of the verb *falloir* ‘need’. *Falloir* has a unique structure in French, (69). It is a transitive with an accusative direct object or theme, a dative experiencer, but an expletive subject, in violation of Burzio’s Generalization.

³¹Postal (1989) develops a battery of other diagnostics, such as the binding in *La psychiatrie a fait (se) connaître Marcel à lui-même* ‘Psychiatry made know Marcel_i to himself_i = made Marcel know himself’ (Kayne 1975: 372). They seem persuasive, but the details are complex, and the judgments on them and on (68)a turn out to vary across speakers who yet share the exceptionality of the *connaître*-class in allowing 1/2/SE.ACC clitics. It may be that some speakers analyze *à*-causees in the *connaître*-class quite differently, essentially as adjuncts; the use of *à*-phrases for agents in Middle French bears keeping in mind (Zink 1997: 277). An interfering factor in evaluating Postal’s examples are the facts about 3.ACC animate clitics in note 29.

- (69) a. Il faut ces gens à mon amie (pour l'aventure).
 b. Il *les* faut à mon amie
 c. Il *les* *lui* faut
 it them.A her.D needs these people to my friend (for the adventure)
 My friend/she needs these people (for the adventure).

The meaning of the experiencer of *falloir* suggests an applicative dative, like that of psych-unaccusatives such as *manquer* 'miss, be missing', rather than a prepositional indirect object. It is confirmed by various diagnostics; for instance, in (70) the theme can bind into the *à*-phrase dative with ditransitives, but not with *falloir* (cf. Postal 1989: 9, 37f., 50, 1990: 171f., Legendre 1989a, Herschensohn 1992, 1999, Landau 2010: 8.1, Roberge and Troberg 2007: 316f.).

- (70) a. J'ai décrit Philippe à lui-même.
 I have described Philippe to him-self
 b. *Il faut Philippe à lui-même
 it needs Philippe to him-self

(Postal 1990: 171f.)

When the theme of *falloir* is a 1st/2nd person accusative clitic, the PCC prevents the dative experiencer from being a clitic, (71). As for other applicative datives, there is no repair. For many speakers, a 1/2.ACC clitic is also incompatible with an *à*-phrase experiencer, (72). It has been suggested that a covert dative clitic doubles the *à*-phrase and creates the PCC (Anagnostopoulou 2005: 231 note 2). This is disproved by the failure of floating quantifiers to be licensed, (73). Rather, the *à*-phrase itself counts for the PCC.³²

- (71)[¥] a. *Il *vous* (*lui/y*) faut (à lui)
 it you.A him.D/LOC needs to him
 b. %Il faut cela à LUI plus impérativement qu'à elle.
 it needs this to him more imperatively than to her
 (Postal 1990: 172; (b) given there as *, but ok for some)

- (72) (Cette fille,) il *la/*te* *lui* faut.
 (Cette fille,) il *la/*te* faut à mon ami.
 this girl it her/you.A him.D needs to my friends
 This girl, my friend/he needs her/*you.

(cf. Kayne 1975: 241 note 47)

³²Some do allow *à*-phrases with 1/2.ACC clitics, although not *à* + strong pronoun under focus or the PCC repair: see Postal (1990: 172) in (71) vs. Kayne (1975: 241 note 47). Both grammars occur among the speakers surveyed here. Similar variation for the PCC in Basque unaccusatives reflects high vs. low datives (Rezac 2008c, forthcoming, Albizu 2009).

- (73) Il *la/*te* *leur_i* a (tous_i) fallu.
 Il *la/*te* a (*tous_i) fallu aux enfants_i.
 it her/you.A them.D has all needed to.the children
 They all / *all the children needed her.

4.5.6 Overview

The behaviour of dative *à*-phrases bears out the theory of the PCC in (9) applied to the applicative-prepositional distinction (19). Indirect objects of ditransitives can or must be in the prepositional construction below the direct object as *à*-phrases, where they do not participate in the PCC. As clitics, they pass through an A-position between *v* and the direct object, and here they do create the PCC. Applicative datives do not have recourse to the prepositional construction. They are between *v* and the direct object and always participate in the PCC. Causees are expected to show this pattern most clearly, and do, because their structural position is clear.

All datives are defective PPs. The PCC repair strengthens them to full PPs in the prepositional construction, similar or identical to locatives. These have the capacity to host unfocussed pronouns, are immune to the PCC, but also bar their DP from participating in various clausal relationships. Among them are applicative relations like causee or possessor, so the repair is unavailable to them. Section 4.7 explores further the nature of PPs and the effect of the repair.

The syntactic character of the information accessed by the PCC and its repair bears emphasis. A dative clitic does not wear on its sleeve whether it corresponds to an indirect object or causee, yet this information is crucial for the repair. Nor is there a simple superficial reflex of applicativity that could be referred to. Some applicative datives are barred as *à*-phrases, and more as *à* + focussed strong pronouns, yet this is by no means always so when they are barred from the repair. The *y*-repair does not use *à*-phrases at all and shows the same restrictions. In contrast, the opaque cliticizations of Chapter 2 are superficially similar to the *y*-repair, but affect all datives indiscriminately, as befits morphology³³.

³³The inspiration of the present analysis in that of Couquaux (1975) has been stated, but it is likewise indebted to that of Postal (1990), which ends up being different. Instead of there being arguments that must be realized in the applicative (GR3) rather than prepositional construction (GR5) and this constraining PCC repair, Postal proposes that applicative datives (GR3) like possessors cannot lower (demote) to the prepositional construction (GR5), which is proposed to be a special construction associated with PCC contexts and focus. The empirical divergences come down to different status attributed to minor and/or variable patterns: possessor and benefactive *à*-phrases, inclusion of reflexives (but see Postal 1989: 50), the PCC repair in *connaître*-class causatives (out for his consultant), the *y*-repair in double-dative causatives (Section 4.7), and the complex domain of the causatives of raising verbs (note 58).

4.6 Irreparable Problems

4.6.1 Introduction

One last element of the PCC repair remains to be established: its specificity to the PCC. The PCC blocks 1/2/SE.ACC + DAT clitics, and the repair licenses an otherwise unavailable unfocussed strong pronoun dative. In so doing, the repair may be responding to the PCC itself, or simply to the unavailability of a clitic only incidentally due to the PCC. It is essential to decide between the two possibilities.

If the repair is licensed by the unavailability of a clitic, it fits very general ‘blocking’ or ‘competition’ approaches where a given structure becomes available whenever a more optimal one is blocked. A good analogy is Williams’ (1997: 579) view of the English comparative alternation. *More* + adjective is available only if adjective + *-er* is not. The constraints that block the latter are heterogeneous: adjective length (*quicker*, **rapidier*), morphology (*participle + *-er*: **doner*, **spenter*), and phonotactics or lexical arbitrariness where the morphophonological properties of *-er* seem relevant (*fatter*, **gladder*, **apter*). It seems that *more* + adjective refers directly to the unavailability of adjective + *-er*, rather than restate these constraints. Bonet (1994), Grimshaw (2001), and Cardinaletti and Starke (1999) have proposed that clitics ordinarily pre-empt strong(er) pronouns, but the latter emerge when clitics are unavailable. In the logic of these approaches, the strong pronoun of the PCC repair does not make reference to the PCC, but simply to the unavailability of a clitic for any reason (see further Section 5.3).

Blocking of this sort captures well the character of the repair as the response to a problem. However, it fares ill in its generality, for the repair turns out to be specific to the PCC. French presents context after context where dative and accusative clitics are unavailable, yet unfocussed strong pronouns are likewise barred. Ineffable structures are the result. This section examines them. First come those that would create clitic clusters surface-identical or close to those barred by the PCC: multiple dative clitics, arbitrary gaps, mediopassive *se* + dative clitics. Next, those where a cliticization site is absent or unreachable: DPs, modifiers, causatives, coordinations and modifications. In none does the unavailability of a dative or accusative clitic permit an unfocussed strong pronoun in its place, nor can the locative clitic substitute for a dative in the *y*-grammar. The PCC remains as the sole context licensing unfocussed strong pronouns for dative or accusative arguments. The theory of the PCC repair must account for this fundamental fact. Modularity will prove to play a key role, both in the discussion below, and more generally in the final analysis of Chapter 5.

4.6.2 Multiple Dative Clitics

Clitic climbing may bring together several dative clitics, as in (74) where a raising verb with a dative experiencer embeds a small clause with a dative of

its own. The outcome is not tolerated by any for 3.DAT + 3.DAT clusters, by some only for 1/2.DAT + 3.DAT, while 1/2.DAT + 2/1.DAT clusters are intermediate. When such clusters are rejected, the PCC repair is impossible, (75), both in its strong pronoun and locative clitic incarnations (Couquaux 1975: 53, Kayne 1975: 175, Tasmowski 1985: 259 note 12, Rezac 2010a).

- (74) a. Ils *me* semblent t_{me} [SC t_{ils} [AP fidèles aux manifestants]].
 b. %Ils_i *me leur_{k/*i}* semblent t_{me} [SC t_{ils} [AP fidèles t_{lui}]].
 they me.D them.D seem faithful to.the demonstrators
 They seem to me faithful to the demonstrators/%them.
- (75) a. Elle *me* semble infidèle à Jean-Jacques
 b. *Elle *me te* semble infidèle
 c. ?*Elle *me* semble infidèle à toi
 she me.D you.D seems unfaithful to Jean-Jacques / you
 She seems to me unfaithful to Jean-Jacques/*you.
 (Kayne 1975: 175, cf. Postal 1990: 177)
- d. ¥ *Paul *me leur* semble reconnaissant.
 e. ¥ *Paul *m' y* semble reconnaissant (, à ses amis).
 f. ¥ ?*Paul *me* semble reconnaissant à eux
 Paul me.D them.D/LOC seems grateful to them to his friends
 Paul seems to me to be grateful to them (his friends).
 (Couquaux 1975: 53, 71 note 11)
- g. *Paul *lui leur* paraît antipathique/sympathique/désagréable.
 h. *Paul *lui* paraît antipathique/sympathique/désagréable à eux.
 Paul seems to her to be unpleasant/sympathetic/unpleasant to them.

The multiple dative clitic clusters created by raising overlap with those ruled out by the PCC on the surface, because 1st/2nd person clitics are syncretic for dative and accusative. Only the PCC clusters license the repair. Perhaps the problem with multiple dative clitics is a syntactic one distinct from the PCC (Postal 1981, 1983, 1984). However, the variation among speakers and its pattern suggest a morphological ban on the repetition of identical features, strongest for 3.DAT + 3.DAT, weakest for 1/2.DAT + 3.DAT (Rezac 2010a:160). If so, it belongs outside syntax, and a syntactic repair will not see it by modularity.³⁴

³⁴The other context where multiple datives are brought together is in causatives; see Appendix 1. Either a syntactic or a morphological account would extend to the mechanism suggested there. In raising like (74), both the datives brought together must be disjoint from the matrix = embedded subject, unlike in the ECM and causatives structures of Appendix 1.

4.6.3 Arbitrary Clitic Cluster Gaps

There are other clitic cluster gaps that belong to the morpho(phono)logy. Two would be fixed by the PCC repair because they involve dative or accusative clitics. They are discussed in Rezac (2010a), which the following discussion resumes. One is the absence of ?*3SG.DAT + LOC *lui y* [(l)ɥii] for many speakers, in contrast to ?3PL.DAT + LOC *leur y* [lœɥi], (76) (cf. Miller and Monachesi 2003: 3.4, Morin 1981: 99 note 6, Couquaux 1975: 50, Blanche-Benveniste 1975: 77f., 85, Herslund 1988: 60f., 320f., De Kok 1985: 368, Grevisse and Goosse 2008: 682.3°, Martín 2009). Phonological hiatus plays a role, but perhaps only by exacerbating a morphological feature similarity of the dative and locative clitics, while factors like subcategorization attenuate it. Where *lui y* is ungrammatical, an unfocussed strong pronoun for the dative remains impossible. The PCC repair does not respond to this gap, in contrast the PCC, in (77).³⁵

- (76) C'est parce que le nid protège ses petits_i / son petit_i que
- | | | | | |
|----|-----------|-------------------------|----------|---|
| a. | l'oiseau | <i>leur_i</i> | <i>y</i> | donne à manger. |
| b. | l'oiseau | | <i>y</i> | donne à manger *à eux _i / EUX. |
| | the bird | them.DAT | LOC | gives to eat to them / THEM |
| c. | *l'oiseau | <i>lui_i</i> | <i>y</i> | donne à manger. |
| d. | l'oiseau | | <i>y</i> | donne à manger *à lui _i / LUI. |
| | the bird | him.DAT | LOC | gives to eat to him / HIM |
- Because the nest protects its young, the bird feeds them/*him/HIM there.
(Rezac 2010a: 164)

- (77) C'est parce que son petit_i a faim que
- | | | | |
|----|-----------|-----------------------------|-------------------------------------|
| a. | *l'oiseau | <i>nous lui_i</i> | donne à manger. |
| b. | l'oiseau | <i>nous</i> | donne à manger à lui _i . |
| | the bird | us.A him.D | gives to eat to him |
- It's because his youngling is hungry that the bird gives us (worms) to him to eat. (PCC)
(Rezac 2010a: 164)

A similar gap degrades 3SG.ACC + LOC *l'y*, beside good 3PL.ACC LOC *les y* (Heggie and Ordóñez 2005: 12f.). It may arise as a morphological garden path interpreting the 3SG.ACC LOC combination as 3SG.DAT, and again factors such as subcategorization for a locative eliminate it. A strong accusative pronoun for the clitic is strictly impossible, perhaps in contrast with the PCC repair (34).

³⁵The questionnaire results are clear about the impossibility of the strong pronoun. Speakers split on *lui y*, half perceiving the gap or only mildly, half sharply. *Leur y* is always better, but some do find it degraded. The results bear out Morin (1981: 99 note 6), Rezac (2010a: 163–9).

- (78) Maï voulait de nos hérissons / notre hérisson, mais c'était embêtant de
 (les/le) lui donner à la boutique. C'est parce que c'était calme au bar qu'
 Maï wanted our hedgehog(s), but it was difficult to given him/them to
 her at the shop. It's because it was calm at the bar that
 On *les/??l'* *y* a donnés à Fañch.
 *on *y* a donnés eux/lui à Fañch.
 one them/??him.A LOC has given them/him to Fañch
 We gave them/??him to Fañch there.
- (Rezac 2010a: 168)

The irreparability of morphological clitic cluster gaps follows from modularity if they are outside syntax, since the PCC repair occurs in syntax. By modularity syntax cannot see arbitrary gap any more than license, say, pronouns whose agreement exponent contains /k/ (Baker's 1996: 204f. example).

4.6.4 *Mediopassive se* + *Dative Clitic*

The clitic *se* in French is systematically multifunctional, as in Romance, Slavic, and elsewhere. As a 3.ACC reflexive, it is subject to the PCC and its repair along with 1/2.ACC clitics. In striking contrast stands *se* as a mediopassive formant. It too fails to combine with dative clitics, but no repair is available.

The two PCC repairs with the true reflexive 3.ACC *se* are shown in (79). Reflexive *se* may also be 'inherent' or idiomatic with certain verbs (Section 4.3). It behaves then the same for the PCC and its repair, (80) (cf. Chapter 6).

- (79) a. L'étrange Frédérique séduit les gens_i sans *se* donner à eux_i.
 The strange Frédérique seduces people_i without giving *herself*.A to them_i.
 b. [¥] Paul s'_iy_i/*lui_i est finalement imposé, à sa femme_i.
 Paul finally imposed *himself*.A LOC_i/*her.D_i, on his wife_i.
 (*reflexive se*, (a) = (24)a, (b) Couquaux 1975: 40)
- (80) a. Elle vit dans un apart avec deux chats_i
 *sans *se* leur *en* prendre.
 sans s'_i *en* prendre à eux_i.
 without SE them.D GEN take to them
 She lives in an apartment with two cats without taking it out on them.
 b. [¥] Paul s' *y* est attaqué / heurté / plaint
 Paul SE LOC has attacked / run.into / complained
 Paul attacked her, ran into her, complained to her.
 (*inherent reflexive se*, (b) Couquaux 1975: 43)

The mediopassive *se* forms constructions that are superficially identical with reflexive ones, but wholly different in syntax and meaning (further discussed

below). The sentence *Elles se voient de loin* ‘They.NOM SE see.3PL from far’ has a reflexive reading, ‘They see themselves (each other) from afar’. It also has a mediopassive reading, ‘One sees them from afar’, where *elles* is the thematic object and the agent is a silent but syntactically active impersonal ‘one’. In French, both the reflexive and mediopassive *se* + dative clitic are strongly ungrammatical. However, for the mediopassive *se* there is no PCC repair, (83).

- (81) Bien sûr qu’Azenor_i aime danser, mais
 Of course Azenor_i likes to dance, but
 ça ne *se* dit pas , c’est tout.
 *ça ne *se* lui_i dit pas , c’est tout.
 ça ne *se* dit pas à ses parents / ELLE_{i/k} / *elle_i, c’est tout.
 That NEG SE her.D says not to her parents / HER / her that’s all
 But one does not say that (to her parents / HER_{i/k} / *her_i), that’s all.
 (Rezac 2010a: 174)

The reflexive-mediopassive contrast is striking, since the clitic clusters are superficially identical. It has been established for both the strong pronoun and *y*-repair: see Blanche-Benveniste (1975: 214–9), Blanche-Benveniste et al. (1984: 107), Kayne (1975: 398), Postal (1990: 167). The following examples are drawn from this literature. They ensure that *à*-phrases and locative clitics are independently available; it is the PCC repair that is not.

- (82) *Reflexive + dative*:
 a. *se* vendre / confier / imposer à lui
 SE sell / confide / impose to him
 to sell / confide / impose oneself to him
Mediopassive + dative:
 b. Ca s’ écrit (*à lui).
 c. Ca s’ écrit à lui mais pas à elle.
 d. Ca ne s’ écrit qu’ à lui.
 that NEG SE writes than to him but not to her
 One does not write that to {*him} / {✓him but not her} / {✓him alone}.
Mediopassive + locative:
 e. Ca s’ ajuste à lui.
 that SE adjusts to him
 One adjusts that to him.
 (Blanche-Benveniste 1975: 214–9, Blanche-Benveniste et al. 1984: 107)
- (83) *Mediopassive in y-grammar* (cf. reflexive (80)b)
 a. [¥] Un tel mensonge ne *se* dit pas à Louise.
 b. [¥] *Cela ne s’ y dit pas , à Louise.
 such a lie/this NEG SE her.D/LOC says not to Louise
 One does not tell Louise (a) such a lie / (b) this.
 (Postal 1990: 167f.)

Because of the interest of this minimal reflexive-mediopassive difference, more contextualized and more minimal pairs follow. The strong pronoun dative with the reflexive is perfectly natural on a purely anaphoric reading. In the mediopassive, it is only possible under semantic focus, for instance if it contrasts with contextually available alternatives. Sometimes this difference translates to one of prosodic accentuation on the strong pronoun. Particularly 1st/2nd person datives stand out, which also prefer clitic-doubling under focus (note 10). However, even unfocussed strong pronouns in French are not deaccented (Section 4.3), so the anaphoric strong pronoun of the PCC repair and the focussed one of the mediopassives may both appear to have the same prosody, as *à eux* in (86). Yet the interpretive invocation of alternatives in the mediopassive remains clear.³⁶

(84) *Reflexive (or anticausative, see below):*

a. Le parc et les jardins s'ouvrent **aux visiteurs** de 10 heures à 19 heures.
The park and the gardens open *themselves* to the visitors from 10 o'clock to 19 o'clock.

b. L'affiche informe les visiteurs_i que le parc et les jardins s'ouvrent à eux_i de 10 heures à 19 heures.
The notice informs the visitors_i that the parc and the gardens open *themselves to them_i* from 10 o'clock to 19 o'clock.

(reflexive or anticausative + dative, see note 38)

c. La banque considère qu'un crédit, ça ne s'ouvre pas comme ça **aux étudiants**, il faut garantir l'emprunt.

The bank holds that a line of credit, *one* does not open it **to students** just like that, it is necessary to guarantee the loan.

d. Les étudiants se plaignent qu'un crédit bancaire, ça ne s'ouvre pas comme ça à EUX/*à eux, il faut garantir l'emprunt.

The students are complaining that a bank credit, *one* does not open it to THEM/*to them just like that, it is necessary to guarantee the loan.

(mediopassive + dative)

(85) Vous vous plaignez que le lait s'achète

You complain *one* buys milk

a. **aux agriculteurs de vos régions** à des prix ridicules.
from the farmers of your districts at ridiculous prices.

b. *à vous à des prix ridicules
from you at ridiculous prices.

c. %à VOUS à des prix ridicules (, alors qu'on le revend aux DISTRIBUTEURS à profits.)

%from YOU for ridiculous prices (while one sells it to REDISTRIBUTORS at profit).

(mediopassive + dative)

³⁶The results of the questionnaire are telling: (86)c and (86)d are consistently perfect or close, (86)e sandwiched between them profoundly degraded.

- (86) Depuis le début de la polémique, les paysans_i se plaignent
 Since the start of the polemic, farmers complain
 a. qu'on *leur_i* achète le lait à des prix ridicules.
 that one buys milk *them_i*.D_i (=from them) at ridiculous prices.
 (transitive + dative)
 b. que les médias s'attaquent à *eux_i* tous les jours.
 that the media attack + *se to them_i* every day.
 (inherent reflexive + dative)
 c. que personne ne s'associe à *eux_i* dans les manifestations.
 that no one associates *himself to them_i* in manifestations.
 (true reflexive + dative)
 d. que les médias {s'intéressent à *eux_i*} / {parlent d'*eux_i*} quasiment tous les jours.
 that the media interest *themselves to (=in) them_i* / speak *of them_i*
 nearly every day.
 (locative + dative/genitive)
 e. ?*que le lait s'achète à *eux_i* à des prix ridicules.
 that *one* buys milk *to (=from) them_i* at ridiculous prices. (Ok if
 alternatives to 'them' available, e.g. redistributors who get better prices.).
 (mediopassive + dative)

The irreparability of mediopassive *se* + dative clitic clusters indicates that the PCC repair is not simply the response to the unavailability of a clitic. Further consequences depend on understanding the ban on mediopassive *se* + dative clitic and its contrast with reflexives. Despite superficial identity, reflexive and mediopassive *se* structures differ profoundly, along the lines of (87) (Pollock 1998, D'Alessandro 2004, Reinhart and Siloni 2005, Zribi-Hertz 2009, Medová 2009).

- (87) a. Reflex.: EA_{NOM} T_{NOM} [vP *t*_{EA} v_{ACC}(... DAT ...) [V SE_{ACC} ...
 b. Med-pas.: O_{NOM} T_{NOM} [vP *pro*/SE v(... DAT ...) [V *t*_O ...

In the reflexive (87)a, the nominative is agreed to come from [Spec, vP] (through such diagnostics as the impossibility of genitive clitic subextraction). The nature of the object is less clear. For certain purposes such as inversion constructions, *se*-reflexives behave as unergatives rather than transitives (Medová 2009: 4.3–4). So however do transitives with idiomatic objects (Kayne 1979). These diagnostics appear to show the absence of an independent theta-role for the object. On the other hand, there is present an accusative Agree/Case relation with the object. This object surfaces overtly when reflexive *se* clitic-doubles nondislocated phrasal anaphora, as in (88) (Ruwet 1990: 75f., Kayne 2000: Chapter 8, Labelle 2008). In Spanish where the accusative is overtly marked, they are accusative (Torrego 1995, Zagana 2006: 187). Thus the reflexive *se* and/or the element it doubles gets accusative Case from *v*, but

shares a theta-role with the subject in the various ways proposed in the literature. The *se*-anaphora are [+ person], so if a dative intervenes between v_{ACC} and them, the PCC arises, and is repaired.³⁷

- (88) Elles *se*_i voient elles-mêmes_i / l'une l'autre_i (quitter leur pays, se pétrifier à mesure qu'elles avancent).
 They *SE*_i see themselves_i / each other_i (leaving their country, petrifying as they advance).
 (reflexive but not mediopassive reading)

In the mediopassive (87)b, [Spec, vP] is occupied by a silent agent, *pro*_{arb}, detectable by interpretation, control, and adverbs. The overt subject originates in the direct object position (for diagnostics such as genitive clitic subextraction). This position cannot be filled by any other element, as (88) indicates. v does not assign accusative, and the direct object agrees with and gets Case from T_{NOM} .

It is not clear what problem arises in the mediopassive when a dative clitic is added. The dative clitic should pose no PCC-like problem for the relationship between T_{NOM} and the object, since it does not do so in unaccusatives and passives. Perhaps somehow the PCC occurs between the generic *pro* and the dative clitic in (87)b, but it is not clear then why the PCC repair is impossible (yet see Section 5.7). Alternatively, mediopassive *se* + dative clitic is ruled out by a different constraint, perhaps a morphological one (Mendikoetxea 1992). This is suggested by Romance variation. Occitan varieties permit mediopassive *se* + dative, while blocking reflexive *se* + dative (Ronjat 1937: §792 vs. §798, De Kok 1985: 384). Spanish varieties seem to exhibit mismatches in the opposite direction (reflexive *se* + dative clitic good, Rivero 2004: 498 note 3, with variation, Albizu 1997a: note 12; mediopassive *se* bad, Mendikoetxea 1992: 319f., but see Mendikoetxea 1999: 26.4.2.3, Fernández-Ordóñez 1999: 21.2.1.6). French alone prevents all kinds of *se* from combining with dative clitics, not only the reflexive and mediopassive, but also the anticausative and others (contrast Ronjat 1937: §798 for Occitan, Cuervo 2003a: 3.2.2, 4.2.2 for Spanish). It may be that *se* + dative clitic is subject to a sweeping morphological gap in French, perhaps with diachronic origins in the exclusion reflexive *se* + dative clitic by the PCC (Rezac 2010a: 174).³⁸

³⁷Medová (2009: 4.4) shows that in Czech *se* contrasts with phrasal reflexives in combining with nominative rather than accusative secondary depictives. This may be explained if the antecedent of secondary depictives must have an independent theta-role: the subject, not *se*.

³⁸For recent overviews of the types of *se* constructions in Romance and elsewhere, see Cuervo (2003a), Dobrovie-Sorin (2005), Medová (2009). Mediopassive *se* superficially resembles but is distinct from anticausative *se*, which derives unaccusatives from transitives by eliminating the external argument, *casser* – *se casser* 'break (the wind broke the branch) – break (the branch broke)'. It is incompatible with a dative clitic, but the PCC repair cannot be tested, because the optional dative added to them is applicative and so irreparable: *la branche se* (**me*) *cassé* (**à moi*) 'the branch broke (*on me)', *la tête se* (**me*) *cassé* (**à moi*) 'the/*my head broke' (*se me* good here e.g. in Spanish, Occitan, Czech). More uncertain are similar-looking structures from ditransitives, like *La question s'est posée à ma génération* 'The

4.6.5 Datives in DPs and APs

The next set of cliticization failures have nothing to do with clitic clusters. Certain domains neither have a cliticization site, nor permit clitics to move out of them: DPs, AP modifiers, and coordination and modification structures. An unfocused dative or accusative pronoun trapped inside is ineffable.

Nouns may take dative arguments, yet do not offer a cliticization site, nor can clitics escape them. Nevertheless, Kayne (1975: 185 f.) observes that unfocused pronoun datives cannot be strong pronouns, (89), unlike in the PCC repair.

- (89) a. [Ta réponse à Jean-Jacques / *nous] a été parfaite.
 Your reply to Jean-Jacques / *us was perfect.
 b. [Sa fidélité à ses parents / *eux] est bien connue.
 His devotion to his parents / *them is well known.
 (Kayne 1975: 185)

question posed itself to my generation', *Le paysage s'est offert à nos yeux* 'The scenery offered itself to our eyes', where the PCC repair is fine, *La question s'est posé à moi* 'The question posed itself to me' (Kayne 1975: 398 note 65). The English translations does not correspond to plain anticausatives, of the type *the gates opened to us*, but rather to the reflexive type *the gates opened themselves to us* (Fellbaum 1989, Levin 1993: 84f.). These have a Case-marked reflexive and so are not simple unaccusatives (cf. Rothstein 1992), yet the nominative is the thematic object and so presumably derived. For French the low origin of the nominative can be ascertained, because the subject in (i) is compatible with the 'subnominal' genitive clitic *en* that is only combinable with unaccusative and not transitive or unergative subjects (Pollock 1998, Boivin 2005 and references there).

- (i) Ils_i sont heureux d'agir en accord avec l'Angleterre, quand l'occasion s'en offre à eux_i.
 They_i are glad to act in accord with England, when the opportunity GEN=of.it (en) presents itself.A (se) to them.D_i (à eux)_i'.

The type *the opportunity presents itself* thus has a promoted object in French but accusative reflexive in English. This mix recalls object-experiencer psych-transitives like *frighten*, *strike* on the analysis where the nominative theme raises from below the accusative experiencer (Belletti and Rizzi 1988, Pesetsky 1995). If *itself/se* is accusative, the PCC and its repair can occur as in regular transitives and reflexives. The relationship of the nominative and accusative/*se* is unclear. One might seek a solution along the lines of Alboiu, Barrie and Friggeni (2004) where *se* is the Case-marked trace of the nominative.

On unification of reflexives and anticausatives through 'reflexivization-by-movement' reviewed and developed in Medová (2009), (i) the external argument raises to [Spec, vP] from the thematic direct object position, sharing a theta-role, and (ii) *se* is or signals an element that blocks accusative assignment to it. Here (i) is irrelevant, and other devices such as a special anaphoric *pro*/PRO would do, while (ii) would be accomplished by *se* absorbing the accusative of v_{ACC}, say as Medová's antipassive applicative + an anaphoric *pro*/PRO in its specifier, or as the Case-marked trace of the raised object, with overt anaphora like *each other* adjoined to it. The crux is keeping the mediopassive *se* sufficiently distinct for the PCC and its repair.

Adjectival and participial modifiers also do not have a cliticization site, save for past participles in Belgian French which permits *une lettre [nous adressée]* ‘a letter us.D addressed’ (Grevisse and Goosse 2008: 662b4°). Adjectives like *redevable* ‘indebted’, *destiné* ‘meant for’, require an overt dative in the appropriate meaning, but an unfocussed pronoun cannot be realized, (90), (91).

- (90) a. Pour que les contraventions de Pauline sautent, il lui faudrait au moins un policier redevable à sa famille / *à elle.
In order to get rid of Pauline’s violations, she will need at least one policeman grateful to her family / *to her.
b. Pour que nos contraventions sautent, il nous faudrait au moins un policier redevable à notre équipe / *à nous.
In order to get rid of our violations, we will need at least one policeman grateful to our team / *to us.
- (91) [L’aide destinée à vous tous / à VOUS / *à vous / *pour vous] est prête.
the help intended to you all to YOU to you for you is ready
(for *à vous tous*, see on modifiers below)

DPs and AP modifiers are strong islands without a cliticization site. That leaves unfocussed pronoun datives without the possibility of cliticization, like PCC contexts, yet it does not license unfocussed strong pronouns.

There are exceptions. Among the speakers surveyed here, all find the sharp ungrammaticality indicated in (90), but most judge 3rd person unfocussed dative strong pronouns in reduced relatives like (92)a unproblematic. Postal (1990: 4.5) likewise finds this to be the sole context where strong pronoun datives are fine provided they are not applicative, (92)b³⁹. Also good are inanimates, (92)c, despite the general oddity of strong animate pronouns (Cardinaletti and Starke 1999, Zribi-Hertz 2000). 1st/2nd person pronouns remain to be properly investigated, but to the extent they have been, they are out even in reduced relatives, (91).

- (92) a. Quand Ricardo_i avait été élu directeur,
When Ricardo_i had been elected director,
un ami [très attaché à lui_i] était venu nous parler.
a friend [attached to him] came to speak to us.
b. la voiture achetée à elle
the car bought from her / *for her
c. L’infinitif_i [. . .] a été très long à admettre un complément atone
préposé à lui_i.
The infinitive [. . .] took long to admit an atonic complement preposed to it.D_i.
(b) Postal 1990: 151, (c) Grevisse and Goosse 2008: 662b4°)

³⁹Postal does not control for focus here, but it remains that reduced relatives pattern with the PCC repair against other non-PCC contexts, focus aside. His examples use only 3rd person.

For some speakers only, the availability of 3rd person strong pronouns extends to passives, (93)–(94). Here cliticization is available for all speakers, and for most but not all preferred to the strong pronoun. There may be two different structures involved: a participle opaque to cliticization in (93)b that allows strong pronouns like participles in reduced relatives, and a transparent one in (93)a that requires cliticization. 1st/2nd person datives again remain to be investigated properly, but appear to prefer or require cliticization far more forcefully.

- (93) Bien sûr que je connais bien ton copain_i.
Of course I know your friend_i well.
a. Je *lui_i* ai été présenté par Ricardo lui-même
b. %Je ai été présenté à lui_i par Ricardo lui-même.
I him.D_i have been introduced to him_i by Ricardo himself.
- (94) a. Vous *lui* serez présenté (par Philippe).
b. ?*Vous serez présenté à elle (par Philippe).
You her.D will.be introduced to her by Philippe
(Postal 1990: 123)

It is not clear to me what to make of these patterns. Postal collapses the reduced relatives with the PCC repair, and the theory developed here in Chapter 5 could be extended in this fashion by positing a Case problem in them. Yet the hints of the role of person and animacy of the dative point perhaps rather to the dative-locative alternations of French verbs like *répondre* 'respond' discussed in Section 4.2 (note 7 and text apposite). It may be that in some grammars, the derivation of opaque past participles selects locatives whereas the finite verb selects datives, partially according to person/animacy, analogously to the coding switch in English *thank you* vs. *thankful to you* (cf. perhaps for nouns Kayne 1975: 186).⁴⁰

4.6.6 Coordination and Modification

A clitic cannot participate in a coordination or modification structure, because it can neither cliticize in it, nor move out of it as a strong island, (95).

- (95) a. *Il *vous* parle/ennuie (à) *t_i* et (à) moi.
he you.D/A speaks/bothers to and to me
He speaks to (+ dat) / bothers (+ acc) you and me.

⁴⁰See Grevisse and Goosse (2008: 662b4°) for apparent *à* + strong pronoun dative arguments of nouns, adjectives, participles. Most involve either focus, as in comparison, or uses now strictly literary that hark back to an older French where the Cliticization Requirement does not hold of datives (Zink 1997: 273–285): *un cheval à lui inconnu* 'a horse to him unknown'. Distinct are adnominal *à*-phrases, *un copain à moi* 'a friend to me.D (= of mine)', *un gâteau à framboises* 'a cake to (= with) raspberries', which are full PPs with no Cliticization Requirement.

- b. *Il *vous* parle/ennuie t_i (à) deux.
 he you.D/A speaks/bothers to two
 He speaks to (+ dat)/bothers (+ acc) you two.

The unavailability of clitics does not lead to the grammaticality of unfocused strong pronouns, unlike the PCC, as pointed out by Blanche-Benveniste (1975: 103) and Kayne (1975: 2.17, 2000: 9.7, 180 note 29). (96) illustrates this.⁴¹

- (96) a. *Bien sûr qu'elle_i est dans le quartier. J'ai vu [elle_i et son_i chien] se promener ce matin.
 Of course she is in the neighbourhood. I saw [her and her dog] walking about this morning.
- b. ??Qu'est-ce que tu veux dire que les garçons_i connaissent pas mon père?! Bien sûr qu'ils le connaissent. Je l'ai présenté [à eux_i et à leurs_i copains] LA SEMAINE DERNIERE ENCORE.
 What do you mean that the boys don't know my father? Of course they know him. I introduced him [to them and to their friends] JUST LAST WEEK. (Ok with focus on *à eux*.)
- c. Qu'est-ce que tu veux dire que tu_i connais pas mon père?! Bien sûr que tu le connais. Je t'ai présenté [à lui_i et à ses_i copains] LA SEMAINE DERNIERE ENCORE.
 What do you mean that you don't know my father? Of course you know him. I introduced you [to him and to his friends] JUST LAST WEEK. (PCC repair)

Among modified strong pronouns, (97), accusatives are impossible, locatives are perfect along with other PPs, while under neutral intonation datives vary with the modifier for reasons to be understood (Kayne 1975: 177–9).⁴²

⁴¹The contrast in (96) is clear in the questionnaire, (96)c being close to perfect for the most part, (96)b mostly not part of the speaker's French at all, although not as severely degraded as some other strong pronouns. There is a confound: for some, even accusative strong pronouns are good unfocused in lists, as *J'ai vu elle, Pierre, Claire, et Jean-François arriver* 'I saw her, P., C., and J.-F. arriving'. There seems to be a nice explanation available. A coordination *I saw X and Y arriving* may be read as *I saw X and Y together arriving* or as *I saw X arriving and I saw Y arriving*. In the latter, X and Y are alternatives to each other for *I saw __ arriving*, and thus each may have focus semantics, licensing strong pronouns. The examples in the text are chosen to favour the collective reading. The examples in Grevisse and Goose (2008: §660–1) are telling: coordinated accusative pronouns are lists or foci, coordinated nominative ones not necessarily.

⁴²It is curious that *tous* can be a floating quantifier, *deux* can if preceded by the definite article (for some), and *autres* cannot: *Elle vous_i en offrira à tous_i / %aux deux_i / *a(ux) autres* 'She you.D GEN will offer to all / to the two / *(to the) others'. Perhaps there is a link to be made between the modifier types and the semantics of floating quantifiers (Bobaljik 2003, Fitzpatrick 2006).

considered here, clitics are not available, and therefore clitic-doubling also is not. Among them all, the PCC alone lets unfocussed strong pronouns take over. It may be that among clitic-doubled structures, doubled strong pronouns must be focussed if alone but not if coordinated; but that is an independent mystery to solve.

4.6.7 *Datives in Causatives*

Causatives are the last case of irreparable cliticization failure. The restructuring causative with its clitic climbing has been introduced in Section 4.5. Under certain circumstances, a dative argument of the causativized verb cannot cliticize in this structure. Yet, it cannot assume the form of an unfocussed strong pronoun either, as Kayne (1975) points out in comparison to the PCC repair.

The structures of interest are causatives of unergatives with a dative argument, like *téléphoner* ‘telephone’. In the relevant pattern of causativization, the unergative subject becomes an accusative causee. The dative argument then cannot cliticize, but it also cannot be an unfocussed strong pronoun: Kayne (1975: 4.3), Postal (1981: 313 f., 1984: 122), Tasmowski (1985: 316).⁴⁵

- (99) a. La nouvelle a fait téléphoner Jean à Marie-Claire
The news made telephone Jean to Marie-Claire..
b. La nouvelle (**m'*) a fait téléphoner Jean (**à moi*)
The news made Jean telephone (**me.D* / **to me*).
c. Cette nouvelle (**nous*) *l'* a fait téléphoner (**à nous*)
This news made *him.A* telephone (**us.D* / **to us*).
d. Cette nouvelle *nous* (**lui*) a fait téléphoner (**à lui*)
This news made *us.A* telephone (**him.D* / **to him*).
e. On *la* fera répondre aux policiers.
We will make *her.A* reply to the police.
f. On *la* (**leur*) fera répondre (**à eux*).
We will make *her.A* reply (**them.D* / **to them*).
(Kayne 1975: 4.3)

⁴⁵ECM has the same pattern, less sharply (Kayne 1975: 305 f.): see Appendix 1. Unergatives may alternatively causativize as if transitive, with a dative causee, with variation (note 27). Dative causee *à*-phrases of this transitive pattern also bar cliticization of a dative internal argument, cf. (61). The use of *à* + unfocussed strong pronoun for it is then also bad, but the baseline of comparison has two dative *à*-phrases, causee and indirect object, unhappy enough as it is. To avoid these problems, some speakers (only) and in some cases (only) may use the mixed causative, on which see note 27 and references there.

- (i) L'amie de Claire_i *les* (**lui_i*) fera porter au postier (**à elle_i*/?*à ses_i* collègues).
Claire_i's friend will have the postman bring them (*les*) (*to her_i (*lui/à elle*)/??to her_i colleagues).

- (100) a. Ces gens_i vont être bien surpris. Ilse a promis de leur envoyer un SMS pendant le spectacle, mais je *la* (**leur_i*) ai fait TELEPHONER (*à eux_i*) pendant la séance.
 These people_i are going to be quite surprised. Ilse promised to send them_i an SMS during the show, but I made *her.A* CALL **them.D* / **to them* during the séance.
- b. Paul voulait faire une blague à Maï en l'appelant pendant le spectacle. Mais on a trouvé plus drôle: je l'ai fait téléphoner *à EUX* pendant la séance.
 Paul wanted to play a joke on Maï by calling her during the show. But we found a better joke still: I made *her.A* call *to THEM* during the séance.
 [Pointing to the town councillors, accompanying Maï.] (*focus control*)

It is not agreed what the problem is in (99)/(100), and so what it is that the PCC repair cannot fix. A part of it is that infinitives lack a cliticization site, but the failure of clitic climbing into the matrix clause has proven more recalcitrant. Kayne (1975: 4.3) analyzes it as the Specified Subject Condition, partly because the accusative causee also creates a new binding domain (Kayne 1975: 3.9). However, in Specified Subject Condition effects in transitives (61)–(62), the dative causee blocks dative and adverbial cliticization unless it cliticizes. In the causatives of unergatives, the accusative causee only blocks dative cliticization, (101), and worse if it cliticizes, (99)f (Milner 1982: 354 note 1, Tasmowski 1985: 360; Baschung and Desmets 2000: 216 report the reverse).

- (101) Le directeur *y*/**leur* a fait répondre Lucille.
 the director LOC/**them.DAT* has made answer Lucille
 The director made Lucille answer to it/**them*.
 (Postal 1984: 141; cf. Kayne 1975: 301, 306)

These differences have given impetus to alternatives, through syntax (Postal 1984, Goodall 1987, and others reviewed in Tasmowski 1985), thematic meaning (Rooryck 1988b), and pragmatics (Tasmowski 1985, Miller 1992: 5.5). A key piece of evidence has been unaccusatives, (102). They also causativize with accusative causees, but do not block dative cliticization (Kayne 1975: 4.6, Blanche-Benveniste et al. 1984: 201, Tasmowski 1985, Rooryck 1988b; cf. note 58). The subject of unaccusatives originates in the object position. If it stayed there in causatives, it would not count as a Specified Subject (Burzio 1986: 4.5; and inversely, Postal 1984). However, Tasmowski (1985: 356–360) discovers that in certain contexts even unergatives permit dative cliticization, as in (103) which puts narrow focus on the accusative causee *Marie*.⁴⁶

⁴⁶The causativization of unaccusatives is more complex than suggested here. Beside (102), some applicative datives are also fine, *Elle lui a fait couler de la crème dessus/sur le visage* 'She made cream run on *him.D* / on *his.D* face' (Kayne 1975: 319f.), but experienter datives are more recalcitrant, e.g. *manquer* 'lack', (*dé*)*plaire* '(dis)please', *suffir* 'suffice', *sembler* 'seem' (Postal 1984: 115f., 1989: 37f., Rooryck 1988b, Legendre 1989a: 771, 1989b: 143–7), as are

- (102) Je *lui* ferai parvenir votre lettre.
 I him.D will.make reach your letter
 I will make your letter reach him.
 (Tasmowski 1985: 281)
- (103) Que faire pour amadouer le patron? Lui écrire? Lui faire téléphoner?
 Mais par qui? **Moi, je *lui* ferais téléphoner MARIE.** Elle est fine, elle le connaît bien, elle saura quoi lui dire.
 What to do to soften the boss's heart? Write to him? Make someone phone him? But who? **I would get MARY to phone *him.D (lui)*.** She is subtle, she knows him well, she'll know what to tell him.
 (Tasmowski 1985: 360; my emphasis)

This observation might be integrated into a syntactic account by supposing that the narrowly focussed subject of (103) undergoes A'-movement and thereby no longer counts as a Specified Subject, or that the narrow focus reading coerces the verb into an unaccusative-like structure. Instead, Tasmowski proposes that the problem in causativizing unergatives is pragmatic. A conflict arises because both the dative clitic and the agent-causee want to be identified as the topic. There is no conflict if the clitic is not dative, (101), or the causee not an agent, (102), and it is resolved if the causee-agent is the focus rather than the topic, (103)⁴⁷.

The options seem open. On syntactic accounts, causatives are an environment where the absence of a cliticization site and a clitic climbing failure cannot suspend the Cliticization Requirement, unlike the PCC. On pragmatic accounts, the PCC repair cannot respond to an extrasyntactic problem in interpretation, just as it cannot respond to morphological clitic cluster problems in realization. Another such interpretive problem has already been seen: Condition B in Section 4.4.

unaccusatives with animate subjects and low datives, *appartenir* 'belong', *échapper* 'escape', *naître* 'be born', *survivre* 'survive' (Kayne 1975: 252 ff., Tasmowski 1985, Rooryck 1988b, Legendre 1989b: 146, Landau 2010: 3.7, Folli and Harley 2007: 213).

⁴⁷Tasmowski's proposal has far greater scope than the causativization of unergatives, including cliticization failure in transitives due to the Specified Subject Condition, and the PCC created by dative causees in Section 4.5. For the PCC, it fails for various reasons, such as the contrast between the PCC 1/2.ACC 3.DAT clusters and good 1/2.DAT 3.DAT clusters (Postal 1981, 1983, 1984, 1990; cf. Tasmowski 1985: 362 note 7), and the non-cancellability of the PCC by dative *à*-phrase through manipulating information structure in the manner of (103), shown in (64). Similarly the Specified Subject Condition cliticization failure in transitives like (61) seems precisely inverse to the effect predicted for locative clitics, Tasmowski (1985: 356–61).

4.6.8 The Weak PCC

There may be an argument for the specificity of the PCC repair to the PCC that inverts the logic hitherto: the repair ‘overapplies’ on clitic clusters that should fall under the PCC but do not. Bonet (1991: 4.1.1) observes that some Romance varieties tolerate 1/2.ACC + 2/1.DAT clitic clusters while still barring 1/2.ACC + 3.DAT. She names this the *weak PCC*, in contrast to the *strong PCC* that rules out all 1/2.ACC DAT clusters. Thus, there have been French varieties reported to accept (*)*Elle me t’a présenté* ‘She introduced *me.A* (*me*) to *you.D* (*te*)’ but not **Elle me lui a présenté* ‘She introduced *me.D* (*me*) to *him.D* (*lui*)’ (Heger 1966: 28f., Ashby 1977: 76, Simpson and Withgott 1986: 160 note 6, Schwegler 1990: 99, Laenzlinger 1993: 257 note 14, Nicol 2005: 159f.). Most French varieties in the literature, and all accessible to me, strongly reject them (Kayne 1975, Blanche-Benveniste 1975, Couquaux 1975, Laenzlinger 1993). The weak PCC is said to be more common in Spanish, Catalan, and Italian.

Yet it would appear that the PCC repair only sees the strong PCC even in grammars with the weak version, so that even when *Elle me t’a présenté* is fine, so are the repairs *Elle m’a présenté à toi* and *Elle m’y a présenté* with the repair. Bonet (2008: 125 note 5) makes this point for the Catalan analogue of the *y*-repair, and hints occur for both repairs in the literature on French (Schwegler 1990: 99, 229 note 53) and for the strong pronoun repair in Italian (Bianchi 2006: 2042).

This state of affairs may be indicative of the nature of the weak PCC. The strong-weak PCC split has been taken to reflect different options for person Agree (Anagnostopoulou 2005, Nevins 2007). The idea is attractive not least because the subject_{EA}→object_O person hierarchy interactions of Chapter 3 also sometimes treat 1/2_{EA}→2/1_O differently from 3_{EA}→1/2_O (see further Section 3.4, 5.9). However, Ormazabal and Romero (2007: 332–4) and others mount a strong case that, in some Spanish and Italian grammars at least, the weak PCC is a mirage:

- For clitic-doubling, one of the clitics in the weak PCC clusters does not behave as an argument but rather as the nonargumental ‘ethical’ dative.
- The relaxation of the strong PCC is available to an idiosyncratic set of verbs in Spanish, e.g. *enviar* ‘send’ and not *mandar* ‘send’. Kempson and Chatzikyriakidis (2008) find the same for Italian, along with arbitrary choice of tense.
- The clitic clusters tolerated by the weak PCC are not all 1/2-2/1 combinations, but an idiosyncratic subset: frequently, *te me* ‘you(SG) me’ but not **me te* in Spanish and Catalan, inversely in French, beside **vous nous* ‘you(PL) us’ in all three languages (cf. Rivero 2008 on Spanish, Laenzlinger 1993: 257 note 14 for French, and for Italian, Evans et al. 1978: 160, Bianchi 2006: 2040, and esp. Cardinaletti 2008). Speakers who tolerate Spanish *te me presento* ‘you me introduced’ and its Catalan analogue vary

This view dovetails with the irreparability of morphological clitic cluster gaps. The repair reveals which clitic cluster restrictions and possibilities belong to the syntactic PCC, and which ones elsewhere. It holds promise for understanding the weak PCC and the mixed person-number restrictions of Nevins (2007), Nevins and Săvescu (2008), much as has been discussed for the syntactic correlates of morphological subject-object interactions in Chapter 3.

Cardinaletti and Starke (1999) develop a system where the unavailability of clitics or weak pronouns in a given syntactic context or for a given meaning should automatically free up strong pronouns. Their conclusions repose above all on subject weak-strong alternations like (104): strong pronouns are not available when weak ones will do, but emerge under focus or coordination.

- There may indeed be a net contrast in coordinations between strong pronouns for weak ones and strong pronouns for clitics, as already pointed out by Blanche-Benveniste (1975: 103). It does not yet follow that there is syntactic competition between strong and weak nominatives. Kayne (2000: Chapter 9)

⁴⁸For similar variation with French multiple dative clitics, see Nicol (159f.), Miller (1992: 265).

demonstrates that strong nominatives do not become automatically available when weak ones are not. One possibility is that the apparent strong forms in coordinated and modified nominatives are syntactically identical to weak ones and the difference resides in spell-out (with further nuances, e.g. only [+human] weak pronouns might have strong forms). Another possibility is that French unfocussed nominatives like datives and accusatives must be weak/clitic pronouns by the Cliticization Requirement, and the appearance of unfocussed strong pronouns in nominative coordinations (104) arises from the existence of silent 3rd person nominative weak pronouns, perhaps reflected in agreement, in the same manner that overt object clitic doubling allows unfocussed strong pronouns in coordinations (98) (cf. Kayne 2000: Chapter 9). It remains to be understood why simple strong nominatives cannot be unfocussed. At any rate, nothing can be concluded from it about undoubled strong object pronouns, which only the PCC licenses⁴⁹.

⁴⁹The discussion of Cardinaletti and Starke (1999) entails that Italian object clitics behave like French nominative weak pronouns in (104), and other literature hints at the same without controlling for focus, e.g. for the *3SG.DAT LOC *gli ci* (= *lui y*) clitic gap (Wanner 1977: 109 note 9), or SE + dative in enclisis (Cardinaletti 2008: 4.7). Italian object clitics would on this point behave like French weak pronouns rather than French pronominal object clitics. The literature reaches a similar conclusion on other grounds, some resumed below (García 2001: 412–4). They do not suggest that Italian clitics are weak pronouns, but closer to them than French clitics are. Better understanding might come from the diachrony of the French object clitic – strong pronoun alternations, which was not always as restricted as it is now (Zink 1997).

- (i) The greater clitic-doubling of focussed strong pronouns in Spanish and French than in Italian (García 2001: 412–4), beside the general impossibility of doubling by weak pronouns (Cardinaletti and Starke 1999: 169). Italian clusters where clitics seem poorer in undergoing morphological fusion may also be those that allow clitic doubling (Section 2.2).
- (ii) The exclusion of the PCC clusters 1/2.ACC + DAT from Old French on, independently of the changing ordering of clitics (De Kok 1985, Zink 1997), versus their availability in even recent Italian, for some with sensitivity to order (Wanner 1977: 109, Evans et al. 1978, Renzi and Cardinaletti 1988: 588 f., García 2001: 412–4, Cardinaletti 2008: note 40). The PCC is variable or absent for Germanic weak pronouns and Slavic second position clitics (Anagnostopoulou 2008, Rezac 2010c).
- (iii) The greater immunity of Italian clitics to constraints on clitic climbing in causativization than those of French and Spanish, e.g. datives in causativized unergatives in Section 4.6, or animate 3rd person objects in causatives in note 29 (García 2001; cf. Burzio 1978: 23–5, Postal 1984: 143 vs. Santorini and Heycock 1988: 51, Baschung and Desmets 2000: 216).

4.7 The PCC, the Repairs, and the Nature of Datives

The following elements of the PCC repair have been established:

- **The Cliticization Requirement:** Unfocussed pronoun datives and accusatives must be clitic, unlike locatives and genitives, and unlike other PPs that have no clitic version. The requirement operates whether cliticization is available or not, save in the PCC context.
- **The PCC:** *1/2/SE.ACC clitics + applicative datives (clitics, *à*-phrases).
- **The PCC repair:** In the PCC context, unfocussed pronoun datives are *à* + strong pronoun, or in the *y*-grammar the locative clitic *y*. Accusatives cannot be affected (save when the dative is inherent *se*).
- **The repair yields (full) PPs:** Both forms of the repair can only express datives that may be prepositional, not those that must be applicative.
- **The repair is syntactic:** The strong pronouns of the repair have the syntax and interpretation of strong pronouns, as found independently in focussed datives and in locatives, not of clitics. Other properties of the repair confirm its syntactic character, including reliance on the applicative-prepositional distinction and operation at a distance from the clitic cluster. The 1st/2nd/reflexive – 3rd distinction that conditions the repair is therefore syntactic.
- **Irreparable problems:** Beside the syntactic PCC, cliticization may fail due to extrasyntactic restrictions on the morphology of clitic clusters, the interpretation or pragmatics of clitics, or the absence of a cliticization site and islandhood constraints on clitic climbing. None of these problems can be repaired by a strong pronoun or *y*, unlike the PCC.

These conclusions suggest a certain view of the repair. Let us adopt the following as starting points:

- The PCC arises in the context (8)/(9) of the Agree/Case approach.
- Datives may stand in the prepositional or applicative constructions (19).
- Dative clitics must pass between *v* and the direct object in cliticizing.
- Dative PPs are defective, unlike locative and other full PPs, leaving them incapable of licensing unfocussed pronouns but also transparent to various clausal relations like floating quantifier licensing and applicative relations. The theory of PP types is elaborated further below.

Applicative and clitic datives stand between *v* and the direct object, (105)a, unlike prepositional datives, (105)b. There they create the PCC for 1/2/reflexive accusatives, which are always clitic by the Cliticization Requirement (unless focussed, to which we return). The repair seems to turn dative defective PPs into full PPs, like locatives. Thereby, they acquire the properties of the latter: they are capable of licensing unfocussed strong pronouns; they are invisible to the PCC; they are unavailable to applicative relations like possession. The last property means that the repair is restricted to indirect objects.

Presumably both true locatives and repaired indirect objects are below the direct object in (105)b, but we would expect the same behaviour of full PPs above it, since it is the full PP structure itself prevent the PCC and other clausal relations, even for the high full *par/de* ‘by’ PPs of Section 4.5. The repair is detectable only for pronouns, through suspending cliticization. However, non-pronominal indirect objects may be viewed as undergoing the repair as well, since they would keep the same form both as prepositional dative *à*-phrases and as repaired locative-like *à*-phrases. PCC repairs in other languages will be seen to apply to all datives in Chapter 5.

- (105) a. PCC: ν DAT_{applicative/clitic} *1/*2/*SE/ $\sqrt{\quad}$ 3.ACC (t_{DAT})
 b. Other: ν (PP_{full}) $\sqrt{1}/\sqrt{2}/\sqrt{\text{SE}}/\sqrt{3}.$ ACC (DAT_{prepositional/PP_{full}})
 where PP_{full} is a PP autonomous of / invisible to clausal Agree/Case

This view of the PCC repair originates with Couquaux (1975), who argues that the repair turns dative pronouns into locative ones if they need not be applicative. Locative *à*-phrases stand in a close relationship to dative *à*-phrases. Locatives differ in licensing unfocussed pronouns, and in the absence of the variety of applicative uses like possessors. On both points they pattern with other full PPs that have no pro-PP clitics. Locatives may thus be viewed as the full PP elaborations of the poorer, defective PP structure of datives, in a way specified further below. When the PCC repair allows a dative unfocussed pronoun to be strong rather than clitic, it creates something very close or identical to a locative.⁵⁰

It is then unsurprising that the result of the repair can cliticize in the *y*-grammar as the locative clitic *y*. *Y* cliticizes unfocussed locative PPs. Its invariant form suggests that it only cliticizes locative pronouns or adverbs without phi-features, as on Kayne’s (2008) proposal that *y* corresponds to *there-of_P*. Supporting evidence comes from the capacity of *y* but not strong pronouns to pick up genderless elements like the infinitive in (106), and *y*’s resistance to human and 1st/2nd person referents except through the mediation of verbs like *penser* ‘think’ (note 7). The PCC repair creates unfocussed locative-like PPs. However, the content of the PP is a pronoun with phi-features, since it comes from a dative, and datives always have phi-features as both strong and clitic pronoun datives show. Hence the parameter that allows the *y*-grammar to cliticize the outcome of the repair as *y* may be the capacity of its *y* to cliticize locatives with phi-full pronouns (Rezac 2010c).

- (106) L’infini_i? Je me prends à [sourire]_j.
 Qui songe à lui_i/_j, en ce temps de mécanisme? (strong)
 Qui *y*_{i/j} songe, en ce temps de mécanisme? (clitic)

⁵⁰The view of the repair as creating locatives is traditional, Gaatone (1984: 124 f.), cf. Grevisse and Goosse (2008: §662.b.2°–3°, 678.2°), and shared by Blanche-Benveniste (1975: 208).

The infinite_i? I find myself smiling_j. Who dreams of $\hat{a}$ it_{i/*j} (*strong*) /
 LOC_{i/j} (*clitic*), in this time of mechanism?
 (Zribi-Hertz 2000, ex. 23; %)

The next step is to understand the Cliticization Requirement, its relationship to the dative-locative difference, and how the repair overcomes it in PCC contexts. The rest of this section addresses the first point and prepares ground for the second. To it the next chapter turns, in French and cross-linguistically.

The Cliticization Requirement is modelled by the following assumptions, partly building on Cardinaletti and Starke (1999) and discussed below:

- French pronouns are: (i) Case-deficient, as all DPs; (ii) Prosodically or Σ -deficient, unlike other DPs and focussed pronouns.
- CPs, full PPs (and focussed DPs) are phases (Chapter 5): complete domains for various systems, including Case and Σ -licensing, (107). Pronouns Case/ Σ -licensed by the CP surface as dative/accusative clitics in the CP. Those Case/ Σ -licensed by the PP surface as strong pronouns in the PP, (cliticization of the PP itself in the CP yields pro-PP clitics).
- Dative $\hat{a}$ -phrases and clitics are defective PPs in not providing Σ -licensing at least; Case-licensing is discussed below.

- (107) a) [CP ... Case/ Σ _{licensing} ... pronoun($\rightarrow$ clitic)]_(complete licensing/binding domain)
 b) [PP ... Case/ Σ _{licensing} ... pronoun($\rightarrow$ strong)]_(complete licensing/binding domain)

A major difference from Cardinaletti and Starke (1999) is that the absence of Case/ Σ -licensing on pronouns is immutable, save by the PCC repair. The failure of cliticization, or the needs of meaning, do not enrich the structure of pronouns to provide Case/ Σ -licensing independent of the CP.⁵¹

⁵¹Short shrift is given here to focussed pronouns. Following Cardinaletti and Starke (1999), they have their own Σ -licensing, and perhaps Case-licensing at least for person in (31), albeit fixed by their focus structure/content rather than given by last resort; they might then be PP-like phases. Having Case-licensing would not prevent them from participating in the Agree/Case system of the clause if some of their phi-features (number, for instance) project outside the phase by Agree with the phase-head (Section 5.2, Rezac 2008a; for the number but not person agreement of focussed nominatives, cf. Kayne 2000: Chapter 9). Zribi-Hertz (2008) takes focussed dative and accusative pronouns to be adjuncts to clitics in Case position, building on Kayne's (2000: Chapter 9) generalization that pronouns in Case-positions must be cliticized or clitic-doubled; but this is not true for all the French grammars considered here (note 10). An alternative is that focussed pronouns are clitic-doubled when the focussed DP is a big-DP structure containing a clitic that must move out, and this is a property parametrizable by person and case (Uriagereka 1995, Belletti 1999, Cecchetto 2000 and references there). Postal (1990) takes dative focussed pronouns to have transformed to a locative (cf. Kayne 2000: 166 for topicalized datives). All of these approaches provide a start on explaining why focus often blocks applicative relations for $\hat{a}$ + focussed strong pronoun, if it yields phases, adjuncts, or locatives.

The Case and Σ -deficiency of pronouns distinguishes clitics from other DPs. All DPs need Case and participate in the Agree/Case system. In French, case morphology only appears on clitics, but verb and participle agreement differentiate nominatives from accusatives, and DPs are subject to the Case Filter.⁵² A need other than Case drives dative and accusative pronouns to cliticize to T in the CP: Σ -deficiency. Its character is suggested by comparison with Germanic weak pronoun movement (Johnson 1991, Holmberg and Platzack 1995, Lasnik 1999, Thráinsson 2001, Anagnostopoulou 2003: 7.3–4). Across Germanic, different A-positions between the VP and T are available to or required of different DP types. Weak pronouns target the highest one, next to T, as in Icelandic (108). However, they do not attach to T, while French clitics do and follow T in T-to-C movement, (109). Plausibly, French clitics move through the same A-positions as Germanic weak pronouns, (110), along the way triggering participle agreement, licensing bare preverbal floating quantifiers, and participating in the PCC. From their final landing site they attach further to T (Chomsky 1995: 249, Sportiche 1996: 244, Matushansky 2006). This step is cliticization proper, and satisfies the Σ -deficiency of French unfocused pronouns. It has been viewed as morphophonological (Matushansky) or syntactic (Sportiche). Section 5.7 returns to the question, favouring a morphophonological requirement and attachment.

- (108) a. Jón las_{T+V} (ðað/bókina_i) líklega (*ðað/?bókina_i) aldrei $t_V t_i$.
Jón read it(weak)/the.book probably never
b. Samt las_{C+T+V} (*ðað) Jón t_{T+V} (ðað) ekki
Yet read it(weak) Jón not
(Icelandic, Jónsson 1996: 55)
- (109) a. Elle (*les*) avait_T (tous) lu-s_V (**les*).
b. Elle (**les livres*) avait_T (*tous) lu(*-s)_V (*les livres*).
she them.A/the books had all read-PL them.A/the books
c. *Les-avait*_{T+C-elle} (tous) lus_V?
Has she read *them.A* all?
(French)
- (110) Elle *les_i-avait*_{T+V+V} ... t_i *tous_i* ... t_i [_{VP} lu-s_i t_i] (= (109)a)

It is unclear whether there is a relationship between Case and Σ -licensing and deficiency, or to put it differently, how the Cliticization Requirement relates to Case. In Cardinaletti and Starke's (1999) system, the functional category for Case-licensing is higher in the functional architecture projected from N than that of Σ -licensing, so N that needs external Σ -licensing also needs external

⁵²For the Case Filter, see [Section 5.4, 5.9](#). Spanish and Basque are closely parallel to French in the PCC and PCC repair, but display accusative/absolutive Case overtly on nonpronominal DPs.

Case-licensing, but not vice versa. Similarly, Kayne (2000: 165) proposes that structurally Case-marked pronouns in French must be cliticized or clitic-doubled and includes nominatives, accusatives, and datives. French locative and genitive pronouns are not discussed in detail in these works. They seem wholly outside the Case system, yet they too cliticize to T. Two views seem reasonable for them. On one, they are Case- and Σ -deficient units that host phi-less pronouns, which do not need Case-licensing because they are phi-less, but need to satisfy their Σ -deficiency by cliticizing in the clause. On the other, they are full PPs with their own Case- and Σ -licensing for their pronoun, perhaps still phi-less, and cliticize by a different mechanism than dative and accusative clitics ones, for which there is some evidence (see note 11 and Appendix 1). That leaves one entity in which the relationship of Σ - and Case-deficiency can be inspected: datives.

Examination of datives leads first to a more articulated view of PP types. Datives occur in the applicative structure above the direct object, where they create the PCC, and in the prepositional structure below it, where they do not, (105). For all datives, floating quantifiers show that $\hat{a}$ -phrases behave like PPs but clitics like PPs or DPs, while inertness for Case and agreement indicate that both $\hat{a}$ -phrases and clitics are PP rather than DP-like (Section 4.2). Since all unfocussed pronoun datives must cliticize, dative $\hat{a}$ -phrases in the applicative and prepositional construction alike fail to meet the Σ -deficiency of pronouns, in contrast to locative $\hat{a}$ -PPs. Let us take all dative $\hat{a}$ -phrases to have a PP structure defective for Σ -licensing, P_{DAT} , while locative have $\hat{a}$ -phrases a full PP structure, P_{LOC} . In nonclitics, both P_{DAT} and P_{LOC} surface as $\hat{a}$. In locative clitics, either the full P_{LOC} or its Case/ Σ -deficient version is present, according to the two options, so that locative clitics have no DP-like behaviour because of their full P_{LOC} or because their pronoun lacks phi-features. The P of locative clitics amalgamates with the (phi-less) pronoun as y , (III)a. In dative clitics, something like P_{DAT} is needed to account for their PP behaviour as well. We may suppose them to have the same P_{DAT} as $\hat{a}$ -phrases, which amalgamates with the pronoun to give dative clitics. DP-like behaviour of dative clitics for floating quantifiers arises if D rather than P_{DAT} projects, (111)c (cf. Rouveret 2010: 255, Stowell 1989: 325f.; Chomsky 2008: 145f.), or if the P_{DAT} of clitics is still poorer than that of $\hat{a}$ -phrases (e.g. containing Den Dikken's 2006v P_{DAT} but not Relator).⁵³

⁵³I use P for both the elements traditionally called preposition and oblique case, differentiating their *syntactic* behaviour by richness of the feature or structural content of P, independently of its morphological realization (Rezac 2008a). The presence and properties of P_{DAT} can accommodate various theories of its insertion. I speak as if it is present on the dative DP from its base-generation onwards, but it seems to make no difference for the present view if P_{DAT} is a clausal functional head attached to the DP through movement (Kayne 2004, cf. 1993, Bianchi 2006: 2045). The greater richness of locatives than of datives is a common proposal in the literature, founded on the Cliticization Requirement, floating quantifiers, and applicativity (below), as well as less secure grounds (q.v. Roberge and Troberg 2007). It is distinct from differences among full PPs, like immunity to Condition B in *Kate_i looked at her*(self)_i / around her(self)_i*, dependent on the context of the PP (Büring 2005: 11.3.2, Zribi-Hertz 2003, 2008).

- (111) a. locatives: [PP/P P_{LOC} D_(phi-less) pronoun]
 b. dative à-phrases: [PP P_{DAT} DP]
 c. dative clitics: [P P_{DAT} D_{pronoun}] or [D P_{DAT} D_{pronoun}]
 where P_{LOC} but not P_{DAT} provides Σ-licensing

P_{DAT} is thus weaker than P_{LOC} in not providing Σ-licensing. The difference between the defective P_{DAT} and all other PPs for Σ-licensing (the Cliticization Requirement) as well as other properties may be construed through the phase theory of Chomsky (2000a et seq.). Phases are categories whose complement undergoes spell-out to LF/PF, after which it is invisible to syntax and an independent LF/PF unit. They provide all the licensing required by the spelled-out object in syntax, PF, and LF. The prototypical phase is the full CP. Full PPs are parallel to full CPs in their functional architecture, A'-islandhood, and complete Agree/Case system (Cardinaletti and Starke 1999, Koopman 2000, Abels 2003, Den Dikken 2006a, Rezac 2008a, Bošković 2004a,b). The phasal status of all PPs save datives can bring together the various cases where DPs in datives alone are visible to external relationships (Sections 4.2, 4.5): floating quantifier licensing, antecedence of anaphoric relations like the reflexive *se*, inalienable possession, and secondary predicates, the creation of new anaphor binding domains, and interference in clitic climbing. These all require that some of the content of the dative DP be related to an element lower in the clause, for instance to bind. To them may be added the ability of datives alone to serve in purely applicative interpretations, if these require a relationship to a lower element as well, like the binding by a possessor into the possessum (Section 4.5). All these relationships are blocked for DPs inside phasal PPs like locatives, because they undergo spell-out that severs them from the surrounding syntactic structure. The PCC repair turns a dative into a full phasal PP inaccessible to these relationships, as further developed in Chapter 5.⁵⁴

This returns us to the Case properties of datives. Full PPs including PP_{LOC} are invisible to the Agree/Case system: verb and participle agreement, structural Case assignment and licensing, the PCC effects on [+ person] elements. This is expected by their phasehood. Their P head or functional architecture has no phi-features, and the DP is licensed inside the phase and inaccessible after its completion. Such PP phases correspond to the typical PPs or obliques opaque to Agree/Case cross-linguistically (Rezac 2008a, cf. the inherent case of McGinnis 1998, Chomsky 2000a: 148 note 87). French datives do not participate in agreement and in nominative-accusative alternations, in contrast to accusative clitics, and their P_{DAT} is to be held responsible. Yet they are visible

⁵⁴See Rezac (2010b) for different analyses of floating quantifiers, through Agree/Move (Sportiche 1988) or variable-binding (Fitzpatrick 2006); Landau (1999) and Pylkkänen (2002) for the same alternatives for possessor datives; and Chomsky (2008: 148), Reuland (2001, 2006), Rezac (2010b: note 2) for Agree in the binding of *se*. Not all relationships are sensitive to PP phasehood or c-command, *The chef told the guests about (the ingredients of) every dish_i as it_i was served* (Pesetsky 1995: 172–180, 228ff., Phillips 1996: 44–8; cf. note 12).

Table 4.3 Transitive subjects in causatives and the PCC (see Sections 4.3, 4.5)

	Applicative DAT causee	Prepositional DAT causee	Full <i>de/GEN</i> PP causee
Phrasal	a. *Elle <i>se</i> fera choisir à Paul. She will.make <i>herself.A</i> {a. *choose à Paul} / {b. know à Paul} / {c. like <i>de</i> Paul}.	b. Elle <i>se</i> fera connaître à Paul.	c. Elle <i>se</i> fera aimer de Paul.
Clitic	a. *Elle <i>se lui</i> fera choisir. She will.make <i>herself.A</i> {a. * <i>him.D</i> choose} / {b. * <i>him.D</i> know} / {c. <i>GEN</i> like}.	b. *Elle <i>se lui</i> fera connaître.	c. Elle <i>s'en</i> fera aimer.
Repair	a. *Elle <i>se</i> fera choisir à <u>lui</u> . She will.make <i>herself.A</i> {a. *choose à him} / {b. know à him.}	b. Elle <i>se</i> fera connaître à <u>lui</u> .	-
Repair ^Y	a. *Elle <i>s'y</i> fera choisir. {She will.make <i>herself.A</i> {a. * LOC choose} / {b. LOC know}.	b. Elle <i>s'y</i> fera connaître.	-

to the Person Case Constraint, unlike full PPs and pro-PP locative/genetive clitics, as resumed in Table 4.3. Section 5.7 considers the ways to hide datives from agreement yet let them participate in the PCC. One option is that P_{DAT} lets the clause see datives as [+ person] but hides (some of) their other phi-features. Unfortunately, it is unclear how this or other proposals bear on the Case-licensing of the DP in PP_{DAT} , and thus the Case properties of datives in the clause. Appendix 2 examines one pertinent phenomenon, inconclusively.⁵⁵

The interaction of datives with the clausal Agree/Case system thus remains unclear, beyond their participation in the PCC despite failing to control agreement. The other evidence seen here indicates a contrast between full phasal PPs and PP_{DAT} . Full PPs and CPs are phases that satisfy the Case-deficiency of all DPs, and the Σ -deficiency of pronouns, whether the latter is viewed as morphophonological or syntactic. PP_{DAT} is a nonphasal shell. It lets the DP within relate to the clause, including partially to the Agree/Case system for the PCC, although not as a (full) agreement controller. It does not provide Σ -licensing, leaving the CP to take care of it. This is the Cliticization Requirement. The PCC repair turns PP_{DAT} into a full PP, the locative PP_{LOC} or nearly so. The next chapter starts from these conclusions to develop the mechanism by which the PCC repair can turn a nonphase into a phase in response to the PCC and it alone.

⁵⁵French datives also fail to raise to the [Spec, TP] subjecthood position, but that is presumably independent of their relationship to the Agree/Case system, since datives in languages like Icelandic do so, although they do not agree, change case, but participate in the PCC, like French datives. Some property of P_{DAT} might be the culprit of the Icelandic-French (Icelandic-Basque, etc.) difference, or something about the applicative structure itself (Rezac 2008c).

⁵⁶As in Spanish object-control restructuring configurations, which permit accusative past dative climbing, but not dative past accusative (Rivas 1977).

(115) a. On *la/*vous* *leur* *croit* *sympathique*.
 one her/*you.A them.D believes sympathetic.
 b. *On *nous/se la* *croit* *sympathique*.
 On *nous/se* *croit* *sympathique* Ilse et Xena.
 one us/SE.D her.A believes sympathetic Ilse and Xena

(116) ECM: (cl_{ACC} cl_{DAT}) v believe (cl_{DAT}) [sc ACC X° < [AP faithful DAT]]
(X° a phase head, phase edge boxed)

⁵⁷Speakers with this pattern often find ECM with dative clitic climbing grammatical but difficult to understand; reactions to *On (le) leur croit sympathique (Paul)* ‘One believes *him.A (le) / Paul* sympathetic to *them.D (leur)*’ recall Higginbotham’s (1991: 128) evaluation of *John is too clever to expect us to catch*. The causativization of ECM in *On me la lui a fait croire fidèle* ‘One has made *me.D (me)* believe *her.A (la)* faithful to *him.D (lui)*’ (Postal 1983: 393 note 25), seems more difficult. The reflexive clitic is even more variable, *(*)Elle se (le) croit fidèle (Paul)* ‘She believes *him.A (le) / Paul* faithful *herself.D (se)*’. Speakers vary on the relative badness of 1/2.ACC + 3.DAT vs. 3.ACC + 1/2.DAT clusters, but not consistently. It is difficult to see if the dative clitic licenses a bare floating quantifier, *Je la leur_i aurai tous_i cru fidèle* ‘I would have believed her faithful to *them.D (leur)* all (*tous*)’; judgments become quite uncertain.

some speakers (cf. Rezac 2010a), as it has done in Basque varieties (Rezac 2008c, forthcoming). Examination of the PCC repair in these configurations is difficult.⁵⁸

The reason to allow for the absence of PCC in ECM is the extraordinary grammar reported in Postal (1983: 413f., 1984: 153–8, 1990: 177), citing also Morin (1979c). It is shown in (117). The bare right-dislocated phrase in (117)b ensures that the clitic is accusative. The coindexation is discussed below. This grammar does have the PCC in other simple and complex structures along the lines described in this chapter (e.g. Postal 1990: 176f., 1989). It is thus key evidence about the nature of the PCC, as Postal points out. First, the PCC cannot be a simple morphological ban on clitic clusters, for 1/2/SE.ACC + DAT clusters are legitimate in ECM but not elsewhere. Second, it must be sensitive to something that differentiates ECM from other configurations, like causative (112)b.⁵⁹

- (117) a. Pierre_i {*me lui_{i/k}*} / {*la lui_{k/*i}*} / {*se_i lui*} croit fidèle.
 Pierre me.A him.D / her.A him.D / SE.A him.D believes faithful
 Pierre believes me/her/himself faithful to him.
 (Postal 1984: 156f.)

⁵⁸In ECM (i) Kayne (1975: 305) assigns the nonclitic dative only ?, but counts it with other irreparable datives, comparing *Jean (t')est antipathique (?à toi)* 'Jean (you.D) is unpleasant (?to you)' (p. 306 note 30), cf. *Elle (t')est infidèle (*à toi)* 'She (you.D) is unfaithful (*to you)' (p. 172). (ii) extends (i) to the ECM grammar (115). My inquiries indicate (i) and (ii) are both ungrammatical, if not easy to judge due to the inherent difficulty of ECM. A configuration similar to ECM (112)a should exist for causatives embedding intransitives with a dative argument. There is great variation on the types *faire ACC naître/ressembler DAT* 'make ACC be.born/resemble to DAT', *faire ACC sembler/paraître DAT INF* 'make ACC seem to DAT to INF', as well as on unfocussed strong pronoun datives when cliticization is impossible for various reasons, including PCC-like clusters: see Postal (1983: 414, 1984: 116, 1990: 171f.). My own investigation finds a great deal of variation on and beyond Postal's data; little can be made of it for now.

- (i) a Tout le monde croit Jean antipathique à Marie / ?à toi
 b *Tout le monde *te* croit Jean antipathique
 everyone you.D believes Jean antipathetic to Marie / to you
 Everyone believes Jean antipathetic to you / to Mary.
 (Kayne 1975: 305f.)
- (ii) C'est à cause de leurs_i propos que
 a on *la/te* croit sympathique aux étudiants / à EUX_i / (*)à eux_i.
 b on *la/*te* *leur_i* croit sympathique.
 one her/you.A them.D believes sympathetic to.the students / to them
 It's because of their_i words that we believe her/*you sympathetic to them_i.

⁵⁹I know of no other published source for the Postal-Morin grammar. It is wholly inaccessible to some who allow (115), but others find the result degraded yet in contrast with the PCC, perhaps better for certain choices of adjectives (*C'est à cause de vos écrits qu'on vous leur croit proche*, 'It's because of your writings that we believe you close to them'). Then they have Postal's coindexation pattern indicated in (117) and discussed below.

- b. Pierre *nous_i* *lui* croit fidèle, nous autres communistes_i.
 Pierre us.A him.D believes faithful, us other communists
 (Postal 1984: 153)

In the approach to the PCC here, it is natural to take the immunity of ECM to arise from the accusative > dative c-command in (112)a, with Albizu (1997b). It fits the cross-linguistic pattern discussed in Chapter 5, where dative > accusative structures are subject to the PCC but accusative > dative ones are not, as in Icelandic and Basque. The conundrum posed by French is how to tie the three different ECM grammars together. If the exclusions in (115) are not the PCC, dative cliticization in ECM might generally not yield the PCC.

One intriguing possibility for the ECM patterns is that the grammars with (115)/(117) have a source for dative clitics beyond ordinary cliticization. A specific form of this hypothesis is advanced in Postal (1984: 156–8) in Relational Grammar. Dative clitics ordinarily represent applicative datives, GR3. In certain contexts, dative GR3 demotes to a locative GR5, including ECM. Locative clitics regularly escape ECM for all speakers, (119), usually in the form *y*. Postal posits that in certain contexts they are instead spelled out as dative clitics. Independent support might come from the fact that elsewhere in the grammar Postal describes, datives escape some constraints on pronominal but not locative clitic climbing (Postal 1983: 409f., cf. note 17).

- (118) a. On croit Jean fidèle à ses principes_i / amis_k.
 b. On *y_i* / **leur_k* croit Jean fidèle.
 one LOC / *them.D believes Jean faithful to his principles / friends.
 (Kayne 1975: 306)

In present terms, Postal's analysis would be recast by having the dative clitics in (117) come directly from the prepositional construction, structurally analogous to locative PPs, without passing through the applicative-like position between *v* and the direct object, where the PCC occurs. This faces a problem. Postal (1984: 156f., 134f.) presents the binding pattern in (117)a as evidence that the dative clitic is special. When and only when the accusative ECM subject is 1st/2nd person, the climbed dative can be coreferential with the subject of the clause where it cliticizes, from which other datives are usually disjoint. He persuasively unites this with another paradigm. In the restructuring causatives discussed in Section 4.5, climbed accusatives must be disjoint from the matrix subject, (59)b. Climbed datives differ, (119). Dative clitic climbing in the restructuring causative can only occur when the dative causee is itself a clitic (by the Specified Subject Condition, cf. (62)), and the resulting double-dative clitic clusters are tolerated (1/2.DAT DAT, and only by some). When they are fine, the climbed dative contrasts with the accusatives in (59)b by being able to corefer with the matrix subject, as in (119)a (Morin 1978: 358f., Aoun 1981: 219, Kayne 2000: 23 note 16, 118, Bouchard 1984: 69 note 10, Postal 1983: 401, 1984: 134, Tasmowski 1985: 319f.). On Postal's proposal, the climbed dative in (119)a would have the same

source as in ECM (117)a, a dative demoted to a locative, and so the same binding pattern. However, the rest of (119) belies this hypothesis. Purely applicative datives have the same binding pattern; yet they never have a prepositional or locative-like analysis, barring them from the PCC repair (Section 4.5).⁶⁰

- (119) Julie_i *me la lui_i a fait*
 Julie_i me.D her.A her.D has made
 a. ...envoyer par la poste, la robe.
 Julie_i made *me* send *it* to *her_i* by mail, the dress.
 b. ...mettre dans les bras, la robe.
 Julie_i made *me* put *it* in *her_i* arms, the dress.
 c. ...acheter, la robe.
 Julie_i made *me* buy *it* for/from *her_i*, the dress.

This objection only means that the second dative of 1/2.ACC/DAT DAT clusters in (117), (119) does not come from the prepositional construction. It may still be the case that it cliticizes by a special mechanism that does not interact with the PCC. Suppose that regular cliticization cannot take a dative beyond its own clause in ECM and restructuring causatives, perhaps due to the presence of a local subject, and in contrast to an accusative, perhaps because the latter moves to the edge of its phase (Bobaljik and Branigan 2006: 61f.). The first position of the dative is the embedded clause, where it may be coconstructed with the matrix subject. The grammars with (117) or (119) have a further mechanism to move the resulting dative clitic, akin to weak pronoun or second position clitic placement. The latter two pronoun types do not always participate in the PCC (Section 5.2). This mechanism takes the dative clitics to the upstairs clause in (117) and (119). Whenever regular cliticization is possible, it gets priority because it occurs earlier in the derivation (lower in the structure).⁶¹

⁶⁰Postal also relates the ability of locative clitics to be coreferential with their subject (but contrast Postal 1990: 148 and 193 note 52). However, this is absent in other grammars that allow (119) (Rezac 2010c, cf. Zribi-Hertz 2008: 604).

⁶¹This is perhaps extensible to the type of phenomenon in note 17. The chief snag in this account is why the dative in (117) has special binding properties only if the embedded ECM subject is 1st/2nd person (in causatives this is inspectable because 3.DAT 3.DAT sequences are never grammatical). Presumably, it is related to the fact that some speakers only allow dative cliticization out of ECM by itself or when it creates a 3.DAT + 3.ACC cluster, (115). These speakers generally do not allow the dative to corefer with the matrix subject, but there are exceptions when the ECM subject A'-extracts, (i); cf. Postal (1989: 9f.) for another person-based difference in inverse binding of complex reflexives, and for (i) the need of ECM infinitives in French to A'-move or cliticize their subject in Kayne (1984), Rooryck (1997). The binding pattern (119) is problematic for a fully monoclausal approach to climbing structures (Miyagawa 1987, Wurmbrand 2002).

(i) elle_i aime un homme_j; qu'elle_i lui_i/*se_j croit fidèle/redevable ___j
 she likes a man that she her.DAT/SE believes faithful/indebted

These are very tentative suggestions. Yet even in the absence of further understanding, ECM makes important points about the PCC. The PCC must refer to more than surface morphology, to syntax that differentiates ECM from other structures 1/2.ACC DAT clitic clusters. This may ultimately be accusative > dative c-command in (112), directly or through forcing pseudo-cliticization by a system that is immune to the PCC.

Appendix 2: Datives in PCC Contexts

French datives do not agree or enter into Case alternations, but they do participate in the PCC. To understand how datives interact with the Agree/Case system further, it would help to examine datives in the same context where the PCC blocks [+ person] accusatives, namely separated from an Agree/Case-licenser by another dative. It should then be possible to see whether they have a [+ person] licensing requirement like DPs, or not, like PPs.

In monopredicate constructions, it is difficult to combine even applicative + prepositional datives (Rezac 2010a: 161f.). In the raising structures of Section 4.6, resumed in (120), dative combinations are fine if only one of the datives is a clitic, and often also when leading to 1/2.DAT 3.DAT clitic clusters, and when they are disallowed there is no PCC repair. However, it is difficult to draw conclusions from such raising because it is ill-understood what position and potential licensing domains the lower dative passes through (see Appendix 1).

- (120)
- | | | | | | | |
|----|-------------------------|----------------|-----|--------|----------|-----------------------------|
| a. | Paul | <i>me</i> | | semble | t_{me} | [reconnaissant à Jeanne] |
| b. | %Paul | <i>me leur</i> | | semble | t_{me} | [reconnaissant t_{leur}] |
| c. | $\forall$ *Paul | m' | y | semble | t_{me} | [reconnaissant t_{leur}] |
| d. | $\forall \text{ ?}^*$ P | <i>me</i> | | semble | t_{me} | [reconnaissant à eux] |
- Paul me.D them.D/LOC seems grateful to Jeanne/them
(resuming (75); (b), (c) for a grammar with **me leur* in (a))

Causatives are more ambivalent. When multiple datives arise in causatives, some speakers tolerate 1/2.DAT + 3.DAT, none 3.DAT + 3.DAT. Tolerated or not, the repair by strong pronoun is excluded at least in the transitive type (121) (Rezac 2010a: 161, Postal 1990: 176). However, the y -repair is reported for the causatives of unergatives with a 1/2.DAT causee, (122). No further data is known, including whether the strong pronoun repair is available here in the same grammars. There are alternative ways to analyze the y of (112) (Rezac 2010c).

- (121) Paul va *lui* (?*leur) faire porter les livres (*à eux) TOUT DE SUITE.
Paul will him.D them.D make carry the books to them immediately
[Eric forgot to bring the books to Paul's students.] Paul will make him
carry the books to them / the students IMMEDIATELY.
(Rezac 2010a: 161)

- (122) a. $\forall i$ $\forall k$ Π_i *me* *lui_{i/k}* *fera* [_{vP} t_{me} [_{vP} *répondre* / *tirer dessus*]]
 b. $\forall i$ Π_i *me* $\gamma_{k/*i}$ *fera* [_{vP} t_{me} [_{vP} *répondre* / **tirer dessus*]]
 he me.D him.D will.make answer shoot on
 He will make me answer to / shoot on them.
 (cf. Couquaux 1975: 46, Postal 1990: 146ff., adapted)

If (1/2.)DAT + DAT clusters in (some) causatives do fall under the PCC repair, the extension of the PCC to (122) is technically feasible. In (122)a, the matrix clause provides a single cliticization and Agree/Case mechanism for both clauses. The embedded dative must cliticize directly into the matrix clause, from the subject of which it must then be disjoint. If it is [+ person], it falls under the PCC because there is a higher causee dative, and then it is repairable if it need not be applicative (*répondre* but not *tirer dessus*). In (122)b, the embedded infinitive is richer, with its own cliticization site and Agree/Case system, allowing the dative to be coreferential with the matrix subject. A mechanism independently needed in this grammar and discussed in Appendix 1 brings it into the matrix clause.

References

- Abeillé, Anne, Danièle Godard, and Philippe Miller. 1997. Les causatives en français: un cas de compétition syntaxique. *Langue française* 115: 62–74.
- Abels, Klaus. 2003. Successive cyclicity, anti-locality, and adposition stranding. Doctoral dissertation, Storrs, CT: University of Connecticut.
- Albizu, Pablo. 1997a. Generalized Person-Case Constraint: A case for a syntax-driven inflectional morphology. In *Theoretical issues on the morphology-syntax interface*, ed. Myriam Uribe-Etxebarria, and Amaya Mendikoetxea, 1–33. Donostia: UPV/EHU.
- Albizu, Pablo. 1997b. The syntax of person agreement. Ms., Los Angeles, CA: University of Southern California.
- Albizu, Pablo. 2009. Construcciones inacusativas con dativos posesivos y dativos de interés en vasco. Handout of talks at LyCC, CSIC, May 11 2009, and UMR 5478, Bayonne, June 9 2009. On-line: <http://www.ile.csic.es/linguistica/Albizu.pdf>. Accessed on September 9, 2010
- Alboiu, Gabriela, Michael Barrie, and Chiara Frigeni. 2004. SE and the unaccusative-unergative paradox. In *Current studies in comparative Romance linguistics*, ed. Martine Coene, Greet de Cuyper, and Yves D'Hulst, 109–139. Antwerp: Antwerp Papers in Linguistics.
- Alexopoulou, Theodora, and Frank Keller. 2007. Locality, cyclicity, and resumption: At the interface between the grammar and the human sentence processor. *Language* 83: 110–160.
- Anagnostopoulou, Elena. 2003. *The syntax of ditransitives*. The Hague: Mouton de Gruyter.
- Anagnostopoulou, Elena. 2005. Strong and weak person restrictions. In *Clitic and affix combinations*, ed. Lorie Heggie, and Francisco Ordóñez, 199–235. Amsterdam: Benjamins.
- Anagnostopoulou, Elena. 2008. Notes on the Person Case Constraint in Germanic. In *Agreement restrictions*, ed. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 15–48. Berlin: Mouton de Gruyter.
- Aoun, Joseph. 1981. The formal nature of anaphoric relations. Doctoral dissertation, Cambridge, MA: MIT Press.
- Ariel, Mira. 1990. *Accessing NP Antecedents*. London: Routledge.
- Ashby, William J. 1977. *Clitic inflection in French*. Amsterdam: Rodopi.

- Auger, Julie. 1994. Pronominal clitics in Québec colloquial French: A morphological analysis. Doctoral dissertation, Philadelphia, PA: University of Pennsylvania.
- Baker, Mark. 1988. *Incorporation*. Chicago: University of Chicago Press.
- Baker, Mark. 1996. *The polysynthesis parameter*. Oxford: Oxford University Press.
- Baker, Mark. 1997. Thematic roles and syntactic structure. In *Elements of grammar*, ed. Liliane Haegeman, 73–137. Dordrecht: Kluwer.
- Baschung, Karine, and Marianne Desmets. 2000. On the phrasal vs. clausal syntactic status of French infinitives: causative constructions and subject inversion. *French Language Studies* 10: 205–228.
- Beaver, David, Brandy Zack Clark, Edward Flemming, T. Florian Jaeger, and Maria Wolters. 2007. When semantics meets phonetics: Acoustical studies of second-occurrence focus. *Language* 83: 245–276.
- Belletti, Adriana. 1999. Italian/Romance clitics: Structure and derivation. In *Clitics in the languages of Europe*, ed. Henk van Riemsdijk, 543–579. Berlin: Mouton de Gruyter.
- Belletti, Adriana. 2005. (Past) participle agreement. In *The Blackwell companion to syntax*, ed. Martin Everaert and Henk van Riemsdijk, vol. 3, case 48. Oxford: Blackwell.
- Belletti, Adriana, and Luigi Rizzi. 1988. Psych-verbs and Theta Theory. *Natural Language and Linguistic Theory* 6: 291–352.
- Bianchi, Valentina. 2006. On the syntax of personal arguments. *Lingua* 116: 2023–2067.
- Bissel, Clifford H. 1944. *Faire, laisser, voir and entendre* with a dependent infinitive. *The Modern Language Journal* 28: 325–337.
- Blanche-Benveniste, Claire. 1975. *Recherches en vue d'une théorie de la grammaire française: Essai d'application à la syntaxe des pronoms*. Paris: Champion.
- Blanche-Benveniste, Claire. 1978. A propos des traits sémantiques utilisés en syntaxe: Critique du trait '+/- humain'. *Cahier de linguistique* 8: 1–15.
- Blanche-Benveniste, Claire, José Delofeu, Jean Stefanini, and Karel van den Eynde. 1984. *Pronom et syntaxe: L'approche pronominale et son application au français*. Paris: SELAF.
- Bobaljik, Jonathan David. 2003. Floating quantifiers. *The second Glot International state-of-the-article book*, ed. Lisa Cheng and Rynd Sybesma, 107–148. Berlin: Mouton de Gruyter.
- Bobaljik, Jonathan David, and Phillip Branigan. 2006. Eccentric agreement and multiple Case checking. In *Ergativity: Emerging issues*, ed. Alana Johns, Diane Massam., and Juvenal Ndayiragije, 47–77. Dordrecht: Kluwer.
- Boeckx, Cedric. 2000. Quirky Agreement. *Studia Linguistica* 54: 354–380.
- Boeckx, Cedric. 2008. *Aspects of the syntax of agreement*. London: Routledge.
- Boneh, Nora, and Léa Nash. 2010. Noncore datives are merged high. Handout from the 4th European Dialect Syntax Meeting, Donostia, June 21–23 2010.
- Boivin, Marie-Claude. 2005. Case Theory, DP movement, and interpretation: A new approach to the distribution of French subnominal clitic *en*. *Natural Language and Linguistic Theory* 23: 543–593.
- Bonet, Eulàlia. 1991. Morphology after syntax: Pronominal clitics in Romance. Doctoral dissertation, MIT.
- Bonet, Eulàlia. 1994. The Person-Case constraint: A morphological approach. *MIT Working Papers in Linguistics* 22: *The morphology-syntax connection*, ed. Heidi Harley and Collin Phillips, 33–52. Cambridge, MA: MITWPL.
- Bonet, Eulàlia. 2008. The Person-Case constraint and repair strategies. In *Agreement restrictions*, ed. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 103–129. Berlin: Mouton de Gruyter.
- Bošković, Željko. 2002. A-movement and the EPP. *Syntax* 5: 167–218.
- Bošković, Željko. 2004a. Be careful where you float your quantifiers. *Natural Language and Linguistic Theory* 22: 681–742.
- Bošković, Željko. 2004b. Object shift and the clause/PP parallelism hypothesis. In *Proceedings of the WCCFL 23*, 99–112. Somerville, MA: Cascadilla Press.

- Bošković, Željko, and Jairo Nunes. 2007. The copy theory of movement: A view from PF. In *The copy theory of movement*, ed. Norbert Corver and Jairo Nunes, 13–74. Amsterdam: Benjamins.
- Bouchard, Denis. 1984. *On the content of empty categories*. Dordrecht: Foris.
- Büring, Daniel. 2005. *Binding Theory*. Cambridge: Cambridge University Press.
- Burston, Jack L. 1983. Clitic object sequences and cooccurrence restrictions in French. *Linguistic Analysis* 11: 247–75.
- Burzio, Luigi. 1978. Italian causative constructions. *Journal of Italian Linguistics* 2: 1–71.
- Burzio, Luigi. 1981. Intransitive verbs and Italian auxiliaries. Doctoral dissertation, Cambridge, MA: MIT Press.
- Burzio, Luigi. 1986. *Italian syntax: A Government-Binding approach*. Dordrecht: D. Reidel.
- Burzio, Luigi. 1989. On the nonexistence of disjoint reference principles. *Rivista di Grammatica Generativa* 14: 3–27.
- Burzio, Luigi. 1991. The morphological basis of anaphora. *Journal of Linguistics* 27: 81–105.
- Cabredo Hofherr, Patricia. 1999. Two German impersonal passives and expletive *pro*. In *Catalan Working Papers in Linguistics* 7: 47–57.
- Camacho, José Antonio. 1997. The syntax of NP coordination. Doctoral dissertation, Los Angeles, CA: University of Southern California.
- Cardinaletti, Anna. 2008. On different types of clitic clusters. In *The Bantu-Romance connection*, ed. Cécile De Cat and Katherine Demuth, 41–82. Amsterdam: Benjamins.
- Cardinaletti, Anna, and Ur Shlonsky. 2004. Clitic positions and restructuring in Italian. *Linguistic Inquiry* 35: 519–557.
- Cardinaletti, Anna, and Michael Starke. 1999. The typology of structural deficiency. In *Clitics in the languages of Europe*, ed. Henk van Riemsdijk, 145–233. Berlin: Mouton de Gruyter.
- Cecchetto, Carlo. 2000. Doubling structures and reconstruction. *Probus* 12: 93–126.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000a. Minimalist inquiries: The framework. In *Step by step*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89–156. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory*, ed. Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133–166. Cambridge, MA: MIT Press.
- Cinque, Guglielmo. 2002. A note on ‘restructuring’ and quantifier climbing in French. *Linguistic Inquiry* 33: 617–636.
- Cinque, Guglielmo. 2004. Restructuring and functional architecture. Italy: Ms., University of Sienna.
- CNRTL: Centre National de Ressources Textuelles et Lexicales. On-line: www.cnrtl.fr. Accessed on September 9, 2010.
- Collins, Christopher. 2005. A smuggling approach to the passive in English. *Syntax* 8: 81–120.
- Conceição, Manuela da. 2007. Pronominal affixation and cliticization in Romance and Bantu. Doctoral dissertation, University of Washington.
- Couquaux, Daniel. 1975. Une règle de réanalyse en français. *Recherches linguistiques de Vincennes* 4: 32–72.
- Couquaux, Daniel. 1977. Même marque-t-il qu’un pronom est réfléchi? *Le français moderne* 45: 126–43.
- Couquaux, Daniel. 1978. Sur une incompatibilité de pronoms clitiques en français. *Linguisticae Investigationes* 2: 211–214.
- Cuervo, María Christina. 2003a. Datives at large. Doctoral dissertation, Cambridge, MA: MIT Press.
- Cuervo, María Christina. 2003b. Structural asymmetries but same word order: The dative alternation in Spanish. In *Asymmetry in grammar*, vol. 1, ed. Anne Marie Di Sciullo, 117–144. Amsterdam: Benjamins.

- D'Alessandro, Roberta. 2004. Impersonal *si* constructions. Doctoral dissertation, University of Stuttgart.
- D'Alessandro, Roberta, and Ian Roberts. 2008. Movement and agreement in Italian past participles and defective phases. *Linguistic Inquiry* 39: 477–491.
- D'Alessandro, Roberta, and Ian Roberts. 2010. Past participle agreement in Abruzzese. *Natural Language and Linguistic Theory*.
- De Cat, Cécile. 2007. French dislocation without movement. *Natural Language and Linguistic Theory* 25: 485–534.
- De Kok, Ans. 1985. *La place du pronom personnel régime conjoint en français: une étude diachronique*. Amsterdam: Rodopi.
- Déchainé, Rose-Marie, and Victor Manfredi. 1994. Binding domains in Haitian. *Natural Language and Linguistic Theory* 12: 203–257.
- Delfitto, Denis. 2002. On the semantics of pronominal clitics and some of its consequences. *Catalan Journal of Linguistics* 1: 29–57.
- Demonte, Violeta. 1995. Dative alternation in Spanish. *Probus* 7: 5–30.
- Den Dikken, Marcel 1995. *Particles*. Oxford: Oxford University Press.
- Den Dikken, Marcel. 2006a. On the functional structure of locative and directional PPs. New York: Ms. City University of New York.
- Den Dikken, Marcel. 2006b. *Relators and linkers*. Cambridge, MA: MIT Press.
- Dobrovie-Sorin, Carmen. 2005. The *se*-anaphor and its role in argument realization. In *The Blackwell companion to syntax*, ed. Martin Everaert and Henk van Riemsdijk, vol. 4, case 56. Oxford: Blackwell.
- Evans, K.J., G.C. Lepschy, S.C. Morris, J. Newman, and D. Watson, D. 1978. Italian clitic clusters. *Studi italiani di linguistica teorica ed applicata* 7: 153–168.
- Fauconnier, Gilles. 1983. Generalized Union. *Communication and Cognition* 16: 3–37.
- Fellbaum, Christine. 1989. On the 'reflexive middle' in English. *Proceedings of the CLS 25*, 123–132. Chicago: CLS.
- Fernández-Ordóñez, Inés. 1999. Leísmo, láimo y loísmo. In *Gramática descriptiva de la lengua española*, ed. Ignacio Bosque and Violeta Demonte, 1317–1397. Madrid: Espasa Calpe.
- Ferreira, Fernanda, and Benjamin Swets. 2005. The production and comprehension of resumptive pronouns in relative clause 'island' contexts. In *Twenty-first century psycholinguistics*, ed. Anne Cutler, 263–278. Mahwah: Lawrence Erlbaum.
- Fitzpatrick, Justin. 2006. The syntactic and semantic roots of floating quantification. Doctoral dissertation, Cambridge, MA: MIT Press.
- Folli, Raffaella, and Heidi Harley. 2007. Causation, obligation, and argument structure: On the nature of little *v*. *Linguistic Inquiry* 38: 197–238.
- Gaätone, David. 1984. Une allergie syntaxique en français : Réflexions sur l'opposition lui / à lui. *Revue de linguistique romane* 48: 189–190.
- García, Erica C. 2001. The cognitive implications of unlike grammars: variable clitic-clustering in Spanish vs. Italian. *Neuphilologische Mitteilungen* 102: 389–417.
- Gibson, Jeanne, and Eduardo Raposo. 1986. Clause union, the Stratal Uniqueness Law, and the chômeur relation. *Natural Language and Linguistic Theory* 4: 295–331.
- Goodall, Grant. 1987. *Parallel structures in syntax*. Cambridge: Cambridge University Press.
- Goodall, Grant. 1997. Theta-alignment and the *by*-phrase. *Proceedings of CLS 33*, vol. 1, 129–139. Chicago: University of Chicago.
- Grevisse, Maurice, and André Goosse. 2008. *Le bon usage*. 14th edition. Bruxelles: De Boeck & Larcier.
- Grimshaw, Jane. 2001. Optimal clitic positions and the lexicon in romance clitic systems. In *Optimality-Theoretic syntax*, ed. Geraldine Legendre, Jane Grimshaw, and Sten Vikner, 205–240. Cambridge, MA: MIT Press.
- Guasti, Maria Teresa. 1996. Semantic restrictions in Romance causatives and the incorporation approach. *Linguistic Inquiry* 27: 294–313.

- Guasti, Maria Teresa. 1997. Romance causatives. In *The new comparative syntax*, ed. Liliane Haegeman, 124–144. Longman: London.
- Guasti, Maria Teresa. 2005. Analytic causatives. In *The Blackwell companion to syntax*, ed. Martin Everaert and Henk van Riemsdijk, vol. 1, case 6. Oxford: Blackwell.
- Haiman, John, and Paola Benincà. 1992. *The Rhaeto-Romance languages*. London: Routledge.
- Harley, Heidi. 2002. Possession and the double object construction. In *The Linguistic Variation Yearbook* 2: 29–68.
- Haspelmath, Martin. 2004. Explaining the ditransitive Person Case Constraint: A usage-based approach. *Constructions* 2. On-line: www.constructions-online.de/articles/35. Accessed on September 9, 2010
- Heger, Klaus. 1966. La conjugaison objective en français et en espagnol. *Persée* 1(3): 19–38.
- Heggie, Lorie, and Francisco Ordóñez. 2005. Clitic ordering phenomena: The path to generalizations. In *Clitic and Affix Combinations: Theoretical Perspectives*, ed. Lorie Heggie and Francisco Ordóñez, 1–29. Amsterdam: Benjamins.
- Herschensohn, Julia. 1992. On the economy of Romance nonlexical datives. In *Romance languages and modern linguistic theory*, ed. Paul Hirschbühler and Konrad Koerner, 123–134. Amsterdam: Benjamins.
- Herschensohn, Julia. 1999. What does zero syntax add to an analysis of French psych verbs? In *Semantic issues in Romance syntax*, ed. José Lema and Esthela Treviño, 105–120. Amsterdam: Benjamins.
- Herslund, Michael. 1988. *Le datif en français*. Louvain-Paris: Peeters.
- Higginbotham, James. 1991. The autonomy of syntax and semantics. In *Modularity in knowledge representation and natural-language*, ed. Jay L. Garfield, 119–131. Cambridge, MA: MIT Press.
- Holmberg, Anders, and Christer Platzack. 1995. *The role of inflection in Scandinavian syntax*. Oxford: Oxford University Press.
- Johnson, Kyle. 1991. Object positions. *Natural Language and Linguistic Theory* 9: 577–636.
- Jones, Michael Allan. 1996. *Foundations of French syntax*. Cambridge: Cambridge University Press.
- Jónsson, Johannes Gísli. 1996. Clausal architecture and case in Icelandic. Doctoral dissertation, Amherst: University of Massachusetts..
- Jouitteau, Mélanie, and Milan Rezac. 2008. The French ethical dative: 13 syntactic tests. *Bucharest Working Papers in Linguistics* 9, 97–108. Bucharest: University of Bucharest.
- Kayne, Richard. 1975. *French syntax*. Cambridge, MA: MIT Press.
- Kayne, Richard. 1979. Rightward NP movement in French and English. *Linguistic Inquiry* 10: 710–719.
- Kayne, Richard. 1989. Facets of Romance past participle agreement. In *Dialect variation and the theory of grammar*, ed. Paola Benincà, 85–103. Dordrecht: Foris.
- Kayne, Richard. 1993. Toward a modular theory of auxiliary selection. *Studia Linguistica* 47: 3–31.
- Kayne, Richard. 2000. *Parameters and universals*. Oxford: Oxford University Press.
- Kayne, Richard. 2002. Pronouns and their antecedents. In *Derivation and explanation in the Minimalist Program*, ed. Samuel David Epstein and T. Daniel Seely, 133–166. Oxford: Blackwell.
- Kayne, Richard. 2004. Prepositions as probes. In *Structures and beyond*, vol. 3, ed. Adriana Belletti. Oxford, New York, 192–212.
- Kayne, Richard. 2008. Expletives, datives, and the tension between morphology and syntax. In *The limits of syntactic variation*, ed. Theresa Biberauer, 175–217. Amsterdam: Benjamins.
- Kempson, Ruth, and Stergios Chatzikyriakidis. 2008. The Person Case Constraint as a treegrowth property. London: Ms., King's College.
- Kiparsky, Paul. 2005. Blocking and periphrasis in inflectional paradigms. *Yearbook of Morphology* 2004, 113–135.

- Koopman, Hilda. 2000. Prepositions, postpositions, circumpositions and particles: The structure of Dutch PPs. In *The syntax of specifiers and heads*, ed. Hilda Koopman, 204–260. London: Routledge.
- Krifka, Manfred. 2004. Semantic and pragmatic conditions for the dative alternation. *Korean Journal of English Language and Linguistics* 4: 1–32.
- Labelle, Marie. 2008. French reflexive and reciprocal *se*. *Natural Language and Linguistic Theory* 26: 833–876.
- Laenzlinger, Christopher. 1993. A syntactic view of Romance pronominal sequences. *Probus* 5: 241–270.
- Lambrecht, Knud. 1981. *Topic, antitopic, and verb agreement in non-standard French*. Amsterdam: Benjamins.
- Lamiroy, Béatrice. 1990. Binding properties of French *en*. In *Interdisciplinary approaches to language*, ed. Carol Georgopoulos, 397–414. Dordrecht: Reidel.
- Lamiroy, Béatrice. 1991. Coréférence et référence disjointe: les deux pronoms *en* et *y*. *Travaux Linguistiques* 22: 41–67.
- Landau, Idan. 1999. Possessor raising and the structure of VP. *Lingua* 107: 1–37.
- Landau, Idan. 2010. *The locative syntax of experiencers*. Cambridge, MA: MIT Press.
- Larson, Richard K. 1988. On the double object construction. *Linguistic Inquiry* 19, 335–391.
- Lasnik, Howard. 1999. *Minimalist analysis*. Malden, MA/Oxford: Blackwell.
- Leclère, Christian. 1976. Datifs syntaxiques et datifs éthiques. In *Méthodes en grammaire française*, ed. Jean-Claude Chevalier and Maurice Gross, 73–96. Paris: Klincksieck.
- Lefebvre, Claire, and Robert Fournier. 1978. Les relatives en français de Montréal. *Cahier de linguistique* 8: 273–294.
- Legendre, Geraldine. 1989a. Inversion with certain French experiencer verbs. *Language* 65: 752–782.
- Legendre, Geraldine. 1989b. Unaccusativity in French. *Lingua* 79: 95–164.
- Levin, Beth. 1993. *English verb classes and alternations*. Chicago: University of Chicago Press.
- Mahajan, Anoop Kumar. 1994. ACTIVE passives. In *Proceedings of the WCCFL 13*, 286–301. Stanford, CA: CSLI.
- Martín, Truss. 2009. Deconstructing dative clitics. *NYU Working Papers in Linguistics* 2.
- Matushansky, Ora. 2006. Head movement in linguistic theory. *Linguistic Inquiry* 37: 69–109.
- McCloskey, James. 2000. Quantifier float and *wh*-movement in an Irish English. *Linguistic Inquiry* 31: 57–84.
- McGinnis, Martha. 1998. Locality in A-movement. Doctoral dissertation, Cambridge, MA: MIT Press.
- McGinnis, Martha. 2001. Variation in the phase structure of applicatives. In *Linguistic variation yearbook* 1: 101–142.
- Medová, Lucie. 2009. Reflexive clitics in the Slavic and Romance languages. Doctoral dissertation, Princeton, NJ: Princeton University.
- Mendikoetxea, Amaya. 1992. On the syntax of constructions with ARB SE in Spanish. *Anuario del Seminario de Filología Vasca Julio de Urquijo* 34: 307–326.
- Mendikoetxea, Amaya. 1999. Construcciones con *se*. In *Gramática descriptiva de la lengua española*, ed. Ignacio Bosque and Violeta Demonte, 1631–1722. Madrid: Espasa.
- Miller, Philip H. 1992. *Clitics and constituents in Phrase Structure Grammar*. New York: Garland.
- Miller, Philip H., and Paola Monachesi. 2003. Les pronoms clitiques dans les langues romanes. In *Langues Romanes, problèmes de la phrase simple*, ed. Danièle Godard, 67–123. Paris: CNRS Editions.
- Miller, Philip H. and Ivan A. Sag. 1997. French clitic movement without clitics or movement. *Natural Language and Linguistic Theory* 15: 573–639.
- Milner, Claude. 1982. *Ordres et raisons de langue*. Paris: Seuil.
- Miyagawa, Shigeru. 1987. Restructuring in Japanese. In *Issues in Japanese linguistics*, ed. Takashi Imai and Mamoru Saito, 273–300. Foris: Dordrecht.

- Morin, Yves-Charles. 1978. Interprétation des pronoms et des réfléchis en français. In *Cahier de linguistique* 8: 337–76.
- Morin, Yves-Charles. 1979a. More remarks on French clitic order. *Linguistic Analysis* 5:293–312.
- Morin, Yves-Charles. 1979b. La morphophonologie des pronoms clitiques en français populaire. *Cahier de linguistique* 9: 1–36.
- Morin, Yves-Charles. 1979c. There is no inversion of subject clitics in Modern French. Montréal, QC: Ms., Université de Montréal.
- Morin, Yves-Charles. 1980. Les bases syntaxique des règles de projection sémantique: L'interprétation des constructions en *faire*. *Linguisticae Investigationes* 11: 9–47.
- Morin, Yves-Charles. 1981. Some myths about pronominal clitics in French. *Linguistic Analysis* 8.2: 95–109.
- Morin, Yves-Charles. 1982. De quelques [l] non étymologiques dans le français du Québec: notes sur les clitiques et la liaison. *Revue québécoise de linguistique* 11: 9–47.
- Nevins, Andrew. 2007. The representation of third person and its consequences for person-case effects. *Natural Language and Linguistic Theory* 25: 273–313.
- Nevins, Andrew, and Oana Săvescu. 2008. An apparent Number Case Constraint in Romanian: The role of syncretism. Ms., Harvard University and New York University.
- Nicol, Fabrice. 2005. Strong and weak person restrictions: A feature checking analysis. In *Clitic and affix combinations*, ed. Lorie Heggie and Francisco Ordóñez, 141–197. Amsterdam: Benjamins.
- Nyrop, Kristoffer. 1925. *Grammaire historique de la langue française*, vol. 5. Copenhagen: Gyldendalske Boghandel Nordisk Forlag.
- Ormazabal, Javier, and Juan Romero. 1998. On the syntactic nature of the *me-lui* and the Person-Case Constraint. *Anuario del Seminario Julio de Urquijo* 32: 415–434.
- Ormazabal, Javier, and Juan Romero. 2007. Object agreement restrictions. *Natural Language and Linguistic Theory* 25: 315–347.
- Ormazabal, Javier, and Juan Romero. 2010b. The derivation of dative alternations. In *Argument structure and syntactic relations from a crosslinguistic perspective*, ed. Maya Duguine, Susana Huidobro, and Nerea Madariaga 203–232. Amsterdam: Benjamins.
- Perlmutter, David. 1971. *Deep and surface constraints in syntax*. New York: Rinehart & Winston Inc.
- Pesetsky, David. 1995. *Zero syntax: Experiencers and cascades*. Cambridge, MA: MIT Press.
- Pesetsky, David. 2000. *Phrasal movement and its kin*. Cambridge, MA: MIT Press.
- Phillips, Colin. 1996. Order and structure. Doctoral dissertation, Cambridge, MA: MIT Press.
- Pica, Pierre. 1994. Condition C and epistemic contexts. In *Explorations in generative grammar*, ed. Young-Sun Kim, Byung-Choon, Lee, Kyoung-Jae, lee, Kyun-Kwon, Yang, Jong-Yuri Yoon, 544–570. Seoul: Hankuk Publishing.
- Pijnenburg, Hans, and Aafke Hulk. 1989. Datives in French causatives. *Probus* 1: 259–282.
- Pinchon, Jacqueline. 1972. *Les pronoms adverbiaux en et y*. Geneva: Droz.
- Polinsky, Maria, and Eric Potsdam. 2001. Long-distance agreement and topic in Tsez. *Natural Language and Linguistic Theory* 19: 583–646.
- Polinsky, Maria, and Eric Potsdam. 2006. Expanding the scope of control and raising. *Syntax* 9: 171–192.
- Pollock, Jean-Yves. 1998. On the cliticization of subnominal clitics. *Syntax* 1: 300–330.
- Postal, Paul M. 1981. A failed analysis of the French cohesive infinitive construction. *Linguistic Analysis* 8: 281–323.
- Postal, Paul M. 1983. On Characterizing French Grammatical Structure. *Linguistic Analysis* 11: 361–417.
- Postal, Paul M. 1984. French indirect object cliticisation and SSC/BT. *Linguistic Analysis* 14: 111–172.
- Postal, Paul M. 1989. *Masked inversion in French*. University of Chicago Press: Chicago.

- Postal, Paul M. 1990. French indirect object demotion. In *Studies in Relational Grammar 3*, ed. Paul M. Postal and Brian D. Joseph, 104–200. University of Chicago Press: Chicago.
- Pylkkänen, Liina. 2002. Introducing arguments. Doctoral dissertation, Cambridge, MA: MIT Press.
- Quicoli, Carlos. 1980. Clitic movement in French causatives. *Linguistic Analysis* 6: 131–186.
- Reed, Lisa. 1992. On clitic case alternations in French causatives. In *Romance languages and modern linguistic theory*, ed. Paul Hirschbühler, and Konrad Koerner, 205–224. Amsterdam: Benjamins.
- Reinhart, Tanya, and Tal Siloni. 2005. The lexicon-syntax parameter: Reflexivization and other arity operations. *Linguistic Inquiry* 36: 389–436.
- Renzi, Lorenzo, and Anna Cardinaletti. 1988. *Grande grammatica italiana di consultazione*. Bologna: Il Mulino.
- Reuland, Eric. 2001. Primitives of Binding. *Linguistic Inquiry* 32: 439–492.
- Reuland, Eric. 2006. Agreeing to bind. In *Organizing grammar*, ed. Hans Broekhuis, Norbert Corver, Riny Huybregts, and Ursula Kleinhenz, 505–513. Berlin: Mouton de Gruyter.
- Rezac, Milan. 2005. The syntax of clitic climbing In Czech. In *Clitic and affix combinations* ed. Lorie Heggie and Francisco Ordóñez, 103–140. Amsterdam: Benjamins.
- Rezac, Milan. 2007. Escaping the Person Case Constraint: Referential computation in the phi-system. *Linguistic Variation Yearbook* 6: 97–138.
- Rezac, Milan. 2008a. Phi-Agree and theta-related Case. In *Phi theory*, ed. Daniel Harbour, David Adger, and Susana Béjar, 83–129. Oxford: Oxford University Press.
- Rezac, Milan. 2008b. The forms of dative displacement: From Basauri to Itelmen. *Gramatika jaietan*, ed. Xabier Artiagoitia and Joseba A. Lakarra, 709–724. Zarautz: UPV/EHU.
- Rezac, Milan. 2008c. The syntax of eccentric agreement: The Person Case Constraint and Absolutive Displacement in Basque. *Natural Language and Linguistic Theory* 26: 61–106.
- Rezac, Milan. 2010a. Ineffability through modularity: Gaps in French clitic clusters. In *Defective paradigms*, ed. Matthew Baerman, Greville G. Corbett and Dunstan Brown, 151–180. Oxford: Oxford University Press.
- Rezac, Milan. 2010b. Phi-Agree vs. movement: Evidence from floating quantifiers. *Linguistic Inquiry* 41 (3).
- Rezac, Milan. 2010c. Dative-locative syncretisms in Romance clitics and the relationship between syntax and morphology. Ms., UMR 7023 CNRS/Université de Paris 8.
- Rezac, Milan. forthcoming. Person restrictions in Basque intransitives. *Lapurdum*.
- Richards, Norvin. 2001. *Movement in language: Interactions and architecture*. Oxford: Oxford University Press.
- Rigau, Gemma. 1982. Inanimate indirect object in Catalan. *Linguistic Inquiry* 13: 146–150.
- Rivas, Alberto. 1977. Clitics in Spanish. Doctoral dissertation, Cambridge, MA: MIT Press.
- Rivero, Maria Luisa. 2004. Spanish quirky subjects, person restrictions, and the Person-Case Constraint. *Linguistic Inquiry* 35: 494–502.
- Rivero, Maria Luisa. 2008. Oblique subjects and person restrictions in Spanish: A morphological approach. In *Agreement restrictions*, ed. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 215–250. Berlin: Mouton de Gruyter.
- Roberge, Yves, and Michelle Troberg. 2007. Thematic indirect objects in French. *French Language Studies* 17: 297–322.
- Roberge, Yves, and Michelle Troberg. 2009. The syntax of dativus commodi/incommodi in Romance. Toronto, ON: Ms., University of Toronto.
- Roberts, Ian. 1991. Excorporation and minimality. *Linguistic Inquiry* 22: 209–218.
- Ronjat, Jules. 1937. *Grammaire istorique des parlers provençaux modernes*, vol. 3. Montpellier: Société des Langues Romanes.
- Rooryck, Johan. 1988a. Formal aspects of French nonlexical datives. *Folia Linguistica* 22: 373–386.
- Rooryck, Johan. 1988b. Restrictions on dative cliticization in French causatives. *Journal of Semantics* 6: 41–55.

- Rooryck, Johan. 1997. On the interaction between raising and focus in sentential complementation. *Studia Linguistica* 51: 1–49.
- Rooryck, Johan. 2006. Binding into pronouns. *Lingua* 116: 1561–1579.
- Rothstein, Susan. 1992. Case and NP licensing. *Natural Language and Linguistic Theory* 10: 119–139.
- Rouveret, Alain. 2010. On verb-subject languages. *Lingua* 120: 232–263.
- Rouveret, Alain and Jean-Roger Vergnaud. 1980. Specifying reference to the subject: French causatives and conditions on representations. *Linguistic Inquiry* 11: 97–202.
- Ruwet, Nicolas. 1982. *La grammaire des insultes et autres études*. Paris: Seuil.
- Ruwet, Nicolas. 1990. *En et y: deux clitiques pronominaux anti-logophoriques*. *Langages* 97: 51–81.
- Ruwet, Nicolas. 1991. *Syntax and human experience*. Chicago: University of Chicago Press.
- Sandfeld, Kristian. 1970 [1928]. *Syntaxe du français contemporain I: Les pronoms*. Paris: Librairie Honoré Champion.
- Santorini, Beatrice, and Caroline Heycock. 1988. Remarks on causatives and passive. Philadelphia, PA: University of Pennsylvania Department of Computer and Information Science Technical Report No. MS-CIS-88–33.
- Schütze, Carson T. 1997. INFL in child and adult language: Agreement, Case, and licensing. Doctoral dissertation, Cambridge, MA: MIT Press.
- Schwegler, Armin. 1990. *Analycity and syntheticity*. Berlin: Mouton de Gruyter.
- Simpson, Jane Helen. 1983. Aspects of Warlpiri morphology and syntax. Doctoral dissertation, Cambridge, MA: MIT Press.
- Simpson, Jane, and Mary Margaret Withgott. 1986. Pronominal clitic clusters and templates. In *The syntax of pronominal clitics*, ed. Hagit Borer, 149–174. Orlando: Academic Press.
- Solà, Jaume. 2002. Clitic climbing and null subject languages. *Catalan Journal of Linguistics* 1: 225–255.
- Sportiche, Dominique. 1988. A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry* 19: 425–449.
- Sportiche, Dominique. 1996. Clitic constructions. In *Phrase structure and the lexicon*, ed. Johan Rooryck and Laurie Zaring, 213–276. Dordrecht: Kluwer.
- Stowell, Tim. 1989. Raising in Irish and the Projection Principle. *Natural Language and Linguistic Theory* 7: 317–359.
- Tasmowski, Liliane. 1985. *Faire infinitif*. In *Les constructions de la phrase française*, ed. Ludo Melis, Liliane Tasmowski, Paul Verluysen, and Dominique Willems, 223–365. Gent: Communication and Cognition.
- Thráinsson, Höskuldur. 2001. Object shift and scrambling. In *The handbook of contemporary syntactic theory*, ed. Mark Baltin and Chris Collins, 148–202. Oxford: Blackwell.
- Torrego, Esther. 1995. From argumental to nonargumental pronouns: Spanish doubled reflexives. *Probus* 7: 221–241.
- Uriagereka, Juan. 1995. Aspects of clitic placement in western Romance. *Linguistic Inquiry* 26: 79–123.
- Wanner, Dieter. 1977. On the order of clitics in Italian. *Lingua* 43: 101–128.
- Watanabe, Akira. 1997. *Case absorption and wh-agreement*. Dordrecht: Kluwer.
- Williams, Edwin. 1994. *Thematic structure in syntax*. Cambridge, MA: MIT Press.
- Williams, Edwin. 1997. Blocking and anaphora. *Linguistic Inquiry* 28: 577–628.
- Wurmbrand, Susanne. 2002. *Infinitives: Restructuring and clause structure*. Berlin: Mouton de Gruyter.
- Zagona, Karen. 2006. *The syntax of Spanish*. Cambridge: Cambridge University Press.
- Zaring, Laurie. 1991. On prepositions and case-marking in French. *Canadian Journal of Linguistics* 36: 363–377.
- Zink, Gaston. 1997. *Morphosyntaxe du pronom personnel (non réfléchi) en moyen français (XIVe-XVe siècles)*. Droz: Genève.

- Zribi-Hertz, Anne. 1980. Coréférence et pronoms réfléchis: Notes sur le contraste *lui/lui-même* en français. *Linguisticae Investigationes* 4: 131–179.
- Zribi-Hertz, Anne. 1995. Emphatic or reflexive? On the endophoric character of French *lui-même* and similar complex pronouns. *Journal of Linguistics* 31: 333–374.
- Zribi-Hertz, Anne. 2000. Les pronoms forts du français sont-ils [+animés]?. In *Traiani Augusti vestigia pressa sequamur*, ed. Martine Coene, Walter De Mulder, Patrick Dendale, and Yves d'Hulst, 663–680. Milan: Unipress.
- Zribi-Hertz, Anne. 2003. Réflexivité et disjonction référentielle en français et en anglais. In *Essais sur la grammaire comparée du français et de l'anglais*, ed. Philippe Miller and Anne Zribi-Hertz, 189–227. Saint-Denis: Presses Universitaires de Vincennes.
- Zribi-Hertz, Anne. 2008. From intensive to reflexive: The prosodic factor. In *Reciprocals and reflexives: Theoretical and typological explanations*, ed. Ekkehard König and Volker Gast, 591–632. Berlin: Mouton de Gruyter.
- Zribi-Hertz, Anne. 2009. Syntax at the interfaces: On the restricted productivity of the French mediopassive within the Romance family. Ms., UMR 7023 Université de Paris 8/CNRS.
- Zubizarreta, Maria Luisa. 1985. The relation between morphophonology and morphosyntax: the case of Romance causatives. *Linguistic Inquiry* 16: 247–289.
- Zubizarreta, Maria-Luisa. 1998. Prosody, focus, and word-order. Cambridge, MA: MIT Press.

Chapter 5

Repairs and Uninterpretable Features

5.1 Introduction

Chapter 4 discussed the Person Case Constraint (PCC) and its repair in French. The constraint bans [+ person] (1st/2nd/reflexive) accusatives separated from *v* by a dative (applicative or clitic). The repair lets a dative be coded by a full, locative-like PP autonomous of the clause, instead of a defective dative PP transparent to the clause. This is impossible otherwise, even to fix problems other than the PCC.

Table 5.1 PCC repairs

	Person-Case Constraint (α^* banned iff [+ person])	Repair (bold element changes)
Transitive Applicative (IO-O)		
French	DAT _{clitic} -ACC _{clitic} [*] (?DAT _{SE(INH)} -ACC _{clitic} [*]	ACC _{clitic} [*] - DAT _{PP} /LOC _{clitic} DAT _{SE(INH)} -ACC _{strong} [*])
West. Basque	DAT _{agr} -ABS _{agr} [*]	ABS _{agr} [*] - DAT _{PP}
Georgian	DAT _{agr} -ABS/ACC _{agr} [*] DAT _{agr} -ABS/ACC _{agr} [*]	ABS/ACC _{agr} [*] - DAT _{PP} DAT _{agr} -[agr's self].ABS/ ACC _{3SG} [*]
Unaccusative Applicative (IO-S)		
Basque (dial.)	DAT _{agr} - ABS _{agr} [*]	ERG _{agr} [*] -DAT _{agr}
Chinook	ABS _{agr} -ABS _{agr} [*]	ERG _{agr} -ABS _{agr} [*]
Finnish	OBL _{Appl} - NOM _{agr} [*]	OBL _{Appl} - ACC [*]
Transitive (EA-S)		
Arizona Tewa	bare _{agr} -bare _{agr} [*]	ERG _{agr} -bare _{agr} [*]
Yurok	NOM - NOM [*]	NOM - ACC [*]

S unaccusative subject, EA transitive subject, O direct object, IO applicative object
Yurok→2/1 combinations are NOM-NOM; see Section 5.9

The French combination of the PCC and an otherwise unavailable repair belongs to the remarkable cross-linguistic paradigm in Table 5.1. Across widely

different systems, it is impossible to combine a [+person] S/O (intransitive subject, transitive object) with an applicative argument in the way expected from their behaviour outside this combination, or from combinations involving [–person] S/O. In their place appear structures that do not exist otherwise: in French a locative for a dative, in Western Basque a nonagreeing dative for an agreeing one, in Basque dialects and in Chinook an ergative for an absolutive, in Finnish an accusative for a nominative. These ‘repairs’ of the PCC are not alternative realizations of the expected syntactic structures, for they have their own distinctive syntax, as has been seen for French. They are not alternative interpretations of independently existing structures, for they do not exist with a similar interpretation, or at all. They are syntactic structures that only emerge in the context of the Person Case Constraint. In their very existence lies half of the extraordinary character of the phenomenon.

The other half is the unity and restraint that may be discerned across the diverse forms of the repair. At first they seem each a separate *bricolage* by which a system mends the gap due to the PCC.¹ Yet neither the forms nor their distribution are haphazard. The unaccusatives all switch the case-agreement coding of an argument to one that normally appears only in transitives, absolutive to ergative, nominative to accusative. Their repair looks like the *addition of an Agree/Case relation* ordinarily unavailable to a structure but found in another. The same view can be taken of the strengthening of a defective or agreeing dative PP to a full, nonagreeing PP in French and Basque, and even of the transformation of the direct object in Georgian. All enrich the repaired structure to another that is independently legitimate, say an intransitive to a transitive and not a transitive to a double-ergative clause, and they do not modify its ‘basic’ content, say by introducing or deleting a lexical item. The repairs are *unitary* and *conservative*.

This is the perspective on the repairs that will be developed in this chapter. In its first part are introduced the Person Case Constraint and its Agree/Case analysis, Section 5.2, and the repairs, Section 5.3. They are argued to reveal a last-resort mechanism $\mathfrak{R}$, which responds to a failure of Agree/Case licensing by activating the potential Agree/Case capacity of a structure. In the Minimalist Program, licensing requirements are Full Interpretation requirements, and they are met by syntactic dependencies established through Agree for an uninterpretable feature. $\mathfrak{R}$ is (1):

- (1) $\mathfrak{R}$: An uninterpretable feature may enter the numeration only if needed for Full Interpretation of the syntactic structure built from it.

As the last-resort enrichment of a structure to meet Full Interpretation, $\mathfrak{R}$ descends from the proposals of Chomsky (1995 et seq.) for similar phenomena:

- (2) α enters the numeration only if it has an effect on output.
(Chomsky 1995: 234)

¹ *Bricolage* is B. Oyharçabal’s (p.c.) apt term.

- (3) Optional operations apply only if they have an effect on outcome: in the present case, v^* may be assigned an EPP feature to permit successive-cyclic A'-movement [...]

(Chomsky 2001: 34)

Here, $\mathfrak{R}$ is viewed as an interface algorithm between syntax and external systems. A strong view of modularity renders these modules inaccessible to $\mathfrak{R}$, circumscribing in three ways its antecedents like (2) and (3). First, $\mathfrak{R}$ only responds to the failure of syntax to meet the input requirements of the external systems, Full Interpretation, not problems that arise within them. Second, $\mathfrak{R}$ cannot affect syntax, only its input, the numeration, which is its interface with the lexicon. Third, $\mathfrak{R}$ cannot affect the interpretable content of the numeration, which it would have to seek in the lexicon, only add uninterpretable features to drive syntactic operations. New derivational paths may become available to a numeration through $\mathfrak{R}$, and thus permit it to satisfy Full Interpretation, but its 'basic' content is conserved: the form and meaning that derive from the interpretable lexical items present in the numeration, and the combinatorial possibilities inherent in them.

The formulation and application of $\mathfrak{R}$ is undertaken in the second part of this chapter. Section 5.4 presents the background on uninterpretable features and Full Interpretation in the Minimalist Program of Chomsky (1995 et seq.). $\mathfrak{R}$ is situated in the Agree, phasal model of current work. In the ensuing sections, the proposal is developed: first as a general mechanism for the ergative/accusative 'dependent' Case in Section 5.5, then for the unaccusative repairs where dependent Case emerges in Section 5.6, and last for the transitive repairs by strengthening a PP or DP in Sections 5.7 and 5.8. The conclusion 5.9 sketches the extension of $\mathfrak{R}$ to other person interactions of Chapter 3, like Arizona Tewa and Yurok in Table 5.1, its parametrization, and addresses the relationship of Case and person licensing.

The conclusion also considers the scope of $\mathfrak{R}$ and uninterpretable features. In the Minimalist Program, uninterpretable features are the device that corresponds to syntactic licensing in other frameworks. They must be eliminated for legibility to the external systems, for Full Interpretation, and their elimination proceeds through the creation of syntactic dependencies. At the same time, the resulting dependencies are often needed by the interfacing systems for other reasons, such the dual scopal and thematic position of *wh*-words created by A'-movement. To the extent these reasons could be attributed to Full Interpretation, $\mathfrak{R}$ can respond to them, dynamically inserting uninterpretable features to create them:

- (4) (Some) uninterpretable features are the response of an autonomous syntax to meet Full Interpretation at the interfaces with external systems.

This conclusion is strong support for the proposition that uninterpretable features and their need to be eliminated underlie syntactic dependencies. Yet perhaps not all uninterpretable features can be reduced to such a dynamic response to Full Interpretation. Some remain the autonomous properties of

lexical items, the heirs of diachrony, acquisition, and other factors outside the core systems. [Chapter 6](#) returns to phi-features from this perspective.²

5.2 The Person Case Constraint

5.2.1 The Agree/Case Approach

[Chapter 4](#) examined the Person Case Constraint (PCC) and its repair in French. Starting from those results, this section introduces the constraint cross-linguistically and the Agree/Case theory of it. The next section turns to the repairs.

The PCC and its repair in French are illustrated in (5). Unfocused pronouns must cliticize if they are accusative DPs or in defective dative PP_{DAT}s, unlike if they are in full PPs such as locative PP_{LOC}s. The PCC bars 1st/2nd/reflexive accusative clitic if a dative intervenes between *v* and the direct object. Such dative interveners are applicative datives and dative clitics, either base-generated in this position, or moving through it. The PCC repair turns the defective dative PP_{DAT} into a full PP that is virtually identical to the locative PP_{LOC}, up to cliticizing as a locative clitic in some varieties (notated [¥]). The full PP of the repair has the syntactic properties of other full PPs.

- (5)
- | | | | | | |
|----|-----------------------|-------------------|-------------|------------|---------|
| a. | Lucille | <i>la/*nous</i> | <i>leur</i> | présentera | |
| b. | *Lucille | * <i>la/√nous</i> | | présentera | à elles |
| c. | [¥] *Lucille | * <i>la/√nous</i> | <i>y</i> | présentera | |
- Lucille her/us.A them.D/LOC will.introduce to them
 Lucille will introduce her/us to them.
- (French, [Chapter 4](#))

The PCC and its repairs have long been known for Romance (Perlmutter 1971, who compares Warlpiri), and individually for other languages such as Basque (Lafon 1980) and Georgian (Boeder 1968). It is the spectacular discovery of Bonet (1991) and the work that followed hers that there is a common constraint and dedicated repairs shared by languages of diverse character and affiliation: Shambala, Yimas, Warlpiri, Kambera, Ojibwa, and Mapudungun join French, Warlpiri, Basque, and Georgian in a long list (Albizu 1997a, b; Haspelmath 2004). The PCC and its repairs are good candidates for reflexes of universal principles.

²This chapter develops the proposals in Rezac (2007), drawing on Postal (1990) and Reinhart (1995). Albizu (1997a) is the earliest syntactic proposal to bring together the various elements that form the view of the PCC in Section 5.2 and unite them with other person hierarchy interactions. Albizu (1997b), graciously provided by the author during the revisions of this book, is an extraordinarily unpublished work that anticipates the present one in a last-resort syntactic approach to the PCC / person hierarchy repairs, albeit quite a different one.

The theory of the PCC adopted here may be called the *Agree/Case* approach. It seeks to subsume the PCC under locality on the system of phi-Agree and Case licensing in Chomsky (2000a), or the *Agree/Case system* (Section 5.4). An Agree/Case locus, such as v_{ACC} , possesses uninterpretable phi-features, the *probe*. The probe seeks to establish a syntactic dependency, *Agree*, with matching interpretable phi-features, the *goal*. The interpretable phi-features of the goal, in turn, need themselves to be licensed by Agree, through Case assigned by the probe. Agree is subject to conditions, including locality that limits the probe to the closest matching goal. The leading idea of the Agree/Case approach to the PCC is that an applicative dative blocks Agree for [+person] ϕ -feature(s), leading to a Case-licensing failure (7) and (8). [+person] is borne in French by 1st/2nd and by the special 3rd person reflexive *se*, but not by 3rd person accusatives; cross-linguistic variation on this matter, in (8), is discussed in Chapter 6.

- (6) *Person Case Constraint* (Agree/Case approach): A goal G cannot Agree for [+person] ϕ -features if X intervenes between it and its Agree/Case locus, where X is of a type to intervene in the Agree/Case system, to which belong applicative datives but not full PPs. If G has no other means of licensing its [+person], it fails the Case Filter.

- (7)
$$\begin{array}{c} T/v \quad > \quad X \quad > \quad G \text{ [+person]} \quad > \text{ is c-command} \\ \underbrace{\hspace{1.5cm}}_{*Agree/Case} \end{array}$$

- (8) [+person]:
- a. 1st/2nd but not 3rd (Basque, Georgian)
 - b. 1st/2nd/SE but not 3rd (French, Icelandic)
 - c. 1st/2nd(/%3rd human) but not 3rd/SE (Spanish)
 - d. 1st/2nd/3rd human but not 3rd default (Finnish)

This version of the Agree/Case approach is essentially that developed in Anagnostopoulou (2003), in part synthesizing earlier work, including Taraldsen (1995), as well as in other works such as Béjar and Rezac (2003, 2009), D'Alessandro (2004), Richards (2004, 2008), Rezac (2008a, 2008c). They share the view that the intervention of the dative is due to its phi-features, discussed later on in this section, and partly differ on assimilating [+person] licensing to Case, to which Section 5.9 returns. Close are syntactic proposals with somewhat different assumption about how the intervention or licensing works: Laenzlinger (1993), who introduces feature-relativized locality for the PCC, Albizu (1997a, b), Ormazabal and Romero (1998, 2002, 2007), and Ormazabal (2000), who bring in the relevance of Case-domains and the double object construction, Adger and Harbour (2007), Baker (2008), Sigurðsson and Holmberg (2008), and somewhat farther, Bianchi (2006). All seem compatible with the proposal for PCC repairs here, given a suitable reformulation in their own terms, sketched in Section 5.9. Some unify the PCC with the subject-object

person hierarchy interactions of Chapter 3, including Albizu (1997a, b), Bianchi (2006), Béjar and Rezac (2009), and Section 5.9 here.³

In the following subsections, the Agree/Case approach is set out through the generalizations that it makes about the PCC. They design a hypothesis space within which it and related proposals lie, and in it the present theory of the repair is articulated. These are all syntactic approaches, and start out by carving the data differently from morphological ones, whether generative (Bonet 1991), constructionist (Haspelmath 2004), or functionalist (García 2001). At the heart of syntactic approaches lie the two observations made in Section 4.1 for French. On the one hand, surface morphology is insufficient to state the PCC, because the PCC does not rule out all 1/2/SE.ACC DAT clitic clusters, and no 1/2/SE.DAT DAT clitic clusters that are syncretic with them, (9). On the other, surface morphology is insufficient to delimit the repair, because it fixes only some impossible clusters, not all where cliticization is impossible, (10), nor all ruled out by the PCC, (11).

- (9) a. Lucille *la/*nous leur* a fait [t_{leur} [choisir (t_{leur} t_{nous})].
 Lucille her/*us.A them.D has made choose
 Lucille had them choose her/*us.
 Lucille had her/*us be chosen for them.
 b. Lucille *nous leur* a fait [t_{nous} [tirer t_{leur} dans le ventre]].
 Lucille us.D them.D has made shoot into the stomach
 Lucille had us shoot into their stomach.

((a) PCC, (b) *DAT + DAT clitics; French, Section 4.1)

- (10) a. $\forall$ *Cela ne *se lui* dit pas ,à Louise.
 b. $\forall$ *Cela ne *s' y* dit pas ,à Louise.
 c. $\forall$ *Cela ne *se* dit pas à elle.
 this NEG SE her.D/LOC says not to her to Louise
 One does not tell her (Louise) such a lie.

(*mediopassive SE + dative; French, Section 4.6)

- (11) a. $\forall$ On *leur* a jeté Paul dans les bras.
 b. $\forall$ *On *me leur* a jeté dans les bras.
 c. $\forall$ *On *m' y* a jeté dans les bras
 d. $\forall$ *On *m'* a jeté dans les bras à elles.
 one me.A them.D/LOC has thrown Paul into the arms to them
 One threw Paul/*me into their arms.

(PCC with possessor dative; French, Section 4.5)

These considerations have shown that in French the PCC and its repairs pay attention to syntactic facts neutralized in realization, including the case of 1st/

³Of syntactic approaches in different frameworks, those of Couquaux (1975) and Postal (1990) for French, and Rosen (1990) cross-linguistically, are related to the proposals here.

2nd person clitics, c-command between datives and accusatives, applicative vs. prepositional datives, reflexives vs. mediopassive *se*. The same has been observed elsewhere: Romance and Basque TP-internal datives vs. TP-external ethical and allocutive markers (Albizu 1997a, b; Ormazabal and Romero 2007), Basque and Chinook applicative vs. prepositional datives (Section 5.6), Georgian subject-object vs. object-dative competition (Section 5.8), and morphemes with $\emptyset$ exponence in Georgian and Tzotzil (Bonet 1991: 190, Albizu 1997a: note 8). Morphology could refer to this information only at a steep price, for as distinct from syntax and phonology, it is motivated precisely by phenomena like syncretisms. These are respected by morphological operations, including the opaque cliticization and agreement of Chapter 2 that superficially resemble PCC repairs. More generally, a modular architecture attributes to morphology a ‘modular signature’ that has been confirmed in Chapter 2. The PCC and its repair have proven to have a fully syntactic signature in Chapter 4, along with the similar person hierarchy interactions of Chapter 3.

5.2.2 Intervention

In the Agree/Case approach, the PCC occurs when a DP lies ‘on the path’ between an argument and its Agree/Case locus T/v, (12)a and (12)b, not off it (12)c, or in a constituent that is on it but that embeds the DP too deeply to be visible to the clause, (12)d.

- (12) a. applicative dat.: T ... v ... [DP(.DAT) ... [DP_{1/2/*3} ...]]
 b. clitic dat.: DAT + T ... v ... *t*_{DAT} ... [DP_{1/2/*3} ... (?*t*_{DAT})]
 c. prepositional dat.: T ... v ... [DP_{1/2/3} ... [DP.DAT]]
 d. PP nonintervener: T ... v ... [(PP_{full}) ... [DP_{1/2/3} ... (PP_{full})]]

Each of these scenarios is found in French and they have been resumed in Section 4.7. The contrast between elements on and off the path differentiates applicative and prepositional datives. Applicative datives c-command direct objects, prepositional datives do not (across various theories, Baker 1988, Ormazabal and Romero 2010b, Den Dikken 1995b, 2006, McGinnis 1998, Pytkäinen 2002, Cuervo 2003a, Anagnostopoulou 2003). In French, all datives are PPs that are *defective* in various ways. Among them is the inability to license pronouns, and transparency of the PP shell to permit the DP within to relate to the clause for purposes such as floating quantifier, anaphoric, and applicative relations. When defective PPs are above the direct object, they create the PCC, (12)a, (12)b, but not otherwise, (12)c. In languages like English or Ojibwa, applicative objects are bare DPs, not PPs at all. DPs participate in the Agree/Case system fully and prevent it from reaching the direct object entirely, for [+person] as well as for any other relationship. On the opposite end of the scale are *full* PPs like French locatives. They are complete domains of

Agree/Case and other systems, isolating the DP within from the various relations mentioned, including the PCC, (12)d. The French PCC repair extraordinarily turns a dative defective PP into a full locative-like one, as in (5). Thereby it eliminates the PCC, confers the capacity to license pronouns, and prevents applicative relationships like possessor in (11). In Sections 5.4 and 5.7 the defective-full PP distinction is developed in terms of their *phasehood*.

Other languages present a situation closely analogous to French, including Spanish (Bonet 1991, Albizu 1997b) and Basque (Albizu 1997b, Rezac 2009).⁴ Basque will be described, since it will be important throughout this chapter for another case of the PCC as well.⁵ The Basque system of case and agreement system exhibits an ergative-absolutive alignment, rather than nominative-accusative one. The objects of transitives and the subjects of unaccusatives have *absolutive* case and agreement (gloss A), while the subjects of transitives and unergatives have *ergative* case and agreement (gloss E), (13). The agreement of both is obligatory. When a dative (gloss D) is present, it must ordinarily agree as well, by its own dedicated agreement morphology, (13)a. When the absolutive object is 1st/2nd person, dative agreement is impossible through the PCC, (13)b. Just then, a nonagreeing dative is exceptionally permitted, for many speakers.

- (13) a. Miren-_{i_j} haurr-ak_k eramango di-zki_k-o_j-te / *d-it_k-u-zte
 Miren-D children-PL.A bring.will R.3pA_k.3sD_j.3pE / R.3pA_j.3pE
 b. Miren-_{i_j} zu_k eramango za_k-it_k-u-zte / *za_k-i-zki_k-o_j-te
 Miren-D you.A bring.will R.2pA_k.3pE / *R.2pA_k.3sD_j.3pE
 They will bring the children/*you.A to Miren.D. (*agreeing dative*)
 They will bring you/*the children.A to Miren.D. (*nonagreeing dative*)
 (Western Basque)

Elordieta (2001) establishes through c-command diagnostics that the agreeing datives of Basque are in the applicative construction. There is no prepositional

⁴Spanish reflects the applicative-prepositional dative split through cliticization or clitic-doubling of all and only applicative datives (Cuervo 2003a, b). Among nonpronominal datives, in PCC contexts only undoubled indirect objects are possible, as prepositional datives (Albizu 1997b). Pronominal accusatives and datives must ordinarily cliticize or, if focussed, be clitic-doubled strong pronouns. Under the PCC repair uniquely unfocussed nondoubled pronouns emerge, as in French (Bonet 1994: 43), while other clitic problems cannot be repaired in this fashion (Bonet 1991: 201–4). A significant difference with French emerges in which pronoun is targeted by this repair: the dative pronoun ordinarily, and for some speakers always as in French (Albizu 1997b), but for others either dative or accusative if both are 1st/2nd person (Bonet 1991: 203) (cf. Simpson 1983: 193f. for Warlpiri). The reasons plausibly lie in another difference with French: 3rd person accusatives differ from datives in clitic and nonclitic form and in doubling conditions, but 1st/2nd person are identical in all respects to datives (Ormaizabal and Romero 2010a). It remains to be explained why 1/2.ACC can be targeted by the repair only when the dative is itself 1/2.DAT, not 3.DAT; see Section 5.8 for related discussion of Georgian.

⁵The description is resumed from Rezac (2009), where further details are given.

construction for datives. The repair works as in French to create full, nonagreeing dative PPs. Consequently, the repaired datives cannot have interpretations that need the applicative construction, like possessor (14) or causee (15).

- (14) a. Miren-i haurr-ak besoetara bota di-zki-o-te / *d-it-u-zte
 b. Miren-i zu besoetara bota *za-it-u-zte / *za-i-zki-o-te
 They will throw (*bota*) the children/*you.A (*haurrak*/**zu*) into the arms (*besoetara*) Miren-D = into Miren's arms.
 (possessor dative, Eastern/Western Basque)
- (15) a. Miren-i haurrak etxe-ra ekarr-arazi *di-zki-o-te / *d-it-u-zte
 b. *Miren-i zu etxe-ra ekarr-arazi *za-it-u-zte / *za-i-zki-o-te
 They will make bring (*ekarrarazi*) Miren.D the children/*you.A (*haurrak*/**zu*) home (*etxera*).
 (causee dative, Eastern/Western Basque, cf. (13))

The facts described so far hold for Western Basque. Eastern Basque differs in the existence of both agreeing and nonagreeing independently of the PCC, so that (13)a is good with *dituzte*. The former are applicative, the latter prepositional, so that Eastern Basque has the prepositional construction that Western Basque lacks (Etxepare and Oyharçabal 2008a, b, Etxepare 2010, cf. Albizu 2001). The PCC repair occurs invisibly in Eastern Basque, because it creates nonagreeing datives that already exist. Like its nonagreeing datives generally, the nonagreeing datives of the repair cannot serve in applicative functions, (14), (15).⁶

Through Basque the scope of the PCC can be expanded to include unaccusatives (Albizu 1997a, b, 2009, Rezac 2008c, 2009, forthcoming). Unaccusatives with purely applicative datives do not permit 1st/2nd person absolutive subjects, (16). Among such applicative datives are experiencers of psych-verbs like *gustatu* 'like', possessors, and datives of interest, but not indirect objects that can appear in the prepositional construction, such as the goal-of-motion of *hurbildu* 'approach'.

- (16) a. Miren-ij hurbiltzen / gustatzen zai-zki-oj / *di-oj-te
 Miren-D coming / liking R.3pA_i.3sD_j / R.3sD_i.3pE
 They are approaching Miren / Miren likes them.
 b. Miren-ij hurbiltzen / ?*gustatzen ni-atzai-oj.
 Miren-D approaching / liking R.1sA_i.3sD_j
 I am approaching Miren / ?*Miren likes me.
 (Eastern/Western Basque)

⁶In French datives in the prepositional construction are still defective PPs, unable to host pronouns, in contrast to locative and PCC-repair dative ones in the same position that are full PPs. In Eastern Basque the matter remains to be investigated, but a dialectal difference in the binding of emphatic anaphora suggests that dialects may differ on this (Albizu 2001): full PPs in Rebuschi's (1995) *variété restreinte*, defective ones in his *variété élargie*.

- (18) a. Þú varst gefinn $t_{\text{þú}}$ honum.
 you.NOM were.2SG given him.DAT
 You were given to him. (*unaccusative + prepositional dative*)
- b. *Honum var/varst gefinn t_{honum} þú.
 him.DAT was.3SG/2SG given you(SG).NOM
 He was given you. (*unaccusative + applicative dative*)
- c. Honum voru gefnir t_{honum} peningarnir.
 him.DAT were.3PL given the.money.PL.NOM
 He was given the money. (*unaccusative + applicative dative*)
 (Icelandic, Schütze 1997: 117, 122)
- (19) Líklega höfum það þá (bara) verið við.
 probably have.1PL it then only been we.NOM
 Probably, it has then (only) been us.
 (Icelandic, Sigurðsson and Holmberg 2008: 262)

The Icelandic-French contrast suggests that the PCC occurs in unaccusatives when a dative intervenes on the path between an argument and its Agree/Case licenser, but not if the argument undergoes A-movement past the dative. Sigurðsson and Holmberg (2008) confirm the role of intervention through the contrast in (20). When an applicative dative undergoes A'-extraction, the nominative may stay in-situ (20)a or cross over the trace of the dative to raise higher within the TP (20)b. In-situ, a 1/2.NOM cannot agree by the PCC. When it bypasses the dative within the TP, the PCC disappears. (Nonagreement in (20)a is addressed below.)⁸

- (20)
- a. [_{CP} Hverjum_i mund-√i/*-um_j [_{TP} þá [_{t_i} virðast við_j vera hæfir]]]?
 b. [_{CP} Hverjum_i mund-√i/√-um_j [_{TP} við_j þá [_{t_i} virðast t_j vera hæfir]]]?
 who.D would.3SG/1PL we.N then seem we.N be competent
 To whom would we then seem to be competent?
 (Icelandic, Sigurðsson and Holmberg 2008: 267)

This subsection has established the relevance of intervention in the Agree/Case to the PCC. The PCC affects the [+ person] goal of an Agree/Case locus if there is a dative DP between them. It does not occur without an intervening DP, either off the path, or embedded in a full PP, or by-passed by A-movement. We return below to the effect that the PCC has: in French to bar clitics, in Basque and Icelandic obligatorily agreeing absolutes and nominatives.

⁸I gloss over whether an A'-extracted dative passes through [Spec, TP] always, never, or only when the nominative stays in-situ, and about the precise target and mechanism of the raising of the nominative when the dative undergoes A'-extraction. Here it suffices that it bypass the trace of a dative, as the adverb *þá* shows. See further Rezac (2008c: 89–91) and references there.

5.2.3 Agreement, Case, Licensing

The foregoing languages also reveal the relevance of the Agree/Case system itself to the PCC. The domains of the Agree/Case systems explain which arguments interact in the constraint (Albizu 1997a). The minimal transitive clause consists of two Agree/Case domains, one below $v_{ACC/ABS}$, one between it and $T_{NOM/ERG}$, while unaccusatives have only one domain, that of T_{NOM} or v_{ABS} , (56).

- (56) Nominative-accusative Ergative-absolutive
 a. T_{NOM} EA v_{ACC} O b. T_{ERG} EA v_{ABS} O *Transitive*
 c. T_{NOM} v S d. T v_{ABS} S *Unaccusative*
 (Section 5.5)

Applicative datives interact with transitive objects and unaccusative subjects for the PCC, for they are between them and $v_{ACC/ABS}$ or T_{NOM} . The external argument does not interact with them, for it is in a higher domain separated from internal arguments by $v_{ACC/ABS}$. Within each clausal domain, only DPs that need Case-licensing are affected by the PCC: accusatives, absolutes, and nominatives, but not arguments within full PPs that are autonomous of the clause. The invisibility of full PPs has been illustrated for French genitives and locatives (Sections 4.3, 4.5 and 4.7). Icelandic (21) from Hrafnbjargarsson (2004) is another nice demonstration. The verbs *líka* 'like', *leiðast* 'bore' allow two constructions, dative + nominative, subject to the PCC, dative + PP or nominative + PP, unaffected by it.

- (21) a. Ykkur líkar *ég / hún
 you.DAT like.3SG I.NOM she.NOM
 You like her/me.
 b. Ykkur líkar við mig / hana
 You.DAT like.3SG with me / her.ACC
 You like her/me.
 c. Ykkur leiðist *ég / *við / hann.
 you.DAT bored.1/3SG I.NOM / we.NOM he.NOM
 You find me / us / him boring.
 d. Við erum leiðir à ykkur.
 we.NOM be.1PL bored.PL.M.NOM to you
 You find us boring.

(Icelandic, Hrafnbjargarsson 2004)

The Agree/Case system also has the potential to explain other still unclear and complex phenomena of apparent immunity to the PCC. In Icelandic mono-predicate structures like (18)/(19), agreement with 1/2.NOM is required, and default 3SG agreement does not fix the PCC. The problem is not the absence of

a nominative agreement controller, since Icelandic allows default agreement if there is not one, (22). Rather, 1/2.NOM cannot survive without agreement, even in a PCC context. In (20) however, matters are different. The nominative originates within a separate nonfinite clause. If it stays in it, it may but need not agree with the matrix verb, independently of the PCC (cf. Anagnostopoulou 2003: 279f.). When there is no matrix agreement, the infinitive behaves as an Agree/Case domain of its own, Case-licensing a nominative independently of the matrix (see Rezac 2004a: 5.4). Consequently the nominative is also licensed when agreement is impossible due to the PCC, (20)a.

- (22) Stúlkunni_i var bjargað t_i.
 girl.the. DAT was. 3SG/DFLT rescued. SGN.NOM
 The girl was rescued.

(Icelandic, Andrews 1982: 467)

For Icelandic strong nominative pronouns, the PCC is thus visible both in overt agreement and in licensing. A separate Agree/Case relation licenses the pronoun. The same holds of Basque. Absolutive and nominative pronouns, strong or *pro*, overtly agree, and cannot be licensed without agreement, in or out of PCC contexts. Certain infinitives studied in Etxepare (2003, 2005) are optionally transparent to matrix agreement, (23). When the matrix verb has a dative argument, its cross-clausal agreement is restricted by the PCC to 3rd persons, (23)a. However, the infinitives provide Agree/Case licensing of their own, including to 1st/2nd person absolutes in PCC contexts, (23)b.

- (23) a. [Nobela beltz-ak_k irakur-tzea]_i gustatzen zai-o_j / zai-zki-o.
 novels black-ABS read-ing liking R.3sA_i.3sD_j R.3pA_k.3sD_j
 She likes reading black novels.
 b. [Zu_k bisita-tzea]_i gustatzen zai-t_j / za_k-tzai-zki_k-t_j.
 you.ABS visit-ing liking R.3sA_i.3sD_j R.2pA_k.3sD_j
 I like visiting you.

(Basque, Etxepare 2003: 167f.)

When we look beyond agreeing pronouns, the generalization (24) emerges:

- (24) In a PCC context, clitics are not licensed, but strong(er) pronouns are not licensed only if they could otherwise control overt person agreement.
 (NB: ‘overt’ refers to paradigms, including Ø exponents)

This is at the edge of current understanding, but the Agree/Case approach suggests a promising line of exploration. Accusatives in Romance, Germanic, and Slavic do not overtly agree with the clause. To a first approximation, their susceptibility to the PCC covaries with their richness as pronouns. French [+person] accusative clitics do not survive in a PCC context, and this tends to be true of Romance clitics generally. For Germanic weak pronouns and Slavic

second position clitics, which are richer and more independent, the PCC becomes more variable (Anagnostopoulou 2003, 2008, Rezac 2010c). The strong accusative pronouns of these languages are not susceptible to the PCC, in direct contrast to the agreeing strong pronouns of Basque and Icelandic. The way to integrate such pronouns into the Agree/Case approach is to suppose them to have their own Agree/Case system, at least for their [+person], while remaining visible to clausal accusative assignment. However, richness of content only renders a pronoun immune to the PCC in a context without overt agreement. In Icelandic or Finnish, strong pronouns escape the PCC as nonagreeing accusatives, but not as nominatives in finite clauses when overt agreement *could* occur if there were no PCC, (18), whether it occurs or not. Likewise for Basque absolutes.

In the Agree/Case system of Chomsky (2000a, 2001), Agree/Case relations occur through Agree by a phi-probe with a Case-less goal. Let us suppose that the systematic nonrealization of finite verb agreement with accusatives in a language like Icelandic indicates that the phi-probe of v_{ACC} need not be valued for person from the goal, for instance because it is not differentiated into individual phi-features. It may then Agree with a goal whose person feature is licensed by the goal's own Agree/Case system. It still assigns accusative Case, but does not receive a (person) value. By contrast, the phi-probe of T_{NOM} must Agree with a goal from which it can be valued, without Case. In this manner, the needs of the probe sort out whether a sufficiently rich pronoun needs to value the probe for [+person], and therefore, whether it can license its own [+person] or not.⁹

⁹These difficult issues deserve a great deal more. Other solutions exist that presently seem more mechanical (Rezac 2007: Appendix). I add some remarks towards eventual further exploration.

In the role of *overt agreement* in the PCC, the present proposal accords with the conclusions drawn from the observation that absolutes in nonfinite *nonagreeing* clauses escape the PCC (Perlmutter 1971: 93 for Warlpiri, Bonet 1991: 190f. for Georgian, Laka 1993a: 27 for Basque). This assumes that the PCC should occur in nonfinite clauses, which is unclear (Rezac 2009, Boeckx 2008: 98 note 4), and faces ambivalent Icelandic evidence (Boeckx 2003, ex. 24, Sigurðsson 2004: 155 note 14, Bobaljik 2008: 319 note 27, Sigurðsson and Holmberg 2008: 271, 276 note 29). The notion *overt* must include certain cases of zero exponence (Bonet 1991: 190, Albizu 1997a: note 8).

Probes that do not need to be valued are close to pure Case-assigning probes (Albizu 1997b), but keep to Chomsky's (2000a) hypothesis that phi-probes drive the Agree/Case system. Parameterization might be in phi-specification: nonagreeing probes might be a minimal [phi] only (cf. Rezac 2004b); see Anagnostopoulou's (2003: 5.6) for a not unrelated parameter). A key issue that needs better understanding is 3SG nonagreement with low 3PL.NOM, perhaps always attributable to intervention: in English and French (Schütze 1997: 4.1.6, 1999; Sobin 1997, Chomsky 2000a: 149 note 90, Den Dikken 2001, Rezac 2004a: Chapter 5), Finnish (Section 5.6), Icelandic (Sigurðsson and Holmberg 2008, Kučerová 2007), Basque (Rezac 2006: 3.6), and Warlpiri (Perlmutter 1971: 91ff.).

The following sketches one possibility for the interaction of the internal Agree/Case system of a PCC-immune pronoun and that of the clause. As in Déchaine and Wiltschko (2002), the

These considerations point to the relevance of Agree/Case domains for [+person] licensing in the PCC. Assimilating the licensing to Case itself goes one step further, proposed by Anagnostopoulou (2003) (cf. Baker 1996: 5.3). Repairs of the PCC will provide good support to the hypothesis, for they eliminate it by introducing a new Agree/Case domain. The matter is taken up again in Section 5.9.

5.2.4 Datives

The last element to consider in the Agree/Case approach, and the least clear, is the nature of the dative's intervention for [+person] Agree/Case relationships. The following conclusions were reached in Section 4.7 for French:

- Datives differ from full PPs in not licensing pronouns and invisibility of the DP within to various clausal relationships, including for the PCC.
- Datives do not control the agreement that nominatives, accusatives, and in Basque, absolutes do, or undergo Case alternations of the nominative-accusative type. This may be attributed to their P_{DAT} case/preposition, which must yet allow them to participate in the PCC.¹⁰
- It is unclear whether dative clitics in French require [+person] licensing in the same manner that accusative clitics do in the PCC. For datives visible to the PCC in Icelandic, some Case-like need has been posited to render them visible to A-movement (Chomsky 2000a, cf. Belletti and Rizzi 1988, Freidin and Sprouse 1991, Yoon 1996).

pronoun is built from a core N and a higher head Φ with interpretable phi-features. DP-internal Agree/Case licenses at least the [+person] of Φ . Options from this point depend on whether the DP-internal Agree/Case licenses all of Φ or only [+person], whether partial or full Agree turns the DP into a phase (Section 5.4), and if so, how (some of) their phi-features are transmitted to the edge, by Move to [Spec, TP] or Agree with D (cf. Rezac 2008a on PPs). The outcome must be such that the clausal Agree/Case system see some phi-features on the DP, which will be a goal for Case assignment, even if already licensed in the DP and incapable of valuing the clausal probe (cf. multiple Case assignment, McCreight 1988, Yoon 1996, Béjar and Massam 1998, Rezac 2003; cf. notes 21, 29, 49). The result would look like *his_{GEN}/him_{ACC}-self_{ACC}*, the possessor with DP-internal genitive and clausal accusative, resolved in English according to dialect. For pronouns invisible to clausal Agree/Case, see Rezac (2008c: Appendix); cf. Baker (2008: 109).

¹⁰The opacity of datives to agreement varies across closely related varieties of Basque (Rezac 2008ab), perhaps Romance (D'Alessandro and Roberts 2010: note 1, Haiman and Benincà 1992: 139f.), along with unclear 'facilitation' effects of a nonagreeing dative on agreement across it (for Icelandic, see Holmberg and Hróarsdóttir 2003: 1001, Sigurðsson and Holmberg 2008, for Basque, Etxepare 2005, Preminger 2009, for Greek, Anagnostopoulou 2003: 202).

These properties of datives have been explored in different ways in the Agree/Case approach. On one, datives create the PCC simply because they are visible to A-movement, not because of their phi-features. Baker (2008: 3.3) develops such a proposal. He posits that Agree for [+person] requires the spec-head configuration, for instance [Spec, T_{NOM}] in Icelandic. Applicative arguments, including datives, A-move to the specifier of T/v. This prevents nominatives from doing so, and thus Agreeing for [+person]. Better understanding is needed of the differences between languages like Icelandic and Basque, since only in the former do datives undergo A-movement to become subjects, and of person agreement with apparently low nominatives as in (19) that casts doubt on the premise.¹¹

On an alternative view, that of Anagnostopoulou (2003) and related work, datives block [+person] Agree/Case relationships through their own phi-features. The analysis partly inspires itself from applicative objects that are plain DPs, as in English or Mohawk. These are treated as regular goals by the Agree/Case system for all purposes, and thus prevent it from reaching a lower object, as in (25). The applicative argument in (25) controls agreement, gets accusative, and raises to [Spec, TP], while the theme is licensed differently. English is uninformative on this point, and probably uses inherent Case or a null preposition (Larson 1988, Pesetsky 1995, Baker 1997, Anagnostopoulou 2001, cf. Bitter and Hale 1996: 18). Mohawk is more revealing. The theme must incorporate, and incorporation only licenses inanimates (Baker 1996: 5.3, Ormazabal and Romero 1998).

- (25) a. She showed **them** the cake. (*active*)
 b. **They** were shown the cake. (*passive*)

Although applicative datives do not control agreement or get overt accusative, unlike applicative DPs, Anagnostopoulou (2003: 5.4.2) proposes that they nevertheless participate in the Agree/Case system for the [+person] feature, while their other phi-features are hidden by their dative PP_{DAT} shell. Elements of this view have a long history and good support, particularly developed in the works of Burston (1983) on the [+person] of datives, Taraldsen (1995: 310f.) on dative case as the source of the tension between datives' [+person] intervention and their failure to value other agreement, Laenzlinger (1993: 256f.) on feature-relativized minimality as the mechanism of

¹¹The evaluation of Baker's proposal must include various inversion constructions with low subjects. In English, locative inversion seems to place the fronted PP in an A-position (Bresnan 1994, Collins 1997, Culicover and Levine 2001) and resists all nominative pronouns (Bresnan 1994: 86). Some inversions do show the absence of person agreement specifically (on French, see Bonami and Godard 2001, Rezac 2004a: Chapter 5, 2010b; cf. Chomsky 2000a: 149 note 90, Schütze 1997: 4.1.6). Others do not, as Icelandic (19) or postverbal subjects in Czech, not to be simply set aside by assuming that the 1st/2nd person is really in [Spec, TP] (Baker 2008: 89 note 17), unless it can be shown that it licenses elements like floating quantifiers (Rezac 2010b).

[+person] intervention.¹² There is lacking a good understanding of the mechanism by which P_{DAT} hides phi-features save [+person], whether it licenses them, and how to parametrize this opacity of PP_{DAT} cross-linguistically (see for instance Anagnostopoulou 2003, Rezac 2008a).¹³

5.2.5 Overview

The elements of the Agree/Case approach to the PCC have different strength. Robust are the role of Agree/Case domains and the intervention of DPs/PP_{DAT}s in [+person] agreement and licensing. They bring together many aspects of the phenomenon: the set of [+person] elements subject to the PCC, the set of elements that interact in it, the role of c-command and of movement. Less clear is the PCC problem itself: the failure to Case-license [+person] DPs, some other [+person] licensing failure, or something else entirely such as a conflict in the phi-values obtained by Agree with multiple arguments. The unclear aspects of the PCC are tied up with this issue: the immunity of non-agreeing strong(er) pronouns but not agreeing ones or of clitics, and the role that the dative plays.

I will proceed by adopting Anagnostopoulou's proposal in (6) that the dative blocks Agree between an Agree/Case locus and a [+person] DP, and this prevents [+person] from being Case-licensed as it needs to be. It proves a

¹²Among the evidence for the [+person] of applicative arguments (dative or not) is:

- (i) Morpheme overtiness, ordering, and cooccurrence restrictions (Anagnostopoulou 2003: 270–2; Bobaljik and Wurmbrand 2002, Rezac 2008 a,b,c; Section 4.2).
- (ii) The syntax of clitic doubling: in Spanish all datives pattern with 1st/2nd person accusatives in doubling without specificity restrictions (Ormazabal and Romero 2010a).
- (iii) Interpretation: the possession restriction, *We sent them /? the conference our abstracts* (Adger and Harbour 2007: 4.2, 4.3.1), the absence of inanimate applicatives in Mohawk (Baker 1996: 238 note 2); the subtler facts of French (Section 4.2) that suggest [+person] is not related to animacy but rather Burston's (1983) Individuation or Boeckx's (2000: 3.4.3, 3.4.4, and 3.4.5) Point-of-View.
- (iv) Subject-object person-hierarchy interactions, where an applicative dative behaves like 3rd person proximate and not obviative direct object (Rosen 1990: 2.3; see Section 3.4).

¹³A straightforward alternative is that datives block all higher phi-Agree, not only [+person], and there is an extra number probe below them, say on the applicative head Appl, whose valuation percolates up to T, perhaps by T-(v-)Appl Agree; see Section 5.6.3 languages with such a probe, and cf. Sigurðsson (2006), Sigurðson and Holmberg (2008) for Icelandic. Various works are close to the [+person] intervention view sketched here, with differences on how to achieve selective visibility of the dative to phi-Agree, the mechanics of intervention, or the problem to which Agree with the dative gives rise for the other [+person] argument: Adger and Harbour (2007); Ormazabal and Romero (1998, 2002); Den Dikken (2004); Richards (2004: 4.3.2.1); Nevins (2007), Boeckx (2000), Schütze (2003), Sigurðsson and Holmberg (2008). Recent work extends the set of interveners beyond datives to possessors and ergatives in ways compatible with the Agree/Case approach, Rezac (2008a: 119), Baker (2008: 92), Shklovsky (2009), Artiagoitia (2009), Karimi (2010), and to other contexts, Richards (2005).

dative and 3rd person S. In many of the varieties with this repair, morphological gaps riddle or entirely suppress the agreement paradigm of 1/2.ABS + DAT even for verbs with prepositional datives, *hurbildu* in (26). The repair remains unavailable for these gaps. It is keyed to the PCC, just like the French one in Section 4.6.

Table 5.1 illustrates two minimal ‘reflections’ of the Basque repair through the mirrors of independent parameters. In the nominative-accusative system of Finnish, the accusative is found in transitives but not unaccusatives, corresponding in this sense to the Basque ergative as ‘dependent’ Case (Section 5.5). Accusative is what the PCC repair recruits in Finnish. Chinook is ergative-absolutive, but it is a ‘primary object’ language where the applicative argument is a plain absolutive DP rather than a dative. Therefore, the applicative argument ergativizes. All three languages treat unaccusatives fundamentally in the same way. The PCC in unaccusatives is repaired by the recruitment of the extra Agree/Case relation of transitives. In Chapter 3 have been seen similar responses to person constraints, including Arizona Tewa and Yurok in Table 5.1; Section 5.9 returns to this parallel.

Transitives cannot use this repair, because they already use the ergative/accusative Agree/Case relation, and there is only one per CP in the linguistic systems at hand. The PCC repair observes this restriction and does not introduce a second ergative or accusative. Yet the repair that does occur can be seen as an instance of the same pattern. To add an Agree/Case relation to an unaccusative, it is turned into a transitive. To add one to a transitive, an incomplete dative PP or a plain DP is enriched with an Agree/Case system to give a full PP or a its DP analogue. This occurs in French, Basque, or Georgian (Sections 5.7 and 5.8).

Thus the repairs have a unity and a conservativity to them: the addition of an Agree/Case relation that is otherwise absent in a structure, but compatible with its independent capacity. It may be cast into relief by considering the alternative ways the repairs might have been. When the repair in French turns PP_{DAT} into a full PP, it takes the dative to the closest full PP, a locative or nearly so. It might have instead recruited a different lexical preposition or a different syntactic structure. Instead of *She presented you.DAT me.ACC* might have appeared *She presented you.ACC with me*, *She presented me.ACC for you*, *She made my introduction to you*, *She had me introduced to you*. Farther would be repairs using impossible structures, for instance two ergatives in a CP. The tools to code such repairs would exist if selection could refer to PCC contexts, or if arbitrary syntax-semantics mappings or ‘constructions’ were permitted. Yet that is not what the repairs look like. From this perspective they are strikingly homogeneous and conservative, for all their surface diversity. They modify a structure by minimally increasing its Agree/Case capacity in a way compatible with the syntax of the language, and other content is unchanged. This character of the repairs is the present point of departure.

5.3.2 *The Choice of Mechanisms*

The Agree/Case approach in this chapter develops the following view:

- The repairs reflect a single mechanism. They are uniform and restricted.
- The mechanism is the addition of Agree/Case-licensing to a structure.
- The repair is minimal, just enough to add Agree/Case-licensing.

The mechanism underlying the repairs is not selection. Selection does mediate argument coding alternations that superficially resemble the dative-accusative alternations of the French, as in *Kate presented Mary (with) a gift* – *Kate presented (*with) a gift* (cf. Burston 1983: 267f.). However, the selectional interaction of arguments seems limited to co-(internal-)arguments (cf. Marantz 2006, Collins 2002), and perhaps cannot see feature values like 1st/2nd person (Adger 2008). These restrictions derive the impossibility of the finiteness of T or the phi-features of the external argument influencing whether *think* or *reflect* selects *about*-PP or *on*-PPs. Like the PCC, PCC repairs span long distances, including raising structures in Basque and Finnish discussed below, and depend on phi-features.¹⁴

That leaves *transformational* mechanisms, which relate one syntactic structure to another. They fall into two types: *global* (*reference-set*, *transderivational*) and *nonglobal* (*local*). Both have been suggested for the PCC repair in the literature. *Global* mechanisms allow a structure or derivation refer to another, letting one structure truly be a *repair* when another is unavailable. *Nonglobal* mechanisms do not allow such reference, so that an apparent repair is really a structure licensed by certain conditions that bar another, not by the latter's unavailability.

Kayne (1975: 174–6) observes the global character of the French PCC repair, which appears to suspend cliticization ‘in certain cases where its application would lead to unacceptable clitic combinations’. However, he qualifies the observation by adducing the clitic problems that it does not repair. Couquaux (1975) proposes the nonglobal mechanism in (27) that transforms a dative to a locative argument in the presence of a local 1st/2nd/reflexive clitic, in the Revised Extended Standard Theory. Postal (1990) develops Couquaux's proposal as the demotion of grammatical function 3 (dative) to 5 (locative) under certain conditions in the Arc Pair Grammar framework of Relational Grammar.

(27) *Règle de Réanalyse*: [+dat] Pron. → [-dat] / [_V 1/2/SE_{clitic} V] ... __

Where $\pm$ dative differentiates dative and locative complements, and ... is structure subject conditions on transformations.

¹⁴The PCC also applies to arguments of distinct predicates in Romance clitic climbing, both of the limited French type in causatives (Section 4.5) and the more general Spanish type (Garcia 2001, cf. Rivas 1977, Contreras 1979, Luján 1980, Bok Bennisma 1981), and analogues in Basque (Etxepare 2003, Rezac 2008c) and Czech (Rezac 2005, Dotlačil 2004: 80f.). PCC in the Spanish constructions and potential PCC repairs in them remain to be properly explored.

Couquaux's proposal is difficult to recast in many descendants of his framework, including the Minimalist Program. They have restricted nonglobal transformations to the Agree/Move relationship, which follows a monotonic c-command path and only sees information on it. This is stated as the Path Condition in (28). The Path Condition follows from cyclicity and locality, which prevents the top end of a syntactic dependency (the probe) from looking too far 'upwards' in the tree and 'downwards' beyond a certain point (the goal or phase) (e.g. Chomsky 2000a: 122, 132–5; cf. (41)).

- (28) *Path Condition*: In an Agree/Move relationship between α [target] and β [goal], α c-commands β , and the relationship is sensitive only to the properties of constituents c-commanded by α and c-commanding β (or in the Minimal Domain of α, β).¹⁵

The Path Condition or the principles underlying it has considerable explanatory scope. Consider the passive of *Kate baked (someone) three cakes*. The relationship of *three cakes* to T may be blocked by an applicative object on the path between them, giving *Three cakes were (*someone) baked ____*. However, nothing off the path can matter, so that the T-*someone* relationship in *Someone was ____ baked three cakes, Gwenael expects someone to be ____ baked three cakes* suffers no interference from *three cakes* and *Gwenael*.

It proves difficult to unify the PCC repairs under the Path Condition. Their common property is the addition of an Agree/Case domain, not its particular location with respect to the elements that define the PCC context. However, this depends on execution. A discussion clarifies the impression and the alternatives.

The French PCC repair transforms of a defective PP_{DAT} indirect object to a full PP. To make this amenable to a movement treatment, there must occur an Agree/Move relationship between the two kinds of PPs, and the direct object must lie on its path, because its phi-features decide which PP is legitimate. Ormazabal and Romero (1998) advance an elegant proposal along these lines

¹⁵ The formulation of the condition sets aside possible interarboreal (sideways) relations (Nunes 2001). Successive-cyclic movement does not obey the condition, because it can only occur if it can be continued up to a terminal position, Bošković (2002: Section 4, 2007). On Bošković's (2002) proposal, landing at intermediate sites is a reflex of movement to the final site. On Chomsky's (2000a, 2001) alternative that Bošković also discusses, successive-cyclic movement would fall under the mechanism $\mathfrak{R}$ developed for PCC repairs, as discussed in Section 5.9. The inverse issue would arise in Multiple Agree of a probe with several goals (cf. notes 21, 29, 49), if Agree with a closer goal needed to crucially refer to the outcome of Agree with a farther goal. Presently, such reference seems either illusory (for the T/v-(participle)-NOM/ACC-(participle) configurations of Chomsky 2001, 2008, see Frampton et al. 2000, Pesetsky and Torrego 2007), or advantageously formulable as the local outcome of the former Agree relation alone, e.g. whether valuation of the probe takes place, does not take place, or is impossible (cf. Anagnostopoulou 2003 for T/v-DAT-NOM/ACC, Bobaljik and Branigan 2006 on C-ERG-ABS).

for the Spanish analogue of the French PCC repair, adapted to French in (29) (Rezac 2010c).

- (29) [DAT_{applicative} [ν + P_[+person:]] [ACC_[±person] V [PP_{full} t_P DAT_{prepositional}]]]

Ormazabal and Romero's proposal is articulated within the hypothesis that the applicative construction derives from the prepositional one (Baker 1988, Den Dikken 1995b, 2006, Ormazabal and Romero 2010b). They reduce the repair to this transformation. First, a [+person] probe is brought to ν by the incorporation of P from the PP of the prepositional construction. The probe seeks to attract the [+person] dative from the PP to [Spec, ν + P], the applicative position. In between lies the accusative. If and only if the accusative is [+person], it halts the probe by feature-relativized locality, and blocks the prepositional-to-applicative transformation. A dative in the applicative position appears as a clitic; one stranded in-situ as strong.

In this proposal, one and the same mechanism creates the PCC and the repair: feature-relativized minimality. The repair is simply the failure of movement. French suggests the need for something more. It has a prepositional dative construction for indirect objects. However, the dative PP differs from all other PPs in not being able to host pronouns, whether in the applicative or the prepositional construction. All dative like all accusative pronouns are subject to an overriding need to cliticize, even those that most clearly come from the prepositional construction (Chapter 4, esp. Appendix 1). The PCC repair does something more than keep datives in the prepositional construction. It confers on the defective dative PP the capacity to license pronouns, making it a full locative-like PP.

This issue recurs in other repairs. In Basque, the repair turns the absolutive subject of an unaccusative into an ergative. As shown in (30), we might suppose the core argument of the unaccusative S to originate in an ergative 'shell', normally move out to become absolutive, but remain frozen in-situ when an applicative dative blocks the movement for a [+person] S. There exist engaging proposals for just such a raising of absolutes from ergatives (Medová 2009, cf. Section 3.4). However, in Basque there is robust evidence that the ergative is a structural Case high in the TP/CP domain and the absolutive is lower (Section 5.5). If (30) were tenable, Chinook would illustrate the impression that the repair is not sensitive to the Path Condition. In Chinook it is the applicative argument that is repaired to ergative when S is [+person]. Yet in (30), S is below the path from the applicative dative to the absolutive, and so should not influence it.

- (30) S_{ABS} H_[+person:] ... [applicative DAT_[+person] ... [ERG t_S] ...

In the Finnish repair, the same points resurface. A nominative responds to the PCC by becoming accusative. It might be supposed that nominatives raise from accusatives (Caha 2009), and that the PCC blocks this movement.

However, in Finnish it will be particularly clear that the applicative argument of the PCC originates above where a *nominative* S can surface (Section 5.6). The applicative cannot be what is stranding S in a position too low for it to be nominative; something special must happen to [+ person] S for it to surface as a low *accusative*.

None of these points is insuperable. However, the impression is that the relationships between the substructures introduced in the repair and their correspondents outside the repair do not have the profile expected of Agree/Move. Silverstein (1986: 178f.) introduces a distinction among case and agreement relations that relates to this conclusion. Some depend on the properties of an argument and its relationship to the clause; these fit Agree/Move. Others, person hierarchy interactions such as the PCC, depend on another argument as well, and they correspond to the profile of Agree/Move only rarely.

In other frameworks, Agree/Move dependencies obtain through potent devices that also subsume such relationships as those between actives and passives or finite and nonfinite complements. This power underlies Couquaux's (27), and the Relational Grammar analyses of PCC repairs (Harris 1981 for Georgian, Postal 1990 for French). Within Principles-and-Parameters approaches, the Agree/Move mechanism is limited by principles like cyclicity and locality, and in the framework of Chomsky (1995 et seq.), it is the sole nonglobal mechanism relating objects in syntax. The lexicon and selection mediate other significant relationships between independently base-generated syntactic structures, but PCC repair is not for them. This leaves global mechanisms.

5.3.3 Global Mechanisms

Global mechanisms let the licensing of a structure or derivation refer to another one in a certain relationship to it. They fit the impression that the PCC repairs are 'marked' structure licensed as last resort when the PCC bars more 'unmarked' ones. PCC repairs need a certain limited, minimal enrichment of a structure for a certain kind of grammaticality failure. The insights and disadvantages of two global proposals in the literature suggest the lines along which to proceed.

Bonet (1994) proposes the seminal global approach to PCC repairs in Optimality Theory (cf. Grimshaw 2001). Optimality Theory is a framework of global comparison of all possible structures for their satisfaction of ranked and violable constraints. Some penalize *unfaithfulness* to a given input structure, others universal *markedness*. The winner is the structure that best satisfies the ranked constraints. Violation of a higher-ranked constraint cannot be compensated for by the satisfaction of lower-ranked ones. For French, two markedness constraints might interact: **STRONG* requires unfocussed pronoun datives to be clitic, and the higher-ranked **PCC* bans PCC configurations. If a structure

does not violate **PCC*, **STRONG* rules out nonclitic pronouns. However, structures with 1st/2nd person accusatives and unfocussed pronoun datives cannot satisfy both constraints. All such structures that satisfy the higher-ranked **PCC* violate **STRONG*, and so **STRONG* does not matter for picking the winner among them.

Such a global approach captures the dependence of PCC repairs on the PCC, as well as their greater markedness than the structures they fix. However, Optimality Theory makes repair universal, and that seems wrong for syntax. For any given input to the evaluation mechanism, there is always a grammatical output, because some structure always wins the competition. If **STRONG* were too highly ranked for strong pronouns to avoid **PCC*, the winner would be another, otherwise unavailable structure, say one with a *for*-PP for the dative. This does not fit the uniform and restricted profile of PCC repairs. More clearly, it does not fit syntax, where PCC repairs are a conspicuous minority in a world of hard, irreparable constraints (Section 1.4). This is the *ineffability problem* of Optimality Theory. By its design, some ‘repair’ should always emerge into grammaticality when a constraint rules out a structure. Solutions exist, but the prevalence of irreparability suggests that syntax is not a system of violable constraints.

Within the Minimalist Program of Chomsky (1995 et seq.), restricted global mechanisms have been proposed within an overall nonglobal system for the few apparent repairs of syntax, those where a structure or derivation is licensed as *last-resort* (e.g. Chomsky 1995: 227f., 346–8). Within this framework, Cardinaletti and Starke (1999) propose to account for clitic-strong alternations by a version of the principle of *Minimize Structure* (Bošković forthcoming). It is resumed in (31).

- (31) *Minimize Structure*: For syntactic structures α , β projected from a given lexical category, where α properly contains β , β is base-generated in preference to α if β converges with respect to a particular interpretation.¹⁶
(cf. Cardinaletti and Starke 1999: Section 8)

Under the hypothesis that strong, weak, and clitic pronouns stand in a subset relationships, as in (32), *Minimize Structure* forces the choice of a clitic over a strong pronoun, save in a syntactic or interpretive context where a clitic cannot survive. For instance, adjectival modification, or the introduction of new discourse entities, are taken to require the CP in (32)a. Only a strong pronoun has one, so *Minimize Structure* allows it, although it is more complex than a clitic.

¹⁶*Minimize Structure* derives from *Minimize α* and assumptions about the lexicon and base-generation. In derivational terms, syntax base-generates for each lexical category in the syntactic lexicon its full extended projection, e.g. the CP of the verb, and to it *Erase- α* applies up to crash with respect to a given interpretation (prior to chain-formation, or equivalently at chain-feet).

- (32) a. strong pronoun = [_{CP} C weak pronoun]
 b. weak pronoun = [_{ΣP} Σ clitic]
 c. clitic pronoun = [_{IP} I LP] (L = lexical category)

Minimize Structure expresses a ‘blocking’ intuition that has a long history in the study of clitic-strong alternations. Some blocking proposals operate over syntactically unrelated structures and freely draw on different modules, to encompass *went:**goed*, *quicker:*more quick*, *Kate_i saw herself_i.*Kate_i saw her_i*, *yesterday:#the day before today* (cf. Di Sciullo and Williams 1986, Williams 1997, 2007, critiqued in Embick and Marantz 2008, Poser 1992: 123–5, Legate 1999, Langendoen 2002: 631). Others are far more constrained. Andrews’ (1990) *Morphological Blocking Principle* is a particularly pertinent precursor of Minimize Structure: a syntactic structure with a clitic blocks one with a strong pronoun because it distributes the same features across fewer lexicalized terminals.

Minimize Structure as well is highly constrained. It can only choose between structures that differ in the amount of functional content above a shared lexical item. For the PCC in French, it works very well. A cliticization failure is viewed as the failure to meet a clitic’s syntactic requirement to attach to a host in the clause. When the PCC prevents cliticization, this need is not met, the structure with a clitic crashes, and so a strong pronoun is licensed. Yet Minimize Structure predicts the same for all the other syntactic and interpretive cliticization failures in French, in none of which do dative and accusative strong pronouns become available: in adjectival modifiers, causatives, coordinate structures, and so on (Section 6.6). Kayne (2000: Chapter 9) reaches this conclusion more generally about French pronouns. Minimize Structure is too general.

What is needed is a global mechanism like Minimize Structure, yet restricted so as to respond to the PCC but not to these other problems. At the same time, it must be supple enough to encompass the various forms of the repair, from adding an ergative to strengthening a PP, each hopefully emerging from independent principles and parameters of a language. The guiding intuition here is (33):

- (33) The PCC repairs are the minimal addition of an Agree/Case capacity to a structure in response to the PCC as a failure of Agree/Case licensing.

Within the framework assumed here, the Agree/Case mechanism is driven by uninterpretable features, so (33) falls under the addition of an uninterpretable feature in response to a problem, $\Re$ in (1). $\Re$ finds itself narrowly circumscribed by the architecture of the system in which it is set: strong modularity and phase-based cyclicity. The next section develops these proposals.

- (1) $\mathfrak{R}$: An uninterpretable feature may enter the numeration only if needed for Full Interpretation of the syntactic structure built from it.

5.4 The Minimalist Program: Uninterpretability, Interfaces, and Repairs

5.4.1 Uninterpretable Features: *phi*, Case, and Agree

The Minimalist Program MP investigates the character of syntax in light of the systems with which it interfaces. The language faculty consists of systems specifying well-formed objects and of mappings between them. Among them are *syntax*, and the *external systems* of realization and interpretation, *PF* and *LF*, perhaps unitary, perhaps cover-terms for diverse systems such as phonology and morphology at PF, thematic and quantificational structure at LF. The PF and LF modules are distinct from syntax and from each other in virtue of their partly unique symbolic and/or computational primitives, and of their limited interaction (Chapter 2).

In the Government and Binding antecedent of MP, aspects of the external systems are duplicated within syntax. The Theta Criterion requires a predicate for an argument and the right number of arguments for a predicate in a phrase-structurally local relationship. However, the needs of arguments and predicates are an aspect of their interpretation, and under certain natural assumptions about interpretive mechanisms, the phrase-structural locality of their relationship follows (Heim and Kratzer 1998). Thus only those syntactic structures that meet the Theta Criterion can receive an interpretation, and it may be left to LF. Similarly, the ban on vacuous quantifications follows if the interpretation of natural language quantifiers requires a variable in their scope (see on both principles Chomsky 1981: 12, 29ff., 1986b: 95–101, 1995: 151f., 187f.). On the PF side, the same reasoning might shift linear order outside syntax (Kayne 1994, Uriagereka 1999a, b). Ultimately, the elimination of these aspects of language from syntax is parallel to that of others which are intuitively clearer, such as allomorphy.

The point of departure of the Minimalist Program is to fully assume the syntax-external character of these aspects of LF and PF (Chomsky 1995: 170f., 334–40). The resulting reduction leads MP to investigate the *strong minimalist thesis*: how far is syntax the optimal system to provide the external systems with legible objects. Legibility starts from the absence of features that are illegible or *uninterpretable* input to an external system. It may extend to conditions like linearizability for PF, thematic and quantificational interpretability for LF, while excluding others like phonotactics (Chomsky 1995: 4.1, 4.5, 341, 347, 2000a: 103, 111f., 120f., 2000b: 9–15, 2005: 10, 14–6, 2008: 138–41, 148; cf. Epstein et al. 1998: 122, Johnson and Lappin 1999: Chapter 3). The strong minimalist thesis inspires the guidelines in (34): lexical items consist only of properties with a role in the external systems, interpretable and realizable

information, and syntax arranges them but adds nothing (Chomsky 1995: 225, 2000a: 113):¹⁷

- (34) a. *Full Interpretation*: Objects submitted by syntax to external systems must be fully legible to them, both features and their arrangements.
 b. *Interpretability Condition*: Lexical items have no features other than those interpreted at the interfaces, properties of sound and meaning.
 c. *Inclusiveness Condition*: Syntax does not introduce new features, such as indices or deletion marks.

If the interpretable properties of lexical items are used only in the external systems where they are legible, syntax reduces to a bare assembly system: the combinator Merge, with simple choices of ways of application like no-tampering and cyclic spell-out, yielding recursive arrangements suitable to realization and interpretation. The interpretation of *wh*-words might require them to occur in an argument position and in a position scoping over a question (Karttunen 1977, Hagstrom 2003). Syntax may then operate without reference to these requirements. Of the objects it blindly constructs, only those with suitable *wh*-chains are interpretable. The same might go for other properties of *wh*-dependencies like superiority (Chomsky 1995: 387 note 69, 2008: 151f., 161 note 52, Ginzburg and Sag 2000: 6.6.2). If so, syntax need never refer to any properties involved in *wh*- or perhaps more generally A'-dependencies, any more than to thematic properties in selection (Chomsky 2008: 151f.).

However, a certain core of syntactic dependencies is not reducible to the external systems in this manner, among them phi-agreement, Case, perhaps A-movement (Chomsky 2000a: 119–22, 2000b: 12–5, 2001: 3–5, 2008: 154f.; cf. Culicover and Jackendoff 2005: 22). They have a syntactic profile like *wh*-movement, such as operation over phrase-structurally unbounded domains constrained by cyclicity and islands, unlike both PF (e.g. opaque agreement, Chapter 2), and LF (e.g. quantifier-variable binding, Chapter 1). Yet neither LF nor PF seem to motivate them. Chomsky (2000a: 113) takes them to render the Interpretability Condition (34)b 'transparently false'.

Examples (35) and (36) illustrate these observations. No interpretation accrues to *two primes* or *tabs* in virtue of being an agreeing nominative or a nonagreeing accusative, so these dependencies seem to lack LF motivation (Chapter 1). Even their A-movement does not seem driven by interpretation, particularly for idiom chunks like *tabs*, which lack referential and quantificational content (Chapter 6). PF requirements also may not be a good candidate,

¹⁷Distinct is the issue of how features legible only to a given external module are made invisible to other modules to meet Full Interpretation (Chomsky 1995: 4.1). They might be inserted 'late', after spell-out to their corresponding module, but only when not used in syntax; others must be replaced, for instance interpretable phi-features by their PF exponents, by a translation operation at the interface, Vocabulary Insertion (Halle and Marantz 1993, Bobaljik 2000, Fox 2000); see Section 6.3 on the LF analogue.

insofar as they may systematically lack overt expression, as Case does on English nonpronouns, agreement on English past tense verbs, and covert A-movement. Yet even when not overtly realized, the dependencies are ascertainably present, for instance by the Case Filter which can detect that a DP has Case (see below), and anaphora binding which reveals covert or ‘backward’ A-movement (Polinsky and Potsdam 2006).¹⁸

- (35) a. She showed [there to be **two primes-ACC** in the set].
 b. There **were** shown [to be **two primes-NOM** in the set].
 c. **Two primes-NOM were** shown [to be __ in the set].
 (for Icelandic examples with overt case, see Section 5.5)
- (36) a. I believe [there to have been **tabs-ACC** kept on Jane Fonda].
 b. There **are** believed [to have been **tabs-ACC** kept on Jane Fonda].
 c. **Tabs-NOM are** believed [to have been kept __ on Jane Fonda].

These observations do not mean that phi-agreement, Case, and A-movement cannot affect LF or PF, only that they do not reduce to their requirements. They can clearly be displayed at PF, and A-movement at least creates new scopal and binding positions at LF, as for *each other* in (37)a and (38)a. Yet binding is not the reason *for* A-movement, which occurs independently of it (Chomsky 2001: 32). Without A-movement, English phi-agreement and structural Case even seem to lack all detectable interpretive correlates, such as the capacity to create anaphora binding configurations in (37)b and (38)b (discussed in Chapter 1).

- (37) a. Some linguists-NOM_i seem.PL_i to them_j/ each other_i [_{t_i} to have been given good job offers].
 b. There seem.PL_i to them_j/ *each other_i) [to have been some linguists-NOM given good job offers].
- (38) a. The DA proved [two men-ACC_i to have been at the scene] during their_j / each other_i’s trials.
 b. The DA proved [there to have been two men-ACC_i at the scene] during their_j / *each other_i’s trials.

(Lasnik 1999: 138, 18, adapted)

Phi-agreement, Case and A-movement thus seem to have no motivation in PF or LF requirements. Chomsky (e.g. 2000a: 113, 118f.) concludes that they are driven by purely syntactic features of lexical items, features that are *illegible* to both the interfacing systems, PF and LF, in violation of the Interpretability Condition. Illegibility to PF/LF may be spoken of as *uninterpretability* to them, a term particularly suited for illegibility to LF. Syntactic features that are

¹⁸For the force of the Case Filter, see Section 5.9.

illegible to an interfacing system must be eliminated prior to it in order to meet Full Interpretation. To this need is attributed the core mechanism of syntax beyond pure Merge: the operation *Agree*, which relates an uninterpretable feature to an interpretable one, and removes it. Illegible features and their *Agree* relationships correspond to syntactic licensing in other frameworks, but their grounds are sought in the Full Interpretation requirement of the interfacing systems. Syntactic construction proceeds so long as there is material to assemble, but its output may not be legible.

In the implementation of these ideas, uninterpretable features are construed as feature types without values, for instance [number:] on T. They are present on lexical items as they enter syntax, and constitute a locus of its parametrization. They are legible neither to LF nor PF, for there is neither realization nor interpretation for valueless [number:]. The syntactic operation *Agree* provides a value by relating an uninterpretable feature to an interpretable one on another element, such as the interpretable [number:plural] on a noun. The newly-valued [number:-plural] is legible to PF. LF however still does not find it interpretable on T. To satisfy Full Interpretation, the valuation of a feature is accompanied by its deletion. Deletion occurs upon the *Transfer* (*Spell-out*) to LF. Thus *Agree-cum-valuation* has as consequence *Transfer* of the object containing the just-valued feature. If at *Transfer* a syntactic object meets Full Interpretation, it *converges*; otherwise it *crashes*. *Agree* and *Transfer* is the response of syntax to the presence of uninterpretable features on lexical items through the needs of Full Interpretation.

The phi-*Agree/Case* system in Chomsky (2000a, 2001, 2005, 2008) illustrates one way to concretize these ideas. DPs come with interpretable, valued phi-features, e.g. {[person:1], [number:PL]}. They also bear an uninterpretable, unvalued [Case:] feature, a stipulated lexical property of nominals. It needs to be valued and eliminated by *Agree-cum-Transfer*, which does the work of the *Case Filter* of Government and Binding. The ability to value [Case:] belongs to *Agree/Case loci*, including T and *v*, part of whose content is a valued, interpretable [Case] feature, such as [Case:NOM] on T (Pesetsky and Torrego 2001, 2004, 2007). The loci also come with unvalued phi-features, such as {[person:], [number:]}. They need to be valued from a DP, implementing the *Inverse Case Filter*. Examples (39) and (40) illustrate these requirements. In (39), uninterpretable Case on *two primes* requires *Agree* with the matrix *Agree/Case* locus *v*. Locality only allows this if there is no DP in between. When the applicative argument *the group* intervenes, Case on *two primes* is not valued and deleted, and Full Interpretation fails. Similarly, in (40) the uninterpretable phi-features on the matrix T must *Agree* with the interpretable phi-features of a DP, and Full Interpretation fails if they find no DP through which to be valued and deleted.¹⁹

¹⁹Section 5.9 returns briefly to Case Filter effects; for the phenomena that fall under the (Inverse) Case Filter, see Pesetsky (1982: 2.5), Chomsky (1986b), Baker (1988), Chomsky and Lasnik (1995), Bošković (1997, 2002), Lasnik (2008). For the Inverse Case Filter constraining impersonal passives like (40)b, see Rezac (2004a: Chapter 5), but cf. also Pesetsky (1982: 2.5).

- (39) a. She showed (*the group) [there to be **two primes**-ACC in the set].
 b. There were shown (*the group) [to be **two primes**-NOM in the set].
 c. She showed (*the group) [**two primes**-ACC to be in the set].
 d. **Two primes**-NOM were shown (*the group) [to be __ in the set].
 (cf. e. **Two primes**-NOM were shown (to the group) [to be __ in the set].
 f. She showed ((to) the group) [that two primes were in the set].)
 (cf. Postal 1993)
- (40) a. He_i has been spoken to t_i about the history of Shuruppak.
 b. *There/*It has been spoken about the history of Shuruppak.

The system operates cyclically. As each lexical item with an unvalued feature is introduced into the derivation, it triggers the operation *Agree*. The unvalued feature, or *probe*, seeks a valued feature *matching* its type, the *goal*, under the conditions on *Agree* (41). Unvalued phi-features on an *Agree*/Case locus seek and receive values from the closest DP, and the Case of the DP receives a value from the locus. In this case the driving force of the system is the phi-probes. Transfer must occur on the same timing-unit or cycle as *Agree*, before the knowledge that the probe was unvalued is lost (Chomsky 2000a: 132, 2001: 5, 2008: 154f.). *Agree* may also lead to the (re-)Merge of the goal at the position of the probe, giving movement, but the details of how and when this occurs are not relevant here.²⁰

- (41) Matching is a relation that holds of a probe P and a goal G. Not every matching pair induces *Agree*. To do so, G must (at least) be in the *domain* D(P) of P and satisfy locality conditions. The simplest assumptions for the probe-goal system are[:]
- a. Matching is feature identity [of type, not value, p. 124].
 b. D(P) is the sister of P.
 c. Locality reduces to ‘closest c-command.’

(Chomsky 2000a: 122)

²⁰Phi/Case valuation may go together intrinsically (Frampton and Gutmann 1999), or because *Agree* maximizes valuations as soon as it relates two lexical items (Rezac 2004b). The [Case:] feature of DPs might be able to probe as well, depending on how the relationship of phi and Case is understood. However, [Case:] might never be in a position where it could find a goal. If a head can probe only within its maximal projection, neither N nor D can ever see into the clause, save for a bare D, cf. Chomsky (2000a: 125, 2001: 16). N might probe its CP/IP complement, but this fails if CPs are phases and Ns do not take IP (raising, ECM) complements because they cannot assign Case, **John's appearance to leave* (Chomsky 1986b: 3.5.2.5; cf. Abney 1987, Sichel 2007). On a proper understanding of the phi-Case link depends the possibility that other probes than phi establish the *Agree* needed for Case assignment (Rezac 2004b).

In this sketch, there are many options and alternatives explored in related work. Those that concern the Agree/Case approach to the PCC are discussed in the literature cited in Section 5.2. The PCC is the failure of a [+ person] DP to be licensed if it fails to Agree for [+ person], due to an intervening dative. Let us adopt the following hypotheses, diagrammed in (42):

- Only [+ person] DPs have [person] and [number], others only [number].
- [person]-bearing DPs need Agree for [person] to be Case-licensed.
- Datives that create the PCC block Agree for [person] by having some [person] but not [number] specification visible to Agree; call this specification ‘+’. It is left open whether datives need [Case].

$$(42) \quad \{[\pi:], [\#:], [\kappa:\text{ACC}]\}_v \dots \{[\pi: +], ([\kappa:])\}_{\text{DAT}} \dots \{([\pi:1]), [\#:\text{PL}], [\kappa:] \}_{\text{DP}}$$

(Notation: π person, number, κ Case)

The failure of [person] Agree with a DP must lead to failure of Case assignment to it. It might be easiest to suppose that each of [person] and [number] on a DP comes with its own unvalued [Case]. Agree for [number] then values the [Case] associated with [number], but not with [person]. Better explored for the PCC is Chomsky’s (2000a, 2001) proposal (43) (Anagnostopoulou 2003: 274, Béjar and Rezac 2009: 46f.).²¹

- (43) DPs have a unique Case feature. Phi-Agree can value Case only if it occurs for all the phi-features of a DP.

These technical proposals have as consequence that the PCC can be viewed as a failure of Case licensing. The repairs work by adding a Case licensing capacity.

5.4.2 The Interface Algorithm $\mathfrak{R}$

In syntactic structures that meet Full Interpretation, each DP needs to have its [Case:] valued and deleted, and thus must be within the reach of the phi-probe of an Agree/Case locus. The inventory of Agree/Case loci appears to be parametrically fixed per linguistic system. In English, French, or Icelandic finite clauses, they are T, transitive *v*, and full P. Closely similar languages may add for instance

²¹To understand matters better, partial agreement with case-agreement mismatches seem a promising domain (Rezac 2003, 2004a: Chapter 5). If datives that intervene in the PCC need Case licensing, the same probe values [Case:] both to the dative and to a lower DP. The [Case] of the probe is interpretable and can be given multiple times (cf. notes 48, 29, 9). Agree with the dative occurs for [person], with the lower DP for [number], and to both Case is assigned. Cf. Chomsky (2001: 17f., 2008: 142) for the configuration $v_{[Case:\text{ACC}]} \dots \text{participle}_{[Case:]} \dots \text{DP}_{[Case:]}$. An overt reflex might be multiple Case assignment stacking NOM/ACC on top of DAT, on which see Yoon (1996) (but cf. Schütze 2001).

the v of unaccusative psych-verbs in Faroese, of ‘fate’ unaccusatives in Icelandic, and so on (e.g. Barnes 1986, Lavine and Freidin 2002, Sigurðsson 2010).

PCC repairs indicate that not all Agree/Case licensing is fixed lexically. Accusative case surfaces in Finnish unaccusatives just to repair the PCC, likewise for ergative case and agreement in Basque and Chinook. A new Agree/Case relation appears when Case-licensing would fail, but in a ‘conservative’ way that respects the potential of the repaired structure. This can be understood in terms of the Agree/Case potential of the pre-repair structure. An unaccusative has the same potential loci as a transitive, v and T, with their interpretable Case features, for instance [Case:NOM] on T, since these reflect interpretable content such as Tense. However, only one of them is *active* in an unaccusative, T_{NOM} or v_{ABS} , by having a phi-probe [ϕ]. The repair activates the other, v_{ACC} or T_{ERG}, through adding a phi-probe. It does so in PCC contexts, where a DP would otherwise fail to have its uninterpretable [Case:] valued.

This is a global mechanism where a structure is licensed by the failure of another. A global mechanism specifies a set of structures or derivations, the *reference set*, and a *metric* that selects the winner (Reinhart 2006). For instance, for Minimize Structure in Section 5.3, the reference set is the set of convergent functional architectures of a lexical item under a given interpretation, and the metric picks the smallest. The global principles of Chomsky (1995: Chapter 4) depend on the concept of the *numeration* (44) to define the reference set.

- (44) *Numeration*: The numeration is the interface between the syntax and the lexicon: a one-time selection of lexical items to which syntactic operations apply up to Transfer. Syntax does not otherwise access the lexicon.

Chomsky (1995: 294, 377) proposes the global principle (45) that is a good starting point for the mechanism of PCC repairs. It compares the structures constructible from a numeration enriched or not with an element α , and licenses the enrichment only if it has an effect on PF or LF, including convergence. The reference-set is the set of structures built from a given numeration that have the same output; the metric picks the structure without α if there is one.

- (45) (76) α enters the numeration only if it has an effect on output.

With regard to the PF level, *effect* can be defined in terms of literal identity: two outputs are the same if they are identical in phonetic form, and α is selected only if it changes phonetic form. At the LF level the condition is perhaps slightly weaker, allowing a narrow and readily computable form of logical equivalence to be interpreted as identity. Under (76), the reference set is still determined by the numeration, but output conditions enter into determination of the numeration itself; they affect the operation that constructs the numeration from the lexicon.

(Chomsky 1995: 294)

A key use of principle (45) in Chomsky (1995) is to add a feature to drive covert quantifier movement, which Fox (2000) and Reinhart (2006) argue to take place only if not logically vacuous. The feature is added only if it has an effect on LF. Krifka (1998) develops a parallel analysis for scrambling in German if it has an effect on focus assignment at PF. Chomsky's (2000a: 109f., 2001: 34) subsequent use of similar principles in (46), (47) is restricted to such cases. In them α is always an uninterpretable feature, a probe. The principles license the addition of a probe if operations driven by it affect PF or LF. The formulations differ from (45) in adding the probe to the edge of a given structure built out of a numeration, the *phase*, rather than to the numeration itself.

- (46) (24) The head H of a phase Ph may be assigned an EPP-feature. [Note:] Parametrically varying properties of H enter into the application of [this principle].

One might also explore a generalization of the idea that operations can apply only if they have an effect on outcome [. . .] This would translate here into restricting (24) to the condition in which it permits IFM [Indirect Feature Movement, i.e. successive-cyclic movement] or specific interpretations associated with peripheral positions (e.g., specificity and informational conditions on OS [Object Shift]).

(Chomsky 2000a: 109f., 144 note 50)

- (47) Optional operations apply only if they have an effect on outcome: in the present case, v^* may be assigned an EPP feature to permit successive-cyclic A' -movement or Int [an interpretation assigned to the EPP position of v^*] (under OS [Object Shift]).

(Chomsky 2001: 34)

These proposals go in the direction of what is needed for last-resort Case licensing, for they are used for similar last-resort addition of uninterpretable features as probes. The initial formulation of a mechanism to subsume both their uses and the PCC repair is (48):

- (48) $\Re$ (preliminary formulation): An uninterpretable feature may enter the numeration only if it has an effect on output.

The proposal limits $\Re$ to affecting the numeration and to adding uninterpretable features. On the first point, $\Re$, along with (45)–(47), differs from the earlier global mechanisms of Chomsky (1995: Chapters 2 and 3) such as Shortest Move in not affecting the syntactic computation itself. The second point derives the conservativity of PCC repairs. $\Re$ can activate a potential Agree/Case locus present in a structure by adding a phi-probe to it, turning T to T_{ERG} , v to v_{ACC} , P_{DAT} to P_{full} . It cannot however add or delete the interpretable content of a structure, unlike (45): add a new potential Agree/Case locus such as a second

T, enrich or replace P_{DAT} with P_{pour} ‘for’. Thus $\mathfrak{R}$ can only activate the syntactic dependencies already potential in a structure. One might entertain principled departures from this position: the addition of an expletive-like syntactic terminal to host the added uninterpretable feature, or even of a contentful terminal if UG principles specify a pairing between uninterpretable and interpretable features, for instance between uninterpretable [*wh*:] and interpretable [C_Q] in questions (cf. Chomsky 1995: 4.2.2, 2000a: 128). It seems unnecessary, although the issue will reemerge.

These two restrictions are imposed on $\mathfrak{R}$ by modularity. The status of syntax as a module restricts $\mathfrak{R}$ to affecting its numeration. $\mathfrak{R}$ cannot see inside the syntactic computation to change its operations or their outputs. The modular status of the lexicon may be responsible for the restriction of $\mathfrak{R}$ to uninterpretable features. The lexicon fixes the groupings of interpretive, realizational, and uninterpretable features drawn from UG primitives at acquisition. The numeration is its interface with syntax, selecting items at the start of the syntactic computation. Thereafter $\mathfrak{R}$ can affect the numeration, but the lexicon is a closed module where $\mathfrak{R}$ cannot seek for other lexical items. Uninterpretable features can be accessed from UG inventory. Other features are inaccessible because their addition would demand the construction of new lexical items, a procedure not available on-line after acquisition.

The most evident effect of modularity is one that has been omitted from the preliminary formulation. Modularity greatly constrains the ‘effect on output’ that permits $\mathfrak{R}$ to apply. In (45)–(47), the ‘effect on output’ may appear transmodular, and that should be a cause for concern. Chapter 2 has argued for phonology- and morphology-free syntax, which cannot respond to PF requirements even if they lead to ineffability. Various interpretive requirements also may be invisible to syntax, such as Condition B (Section 4.6). These must all be excluded from ‘effects on output’. Modularity suggests that $\mathfrak{R}$ should only refer to the interfaces of syntax with the external systems, not to the internal or external requirements of the latter. $\mathfrak{R}$ only sees whether the output of syntax meets the input requirements of the external systems, whether it is legible to them: *Full Interpretation*. A minimal requirement for Full Interpretation is the absence of illegible features, like unvalued [Case:]. Problems that occur when PF attempts to realize the output, and LF attempts to interpret it, or other cognitive systems attempt to use the result, are invisible. However, Full Interpretation need not reduce to the absence of uninterpretable features. Other legibility requirements have been proposed and may cover (44)–(46) (see Section 5.9): thematic interpretability (Chomsky 1995: 347, cf. 2000a: 111f.); linear order (Chomsky 1995: 221); the need to receive both QR and non-QR structures if the two are not logically equivalent (Reinhart 2006: 1.3, 2.7).

Taken together, these restrictions make of $\mathfrak{R}$ an *interface algorithm* outside syntax and lead to the formulation in (1), repeated below:

- (1) $\mathfrak{R}$: An uninterpretable feature may enter the numeration only if needed for Full Interpretation of the syntactic structure built from it.

$\mathfrak{R}$ takes the numeration and the structure built from it as input to PF and LF, and adds a feature to the former if needed for Full Interpretation of the latter. The syntactic computation and the external systems are impenetrable to $\mathfrak{R}$. All the information and effects of $\mathfrak{R}$ are localized in the interfaces of syntax with the lexicon, LF, PF. The appearance of globality or look-ahead of the PCC repairs or successive-cyclic *wh*-movement is deceptive. Syntax itself is not global. This construal of $\mathfrak{R}$ as an interface algorithm fits Reinhart's (2006) view of global mechanisms as last-resort repairs to meet interface requirements (Section 5.9).

So far undiscussed is the proposal that $\mathfrak{R}$ affects the numeration, as in (45), rather than edge of the syntactic structure built from it, (46) and (47). Both might be accommodated by the modularity of syntax, for the computation from the numeration is not affected in either case. Empirically, the two options have different effects, but only under certain assumptions. The addition of a feature to the numeration may lead to the construction of a radically different structure than would be possible otherwise, despite the two having the same interpretable content. In PCC repairs, it will be manifest in the creation of a new Agree/Case domain out of a part of the numeration, containing that part of its content that would otherwise block an Agree/Case relationship for the rest. This may affect the interior of the structure built up from the unmodified numeration, not only at its edge. Thus $\mathfrak{R}$ opens up a new derivational path for the numeration. We will see that $\mathfrak{R}$ could be made to operate in the manner of (46)/(47) at the edge of already built-up structures, at the cost of a certain counter-cyclicity, perhaps allowing elimination of its reference to the numeration. If $\mathfrak{R}$ does operate on the numeration, cyclicity is strengthened, and the difference increased between $\mathfrak{R}$ and syntax which operates cyclically.²²

Finally, it is left open for now how $\mathfrak{R}$ picks a particular uninterpretable feature and how $\mathfrak{R}$ is parametrized. The formulation allows any feature to be added in response to any failure of Full Interpretation. This will give $\mathfrak{R}$ the scope to follow up on (46), (47) for phenomena like successive-cyclic movement in Section 5.9. The investigation of $\mathfrak{R}$ in the following sections concentrates on the Agree/Case system. In it, it remains unclear whether phi-probes are the only probes that can value Case or if the freedom to use other probes would lead to unwelcome possibilities. It seems possible to leave the identity of the probe(s) $\mathfrak{R}$ that adds free. Other considerations may decide, since the addition of a probe will lead to the creation of phases, whose probes may themselves be partly fixed by convergence (cf. Abels 2003). On the other hand, the need to parametrize $\mathfrak{R}$ will become clear as we proceed, and it is formulated as a property of lexical items in Section 5.9.

²²By affecting the numeration and creating a new derivational path, $\mathfrak{R}$ differs from a constraint on the numeration that makes sure that there is a probe for every item that needs it, Heck and Müller's (2003) *Phase Balance* for (46). However, the two concepts are related.

5.4.3 Phase Theory

$\mathfrak{R}$ is set in the current theory of numerations and the objects built from them, phases (Chomsky 1995: 4.2.1, 2000a, 2001, 2008). A numeration consists of the building blocks of a given unit of Transfer (spell-out). It starts with an initial selection of items from the lexicon. Through the application of syntactic operations, its elements are progressively replaced by structures assembled from them. These intermediate collections of constructed objects and remaining lexical choices may continue to be called the numeration, or the *workspace*. The eventual result of the assembly is Transferred to the interfacing system as a *phase*. The construction of a structure from one numeration may hook up with the units built and Transferred from another, as when a verb embeds a CP. These form part of the workspace, or numeration in an extended sense, including both the initial set of lexical choices and objects already assembled and available.²³

Several options have been entertained in defining the unit of Transfer, the phase, and thus the numeration from which it is constructed. Extrinsic definitions posit that certain lexical items like C define the phase; intrinsic ones derive phasehood (Chomsky 2000a: 106–8, Uriagereka 1999a, b). I will adopt the intrinsic view that phases are defined by Agree. The uninterpretable features valued by Agree must be deleted on the same cycle when they are valued, since subsequently the distinction between valued uninterpretable and interpretable features is lost (Chomsky 2000a: 131, 2001: 5, 2008: 154f., Epstein and Seely 2002). Yet other operations might or might not be allowed to take place on the *same* cycle as Agree, in parallel with it; for instance, while T Agrees, the CP layer might be Merged and embed it (Chomsky 2001, 2007, 2008, Hiraiwa 2010). We will have occasion to return to this issue for $\mathfrak{R}$.²⁴

The construction of a syntactic object from the numeration terminates in its Transfer to the interfacing systems. In the model of Chomsky (2000a), (49), the lexical item that triggers Transfer (upon Agree), the *head of the phase* H, sends

²³In this terminology, *numeration* replaces the *lexical array* of Chomsky (2000a). It seems innocuous, since the global mechanisms of Chomsky (1995 et seq.) like Merge-over-Move hold over what Chomsky (2000a) calls lexical arrays; contrast Heck and Müller's (2003) Phase Balance that specifically depends on the entire numeration of a *sentence*, not a phase. Other work continuously accesses the lexicon with no numeration, and uses *workspace* for the structures progressively built from it (Collins 1997, 2002, Frampton and Gutmann 1999).

²⁴The notion of the cycle for this purpose is to be distinguished from other uses of the term. For instance, the Earliness Principle might require a probe to Agree upon Merge, or as soon as possible in the derivation, or while it is the label, which will dynamically restrict its search-space to certain objects such as its sister or its maximal projection. This does not say anything about the possibility of building up other structures or the Agree of other probes at the same time, so a probe on T can be restricted to the TP while contemporaneously (co-cyclically) C is Merged with the TP and its probe builds [Spec, CP]. For discussion of the search-space of a probe, cf. Chomsky (1995: e.g. 234f., 2000a: 132ff.), Richards (1999), Rezac (2003), Béjar and Rezac (2009).

its complement γ to the external systems: H Transfers γ . The Transferred material γ is removed from syntax and becomes invisible to it. This invisibility is the *Phase Impenetrability Condition*. The specifiers of the H, β in (49), are not Transferred with γ . They belong to the *edge* of the phase that remains visible to operations in the next higher phase, to α and Z, to be Transferred with it. This edge remains accessible for inclusion in objects constructed from other numerations, such as that of Z/ α in (49). The edge of a completed phase remains in the workspace, into which the next numeration places its initial selection of lexical items, and in which assembly proceeds (Chomsky 2000a: 106).

(49) For [_{NP} Z α [_{HP} β [H γ]]] (Z, H phase-heads): α , Z see only β , H.

The head of the phase, H, ought to be Transferred with its complement, because it is H's valued uninterpretable features that need to be deleted. However, H ought to also remain visible to selection from the higher phase. Richards (2007) and Chomsky (2007, 2008) resolve this tension by giving each phase a pair of heads in a selectional relationship, such as C-T. The lower head (T) Agrees and undergoes Transfer, and the higher head (C) remains at the edge. An alternative is that Transfer strips the valued features from the phase head and leaves the interpretable ones. Here it will principally matter that Agree triggers Transfer.

When the complement of a phase-head Transfers and fails to meet Full Interpretation, $\mathfrak{R}$ can modify the numeration of the current phase by adding an uninterpretable feature to its elements, up to and including the edge and head of any embedded phase. For Z in (49), this is α , β , H but not γ , which has already been Transferred. In this, $\mathfrak{R}$ differs from (46), (47) where only the current phase-head Z may be given a feature.

There are alternative conceptions of phase-theory or cyclicity, and not all the elements of the model sketched here play an equal role in this chapter. The numeration and the evaluation of its convergence upon Agree play a key role. The Phase Impenetrability Condition does not. Chomsky (2000a) derives its effects in the phi-Agree/Case/A-movement system from the feature-relativized locality of the probe-goal search, and empirical grounds for this position seem to me promising (cf. Rezac 2004a: Chapter 2, 3, Bošković 2007: 5.2, Chomsky 2008: 143).²⁵

²⁵Other work seeks precisely the opposite reduction, of intervention to phasehood, Müller (2004). Reasons to think that feature-relativized intervention is ineliminable rest in Rizzi's (1990) separation of locality condition on A- and A'-movement, as in (i). For the phi/Case/A-movement system, an applicative object is an intervener in (i-a), but A'-extraction does not see it in (i-b). Abandonment of impenetrability would be required here if phases were downsized, to the XP in Müller (2004), or to every operation in Epstein and Seely (2002). A failed Transfer must then be tolerated if some Transfer later converges, which again seems compatible with what follows.

- (i) a. Hervor_i was given t_i Tyrving.
- b. What_j was Hervor_i given $t_i t_j$?

5.5 Dependent Case as Last-Resort

Unaccusatives make a convenient starting point for analysing PCC repairs, because their Case-based character is transparent. The repairs show up as the *transitivization* of the Agree/Case structure of an unaccusative. This section develops the theory of the difference between the Agree/Case systems of unaccusatives and transitives, and the next section applies it to the repairs. The theory needs to single out the extra ergative and accusative Agree/Case relations that transitives have over unaccusatives, and allow its introduction by the repair mechanism $\mathfrak{R}$. These desiderata fit the proposal known as *dependent Case* in the literature. $\mathfrak{R}$ makes for an attractive mechanism of dependent Case not only in PCC repairs, but in general. Through $\mathfrak{R}$, the ergative and accusative are construed as last-resort Agree/Case relations that emerge when needed, in PCC repairs and plain transitives alike.

In adding ergative/accusative to unaccusatives, the unaccusative PCC repairs manipulate *structural Case*, or more properly, *structural Agree/Case relations*. The concept of structural Case reposes first and foremost on the alternation of case morphology and agreement such as those in Icelandic (50). *Some boats* alternates between an agreeing nominative and a nonagreeing accusative according to as it is embedded under the active or passive of the ECM verb *believe*. The alternation occurs over an indefinite phrase-structural distance, and the alternating argument has no argumental, aspectual, or any other apparent interpretive relationship to the matrix verb (cf. the (37), (38) above and [Chapter 1](#); for Icelandic varieties with an overt expletive, see Thráinsson 2007: 482.).

- (50) a. Hún taldi [hafa verið keypta einhverjir báta].
 she believed to.have been bought.PLM.A several boats(M).PL.A
 b. Það voru taldir [hafa verið keyptir
 there were believed.PLM.N to.have been bought.PLM.N
 einhverjir bátar].
 several boats(M).PL.NOM
- (51) a. Hún taldi [hafa verið bjargað einhverjum bátum].
 she believed to.have been rescued.DFLT several boats(M).PL.D
 b. Það var talið [hafa verið bjargað
 there was believed.DFLT to.have been rescued.DFLT
 einhverjum bátum].
 several boats(M).PL.D

(Icelandic, Sigurðsson 1991: 355f.)

In contrast to structural Case stands *inherent Case*. In (51), the verb *rescue* assigns dative to *some boats* as its *thematic argument* in a phrase-structurally local relationship. The embedding of the dative in different structural Case environments has no power to change the dative. There are different ways to

conceive of inherent Case. For instance, the head Appl of applicative constructions might select a preposition-like dative morpheme in its specifier. Different mechanisms may be appropriate, for instance for dative direct versus applicative objects. However, all are phrase-structurally local, go to an argument in virtue of its interpretive relationships, typically thematic or aspectual, and block structural Case.²⁶

It is structural Case whose characteristics appear in the unaccusative PCC repairs, as Finnish (52) illustrates. The nominative is assigned to the embedded object *se* by the matrix raising verb *täytyy* across a sequence of subjectless infinitives. In the PCC context, when the object is [+person] *sinut* below the applicative argument *minun*, the repair switches it to accusative. Both the nominative and the repair accusative relationships occur across an indefinite phrase-structural distance without an interpretive relationship to the matrix clause.

- (52) Minu-*n*_i täyty-y *t*_i men-nä kaupunki-in näkemään **sinu-t** / **se**
 me-GEN must-3SG go-INF city-ALL see-INF you-ACC / it-NOM
 I must go to the city to see you / it.

(Finnish, Section 5.5)

The Agree/Case relations added to unaccusatives by the PCC repair are the accusative in the nominative-accusative system of Finnish, and the ergative in the ergative-absolutive one of Basque and Chinook. These two relations share the important ‘odd man out’ property. The accusative is the relation of the transitive object O, beside the nominative common to the subject of unaccusatives S and transitives EA, (53)a; the ergative is the relation of the transitive subject EA, beside the absolutive common to S and O, (53)b. The ergative and

²⁶The purpose of this discussion is to highlight the distinctive character of structural Case. It does not preclude various possibilities for inherent Case, including unification with structural Case. Consider movement to the *nonthematic* object of a preposition known from Irish (McCloskey 1984) and English (i) (Postal 2003: Chapter 2). It seems implementable through P-DP Agree and Move, the same mechanisms as for structural Case (Runner 2006: 206f., Rezac 2006: Chapter 3). Yet the outcome is a DP in phrase-structurally local relationship to P and embedded in a PP that plausibly prevents further structural Case assignment. If the P is a prepositional complementizer, we get the oblique case often assigned to the subjects of nonfinite or modal structures, under a local but nonthematic relationship to a high functional head such as C, analogous to a prepositional complementizer in terms of its relationship to (i) (Moore and Perlmutter 2000, Sigurðsson 2002, Franks and Lavine 2006, but see McCloskey 2005 for its assignment at a distance). If instead of P we take *v* or a head selected by it, the outcome is the dative of Icelandic direct objects, dependent on *v* to which it bears no thematic relation, unlike the dative of indirect objects (Svenonius forthcoming; Sigurðsson 2010). True inherent Case might differ only in P selecting its DP and Merging with it without Move.

- (i) Don't count **on there** to be that many supporters in the organization.

(Postal 2003: 92)

accusative are the extra Agree/Case relation that transitives have over unaccusatives. This is Burzio's Generalization in nominative-accusative systems, and its mirror image in ergative-absolutive ones, and the keystone of the theory of dependent Case.

- (53) a. Accusative system: $\boxed{\text{EA}} \boxed{\text{S}}_{\text{T-nom}} \text{O}_{\text{v-acc}}$
 b. Ergative system : $\text{EA}_{\text{T-erg}} \boxed{\text{S}} \text{O}_{\text{v-abs}}$

The theory of dependent Case presupposes that the ergative is a structural Case, as are uncontroversially the accusative, nominative, and absolutive. The assumption needs some defence. It may be provided from Basque, which will be the language to illustrate the theory of the dependent ergative, and later of unaccusative repairs by it.

A variety of analyses exist for ergative-absolutive systems, and appear to match the underlying variety of the systems themselves. In some, the ergative is inherent Case (Massam 2006, Anand and Nevins 2006, Woolford 1997, 2006 Legate 2006, 2008). In others it is robustly structural. The structural character of the ergative Agree/Case relation in Basque may be illustrated briefly in (54) and (55); it is further discussed in Albizu, Etxepare and Rezac (in preparation), drawing notably on Artiagoitia's (2001a, b) study of raising-to-ergative and ergative expletives.

- (54) a. [Nesk-ak nekatuta dire-la] iruditzen zai-t
 girls-ABS tired R.3pA-that seeming R.3sA.1sD
 It seems to me like/that the girls are tired.
 b. Nesk-ak_i [nekatuta (dire-la)] iruditzen zai-zki_i-t.
 girls-ABS_i tired R.3pA-that seeming R.3pA_i.1sD
 The girls seem to me (like they are) tired.
- (55) a. [Nesk-ak nekatuta dire-la] ematen du
 girls-ABS tired R.3pA-that seeming R.3sE
 It seems like/that the girls are tired.
 b. Nesk-ek_i [nekatuta (dire-la)] ematen du-te_i.
 girls-ERG_i tired R.3pA-that seem R.3pE_i
 The girls seem (like they are) tired.
 c. [Kontu-ak_i hobetzen ari dire_i-la] ematen du-te_i
 matters-ABS getting.better R.3pA-that seeming R.3pE_i
 Matters seem like they are getting better.

(Basque)

In (54) is the raising-to-absolutive verb *iruditzen*. In (54)a it takes a finite complement and a silent 3SG.ABS expletive controls the agreement. Alternatively in (54)b (without *direla*), it may take a small clause complement and raise its subject to the matrix absolutive relation, or (with *direla*) a finite complement and copy-raise its subject. Perfectly parallel to it is the raising-to-ergative verb *eman* in (55), but now the matrix Agree/Case relation is ergative. In (55)a,

agreement indicates a 3SG.ERG expletive. In (55)b, the subject of the small or finite clause complement (copy-)raises to matrix ergative case and agreement. Artiagoitia (2001a, b) carefully shows that such (copy-)raising is distinct from the thematic use of *seem* in the sense of *give appearance*, because the matrix verb bears no thematic relationship to the raised subject. Remarkable support can be adduced from (55)c: matrix ergative agreement occurs with the absolutive subject of an embedded clause, similar to English *There seem like there are some books on the shelf*. The matrix clause cannot have any thematic argument corresponding to the ergative, due to Condition C (cf. *He_i seems like John_i is tired*).²⁷

This and other evidence shows that the ergative and absolutive Agree/Case relations in Basque are structural, like the nominative and accusative in Icelandic. There are other systematic parallelisms between the Basque ergative-accusative system and typical nominative-accusative ones, such as the existence of only one instance of each Agree/Case relation per CP, the hierarchical configurations of the core arguments where EA c-commands O, and the acquisition of true subjecthood properties by EA and S but not O. They suggest a parallel theory of both systems (Bobaljik 1993, Laka 1993b, 2000, cf. Ortiz de Urbina 1989, Oyharçabal 1992, Legate 2006, 2008). In both, there are two active Agree/Case loci. One is lower and relates to O, $v_{ACC/ABS}$; the other is higher and relates to EA, $T_{NOM/ERG}$ (we return to other possibilities such as Fin_{ERG} , Asp_{ABS}). The *Obligatory Case Parameter* (57) switches between nominative-accusative and ergative-absolutive systems (Levin and Massam 1984, Bobaljik 1993, Laka 1993b, 2000).

- (56) Nominative-accusative Ergative-absolutive
 a. T_{NOM} EA v_{ACC} O b. T_{ERG} EA v_{ABS} O *Transitive*
 c. T_{NOM} v S d. T v_{ABS} S *Unaccusative*
- (57) *Obligatory Case Parameter* (descriptive, see (60)): T, v are potential Agree/Case loci. If there is only Agree/Case relation active, it is parametrically: v (v_{ABS} , ergative system) / T (T_{NOM} , accusative system).

The Obligatory Case Parameter states which potential Agree/Case locus is active when there is only one DP, in unaccusatives; below, it will be implemented as a lexical property of T/v. The other Agree/Case relationships, the accusative and the ergative, must be limited to the remaining argument of

²⁷For more on Basque raising, see Rezac (2008a), Albizu (2009), and for Basque generally, Section 5.6. There is idiolectal variation in Basque on the availability of copy-raising (Argiaitoigita 2001a, b) and more so for remote agreement, as in English (Potsdam and Runner 2001). The structural character of the ergative does not bar relating it to prepositional cases through a high clausal head akin to a prepositional complementizer, cf. note 26 and Rezac (2006). For evidence from dative interference that the ergative is higher than the dative, see Rezac (2008a: 4.4).

transitives. Their distribution could be stipulated in the lexicon by specifying a phi-probe on the transitive but not unaccusative *v* in nominative-accusative systems, and on T selecting a transitive *v* in ergative-absolutive ones (Albizu and Fernández 2006). However, this does not capture the parallelism between two. Both are relations that surface only when there remains a DP after the obligatory relation has been used up. The proposals of Marantz (2000), indirectly, and directly Levin and Massam (1984), Bitter and Hale (1996) and Laka (2000), aim to do that. They group the ergative and accusative as *dependent Case*, which becomes automatically available if there remains a DP after the obligatory Case has been discharged by a distinct DP, its *Case-competitor*, independently of any selectional relationships. The pattern of PCC repair in unaccusatives is just such a last-resort emergence of ergative and accusative when the obligatory relation fails to license a DP in the PCC.²⁸

Dependent Case demands an extension of syntax beyond ordinary Agree/Move dependencies, because it does not have a uniform path-theoretic relationship to the Case-competitor or the obligatory Case on which it depends. In (56), the ergative *c*-commands the absolutive, but the accusative is *c*-commanded by the nominative. Only one of them can easily be made to depend on a given obligatory Agree/Case relationships while obeying the Path Condition (28). The ergative EA is on the path from the C/T/*v* system to O and can be made to depend on a relationship between them (Bobaljik and Branigan 2006). The accusative O is below the path from C/T/*v* to EA, so its dependence on their relation would be countercyclic (Harley 1995: 4.3 note 104). Instead, the theory of dependent Case proposes that distribution of the ergative and accusative is 'global'. They depend on the Agree/Case relation of another argument in the same CP, without a fixed path-theoretic relationship to it. The same conclusion has been drawn about PCC repairs in Section 5.3, and the same mechanism will be useful for them.

To integrate dependent Case, different extensions of the Agree/Case mechanism beyond standard Agree/Move have been explored. Marantz's (2000) seminal proposal specifies an algorithm that examines the domain of A-movement for a distinct DP, which is usually the Case-competitor. If it finds one, it assigns dependent Case upward from V + INFL to the EA in an ergative system, downward to the O in an accusative one (cf. Bobaljik 2008, Harley 1995: 4.2, 4.3, 5.1). The algorithm does not use syntactic mechanisms at all, because it operates within a post syntactic morphology given the power to span the entire domain of A-movement. Reasons to reject such a morphology have been discussed in

²⁸Other instances of the emergence of dependent Case without selectional relationships will be seen in Section 5.6. See Harley (1995: 4.2) for discussion of the other original justification of dependent Case: the insensitivity of nominative to structural positions, so that it falls to the highest Caseless DP in the domain of T while the next lower one gets accusative (cf. Yip et al. 1987, Maling 1993). It loses its force with the replacement of spec-head checking by Agree. Distinct from dependent Case is default Case, accusative in English, nominative in Icelandic, absolutive in Basque, assigned at realization in configurations independently licensed for the Case Filter (Schütze 2001, Quinn 2005, cf. Bitter and Hale's 1996 structural oblique).

Chapters 2 and 3. Bitter and Hale (1996) enrich syntax with an analogous (nonglobal) mechanism for detecting Case competitors to a DP in the domain of A-movement.²⁹

The proposal here is to subsume dependent Case and PCC repairs alike under $\Re$, which permits a last-resort Agree/Case relation only when another fails. (58) has the consequence (59).

- (58) $\Re$ (for Agree/Case): A uninterpretable feature (probe) may enter the numeration on a potential Agree/Case locus if needed for Case-licensing.
- (59) Dependent Case exists only if a DP is not licensed by obligatory Case.

This keeps the fundamental insight of dependent Case, but refers to a Case-competitor indirectly, as the DP that absorbs the lexically-specified obligatory Case, leaving another DP in need of Case licensing. $\Re$ applies to a numeration whose Agree/Case properties are fixed by the lexicon of a language. The lexicon provides *potential* Agree/Case loci, which have interpretable, valued Case features such as [Case:NOM] on T. These are *active* loci if they have a phi-probe to seek a DP and assign it Case under Agree. The lexicon fixes some active Agree/Case loci, including T or *v* by the Obligatory Case Parameter (60). Here the choice of T, *v* is for convenience. The parameter might well have deeper content; for instance, it might activate a low *v*/Asp locus rather than a high C/Fin/T locus in ergative languages because their C/T system has nominal or prepositional properties (cf. Johns 1992, Alexiadou 2001, Mahajan 1996 for such connections).

- (60) *Obligatory Case Parameter*: In the lexicon, one of *v* (absolutive) or T (nominative) has a phi-probe.

²⁹Quite different is the proposal of Levin and Massam (1984) and Laka (2000) to enrich probe types so as to distinguish those that need (obligatory) and need not (dependent) find a goal. The proposal refers to a Case competitor only indirectly, like the one to be developed here. Discussion of it is deferred to Section 5.9.

A property that differentiates Marantz's morphological algorithm from all other dependent Case approaches is that it does not rely on available Agree/Case loci, and so it can assign dependent Case to multiple DPs, while the obligatory Case should be unique (cf. Katzir 2007, Legate 2008 for discussion). The empirical domain is complex. Agree might allow multiple Case assignment under certain circumstances, perhaps up to the DP that values the probe, visible as case concord, stacking, or spreading (Maling 1993, Maling and Sprouse 1995, Yoon 1996, Schütze 2001, cf. notes 48, 29, 21, 9); see note 49 for an instance. Here both the obligatory and the dependent Cases behave alike. A wholly distinct domain is applicative constructions. Some are asymmetric like English, but in others the applicative object and S/O are simultaneously symmetric for case, agreement, and A-movement (Bresnan and Mochi 1990, MacKay and Trechsel 2008). Such recursion seems to be of *object* Case, not dependent Case, and best stated as the availability of Appl/P as an extra Agree/Case locus, with parametric variation in its probe: see Section 5.6.

Active loci are phases, since phasehood follows upon Agree. Thus in unaccusatives, v_{ABS} Agree leads to Transfer of the $v\text{P}$ phase in ergative languages, T_{ERG} Agree of the TP phase in accusative ones. These are approximations, insofar as cyclicity may permit building up structure between the Agree of a head and its consequent Transfer, for instance the CP above an Agreeing TP in Chomsky (2001, 2008). For convenience, I will speak of the v -phase and of the C/T-phase as the phases due to the Agree of v and T. Potential Agree/Case loci are not phases as such, but other features make them so, such as the EPP/Edge Feature of Chomsky (2008). This is usually assumed for C/T.

By the Obligatory Case Parameter, the lexicon provides one active locus per CP, v or T. This is adequate for unaccusatives. It is also all that unaccusatives can tolerate, if a probe must find a goal, since they have only one DP. For transitives, $\mathfrak{R}$ (58) steps in to add a phi-probe to a potential Agree/Case locus in the derivation, activating it. This is the source of dependent Case. In an ergative system, the derivation proceeds as in (61), diagrammed in (62):

(61) $\mathfrak{R}$ in an ergative system:

1. v_{ABS} -Agree with O and S, valuing [phi:] on v and [Case:] on O/S.
2. Transfer upon v -Agree of the complement of v , with convergence.
3. The next phase is built up, including the EA at the $v\text{P}$ edge.
4. The potential Agree/Case locus T has no phi-probe, thus no T-EA Agree.
5. Transfer of the C/T-phase, which crashes because of [Case:] on EA.
6. $\mathfrak{R}$ adds [phi:] on the potential locus T of the failed numeration.
7. The construction of the phase restarts from the new numeration.
8. Agree between T and EA, valuation of their [phi:] and [Case:].
9. Transfer of the C/T-phase, with convergence.

(62) Derivation of dependent ergative

- a. $v_{[\varphi:, \kappa: A]} [\dots \text{DP}_{[\varphi: 1\text{PL}, \kappa:]}] \rightarrow \text{Agree}$
 - b. $T_{[\kappa: E]} [\text{DP}_{[\varphi: 2\text{PL}, \kappa:]} v_{[\varphi: 1\text{PL}, \kappa: A]} [\dots \text{DP}_{[\varphi: 1\text{PL}, \kappa: A]}]] \rightarrow \sqrt{\text{Transfer}}, \dots$
 - c. $T_{[\kappa: E]} [\text{DP}_{[\varphi: 2\text{PL}, \kappa:]} v_{[\varphi: 1\text{PL}, \kappa: A]} [\dots \text{DP}_{[\varphi: 1\text{PL}, \kappa: A]}]] \rightarrow * \text{Transfer}, \mathfrak{R}$
 - d. $T_{[\varphi: 2\text{PL}, \kappa: E]} [\text{DP}_{[\varphi: 2\text{PL}, \kappa: E]} v_{[\varphi: 1\text{PL}, \kappa: A]} [\dots \text{DP}_{[\varphi: 1\text{PL}, \kappa: A]}]] \rightarrow \sqrt{\text{Transfer}}$
- (Notation: κ [Case], φ [phi], ~~strickethrough~~ Transfer)

It has not been specified how $\mathfrak{R}$ knows to add a phi-probe rather than another probe, nor to add it on the potential Agree/Case locus T rather than on another terminal. It seems unnecessary. A potential Agree/Case locus is such by having an interpretable [Case] feature. If the phi-probe is added elsewhere, the [Case:] of a DP cannot be valued. How $\mathfrak{R}$ knows to choose a phi-probe depends on what other probes exist, whether they can be added to potential Agree/Case loci, and whether Agree by them would value Case (Section 5.4).

The accusative system is more interesting because its dependent Case has an intuitively countercyclic character. The accusative is available for O because the *higher* EA takes up the nominative, and not for S when there is no EA. $\mathfrak{R}$ faces no

problems here, because it affects the numeration of a nonconvergent phase, which may as consequence split into two phases. Let us proceed first on the assumption that v is a phase only if it has a phi-probe that Agrees. In a nominative-accusative system, only T bears a lexically specified phi-probe. It Agrees with the transitive subject. At the C/T phase, the derivation is Transferred and crashes, because nothing has valued the [Case:] of the direct object, (62)a. $\mathfrak{R}$ adds a phi-probe to the remaining potential Agree/Case locus in the numeration, v . The derivation rebuilds from the new numeration. Now v Agrees and licenses the direct object, and thereby becomes a phase, (62)b. It Transfers with convergence, (62)c. Next the C/T phase is built up as in the previous failed attempt, save that now there remain no unvalued Case features, and Transfer succeeds in (62)d.

(63) Derivation of dependent accusative

- a. $T_{[\varphi:2PL,\kappa:N]} [DP_{[\varphi:2PL,\kappa:N]} v_{[\kappa:A]} [\dots DP_{[\varphi:1PL,\kappa:]]} \rightarrow *Transfer, \mathfrak{R}$
 b. $v_{[\varphi:\kappa:A]} [\dots DP_{[\varphi:1PL,\kappa:]]} \rightarrow Agree$
 c. $v_{[\varphi:1PL,\kappa:A]} [\dots \overline{DP_{[\varphi:1PL,\kappa:A]}}] \rightarrow \checkmark Transfer$
 d. $T_{[\varphi:2PL,\kappa:N]} [DP_{[\varphi:2PL,\kappa:N]} v_{[\varphi:1PL,\kappa:A]} [\dots \overline{DP_{[\varphi:1PL,\kappa:A]}}] \rightarrow \checkmark Transfer$
 (Notation: κ [Case] (N nom., A acc.), φ [phi], ~~strike through~~ Transfer)

These mechanics illustrate the consequences of the decision to have $\mathfrak{R}$ add features to the numeration, rather than to a structure built from it. It allows $\mathfrak{R}$ to open up a new derivational path. The $\mathfrak{R}$ -enriched numeration need not yield the same structure as its poorer predecessor. The subset of the enriched numeration with the added probe Agrees and Transfers separately, spawning off a phase. The rest remains in the workspace, already selected from the lexicon. Derivation from it continues, embedding the spawned-off phase, and converging. It seems an elegant way to achieve the intuitive countercyclicity of dependent accusative and a conceptually simple, modular way for $\mathfrak{R}$ to operate.

The alternative is to let $\mathfrak{R}$ add a probe within an already built-up structure, along the lines of (46)/(47). $\mathfrak{R}$ would have to be able to add a probe to v at the point of C/T Transfer, and the added probe would need to Agree with the object and value its Case. Then the numeration can be dispensed with in the formulation of $\mathfrak{R}$. The general application of operations within already built-up structure is prohibited by cyclicity (Chomsky 1995: 234f., 248, 327f., 2000a: 3.6, 2007, 2008: 138, Kitahara 1997, Freidin 1999, Richards 1999). However, there are leeways. If the phase defines the cycle, there are no cyclic restrictions on the order of operations within a phase (Chomsky 2001, 2007, 2008, Hiraiwa 2010). It remains that in (63)a, the structure built up to C/T would be remolded from the inside if $\mathfrak{R}$ were to add a phi-probe to v and it Agreed with the object. Such a derivation might be prohibited by other principles than phasal cyclicity, including the Extension or No Tampering Condition that explicitly prohibits modifying already built structure, or the requirement that a probe occur only within the label of a syntactic object in the workspace

(Chomsky 2000a: 3.6, 2008: 138). The derivation may appear more palatable if the resulting Agree of v only values and deletes uninterpretable features, rather than build interpretable structure by movement of the object to [Spec, v P].³⁰

This choice between formulating $\mathfrak{R}$ as modifying the numeration versus already constructed structure will come up again in the repairs of the PCC. The discussion has assumed that the transitive v is not a phase if it lacks a phi-probe. It may be that the transitive v is always a phase, for some other intrinsic reason other than phi-Agree (Chomsky 2001, 2008). If so, the accusative system is trivial: the derivation crashes at the level of the v -phase because v triggers Transfer without Agreeing with the direct object. $\mathfrak{R}$ adds a phi-probe to v , followed by v -O Agree and a convergent Transfer.

In this manner, $\mathfrak{R}$ is the operation underlying dependent, last-resort Case. Ergative and accusative do not exhaust its potential. Sections 5.7 and 5.8 extend it to the PP and DP systems. Dependent Case has also been proposed for the dative of Romance causatives (Harley 1995: 4.3.3.2, Bobaljik and Branigan 2006, Folli and Harley 2007), for the dative of the K'ekchi focus antipassive (Béjar and Rezac 2007: Appendix), and for the nominative of Icelandic infinitives (Rezac 2004a: 5.4). These can be modelled in the same way as the ergative and accusative, for instance with the prepositional complementizer or the Fin/T of infinitives as a potential Agree/Case locus.³¹

The last issue to examine is parametrization. Section 5.9 returns to the parametrization of lexical items to undergo $\mathfrak{R}$. Some lexical items are simply not potential Agree/Case loci. English infinitival T in (64) is an example. When the applicative object *the students* prevents matrix Case assignment to the ECM subject *seven*, the infinitive does not strengthen to include its own Case assigner. Changing the infinitive to a *for*-type infinitive (64)d is not permitted to $\mathfrak{R}$, because it cannot add interpretable content, unlike Minimize Structure (31). Similarly, English unaccusative and unergative v perhaps differ in their susceptibility to $\mathfrak{R}$, since they differ in their capacity to license objects in (65) (although a better explanation might be that the in-situ subject of unaccusatives but not unergatives intervenes at the point of v -Agree with *its way*).

³⁰Similar comments apply if cyclicity is implemented as the Earliness Principle that a probe seek to Agree as soon as possible. Modification of already constructed structure is not prohibited, even though lexically-specified probes will never be embedded prior to Agreeing (Rezac 2003).

³¹If the prepositional complementizer of infinitives is a potential Agree/Case locus activable by $\mathfrak{R}$, it could subsume the causee dative, under Kayne's (2004) analysis where the dative is due to the complementizer. Nevertheless, the causee dative of Romance seems an unlikely candidate for dependent Case, given its interpretive correlates and failure to alternate (Section 4.5).

- (64) a. She v_{acc} + showed (the students/to the students) [that seven is a prime].
 b. She v_{acc} + showed (***the students**) [**seven** to be a prime].
 c. She v_{acc} + showed (***the students**) [there to be a **prime** in the set].
 d. *She v_{acc} + showed the students [for seven to be a prime].
 (see further (39), (115))
- (65) a. The river_i $t_i v_{unerg}$ + thundered/cascaded [**its way** down the ravine].
 b. *The river_i v_{unacc} + fell/flowed t_i [**its way** down the ravine].
 (see further (114))

The empirical domain central to the parametrization of dependent Case is exceptions to Burzio's Generalization and its ergative mirror. In accusative languages there are unaccusatives whose sole DP is accusative: adversity impersonals in Russian, *no/to* passives in Ukrainian (Lavine and Freidin 2002), fate unaccusatives in Icelandic (Sigurðsson 1992: 6.2.4, 2009, forthcoming; Maling and Sprouse 1995: 174; Schäfer 2007), psych-verbs in Faroese (Barnes 1986, minimal contrast with Icelandic). In ergative languages there are unaccusatives with an ergative, such as Basque raising-to-ergative *irudi* 'seem' in (55), and the lexical exceptions *iraun* 'last', *iraki* 'boil' (Oyharçabal 1992, 1999, Artiagoitia 2001a,b, cf. Baker 1996: 211–8). It might be possible to lexically specify such Agree/Case loci as active, e.g. the v of unaccusative psych-verbs in Faroese or the T lexicalized by the raising *irudi* 'seem' in Basque. More natural under a dependent Case approach is a silent Case competitor to discharge the obligatory Case, such as Laka's (1993b, 2000) silent theme in ergative-subject unergatives (cf. Bitter and Hale's 1996 incorporated D in antipassives). Evidence for a Case competitor in Slavic accusative unaccusatives is discussed by Szucsich (2007) and Lavine and Franks (2008), and in Faroese dative-accusative psych-verbs by Sigurðsson (2004: 149) and Jónsson (2009). For Basque ergative unaccusatives, this explanation mirrors diachrony: raising-to-ergative *irudi* come from 'have appearance', ergative-subject *irakin* 'boil' and *iraun* 'last' are fossils of causatives. On these proposals, dependent Case is not itself parametrized. Its availability follows from the existence or non-existence of silent arguments that do or do not absorb obligatory Case.³²

³²The dependent Case approach is sometimes held to be predicated on the absence of raising to ergative/accusative, as in Marantz's (2000) original proposal, but that only demands a silent competitor. More complex, in any approach, is cross-clausal agreement with a goal agreeing and Case-licensed in another clause, (55)c (cf. Section 3.2). One possibility is that a CP transparent to external Agree gets the Case that goes with that Agree, obligatory or dependent, perhaps as a condition on its transparency in the first place, and then counts as the Case competitor.

5.6 Unaccusative Repairs: Transitivity

5.6.1 Introduction

We are now in a position to apply $\mathfrak{R}$ to the repairs of the PCC in unaccusatives in Table 5.2. The parallel emergence in the repairs of the two dependent Cases, ergative and accusative, is strong support for their unification as dependent Case, and for approaches that assign it to the DP left after the obligatory relation.

Table 5.2 PCC repairs in unaccusatives

	Person-Case Constraint (α^* banned iff [+ person])	Repair (bold element changes)
Basque (dial.)	DAT _{agr} -ABS _{agr} [*]	ERG_{agr} [*] -DAT _{agr}
Chinook	ABS _{agr} -ABS _{agr} [*]	ERG_{agr} -ABS _{agr} [*]
Finnish	OBL _{Appl} -NOM _{agr} [*]	OBL _{Appl} - ACC [*]

5.6.2 Basque

Basque is an ergative-absolutive language with a structural ergative. Subjects of unaccusatives are absolutive, save in the PCC context, where dialectally they become ergative, like the subjects of transitives. The presentation of this *absolutive displacement* draws on Rezac (2008c) where it is set out more fully.

In the Basque system of ‘morphological’ ergativity, ergative and absolutive are structural Agree/Case relations, each with its own case and agreement morphology (Sections 5.2 and 5.5). The hierarchical configuration of the core arguments is as in English. The transitive subject EA c-commands the direct object O at base-generation and throughout A-movement. EA, not O, acquires subjecthood properties, such as being PRO or copy-raising. Such subjecthood appears to accrue to the element whose interpretable content moves to the designated subjecthood position of the clause, traditionally spoken of as satisfying the EPP of T (Fin). In Basque, this may involve clitic-doubling rather than XP-movement for full DPs. Following the Bobaljik-Laka approach to the Basque type of ergativity in Section 5.5, the partial structures for plain transitives and unaccusatives are given in (66).³³

³³ Among useful references are: case and agreement: Laka (1993ab), Oyharçabal (1992, 1999), Albizu (2002), Rezac (2003), Hualde and Ortiz de Urbina (2003), EA/O/S positions: Ortiz de Urbina (1989), Oyharçabal (1992, 1999); applicative and prepositional datives: Elordieta (2001); Etxepare and Oyharçabal (2008a,b), Etxepare (2010); PCC in applicative but not prepositional constructions, Albizu (1997a,b, 2009), Rezac (2008c, 2009, forthcoming); absolutive displacement, Rezac (2008c, 2009, forthcoming), Agirre (2004), Arregi (2004), Arregi and Nevins (2008).

- (66) a. Zu- k_j n_i poliziarengana eraman n_i -au-zu j
 you-E me.A police.to bring R.1sA $_i$.2sE $_j$
 You brought me to the police.
 a.' [ERG_{EA} T_{ERG} [_{t_{EA}} [_{v_{ABS}} ... ABS_O]]]
 b. N_i berarengana joaten n_i -aiz
 I.A her.to going R.1sA $_i$
 I am going to her.
 b.' [ABS_ST [_{v_{ABS}} ... _{t_S}]]

(Basque)

The structures of interest for the PCC elaborate on (56) by the addition of an applicative argument, (67). It has its own dative case and agreement morphology. It c-commands O and S by all diagnostics referring to the A-position of lexical NP/DP content, such as quantifier-variable binding (Elordieta 2001). However, for subjecthood purposes such as control, the absolutive S rather than the applicative dative is the subject (Rezac 2008c). This divorce of diagnostics is also found in languages like Spanish, in contrast to true dative-subject languages like Icelandic (Massulo 1992, Anagnostopoulou 2003: 310, Cuervo 2003b). It indicates that some interpretable content of S satisfies the EPP of T by moving over the dative, as in (67), plausibly the D-head of S through clitic-doubling or rich agreement (Béjar and Rezac 2003, Rezac 2008c). Beside applicative datives there exist prepositional datives, which are below S for all diagnostics. In the Western Basque varieties relevant here, both applicative and prepositional datives control the same dative-type agreement or clitic-doubling on the verb (Section 5.2).

- (67) a. [TP D_{ERG} T_{ERG} [_{vP} _{t_{EA}} _{v_{ABS}} [DAT_{Appl} [_{VP} V ABS_O]]]] (*trans. appl.*)
 b. [TP D_{ABS} T [_{vP} _{v_{ABS}} [DAT_{Appl} [_{VP} V _{t_S}]]]] (*unacc. appl.*)
 c. [TP D_{ABS} T [_{vP} _{v_{ABS}} [_{VP} V _{t_S} DAT_{PP}]]] (*unacc. + PP*)

The presence of an applicative dative between v_{ABS} and O/S creates the PCC:

- (68) $T/v > \text{DAT}_{Appl} > G [+person]$
 *Case/Agree

(Section 5.2)

The PCC is visible as the impossibility of agreement with and the licensing of 1/2.ABS, *pro* or strong, while 3.ABS is unaffected. This is shown in (69) for the unaccusative psych-verb *gustatu* 'please' with an experiencer dative; other applicative datives like possessors behave similarly (Albizu 2009). Such datives must be applicative by their interpretations, and c-command diagnostics verify their A-position above S save for subjecthood. Within the vP then, the dative c-commands S, and creates the PCC by blocking [$+ person$] Agree between v_{ABS} and S, (70). Beyond the vP , S or its D head raises to satisfy the EPP of T. Movement past the dative intervener can obviate the PCC, but only if it brings

an argument to where [+person] Agree with it is possible. Here, it raises S beyond the range of v_{ABS} to T, and so has no effect. Prepositional datives like the goals of motion verbs, *hurbildu* ‘approach’ in (71), do not create the PCC, (72). In some varieties (69) and (71) are in minimal contrast. In others the agreement paradigm of prepositional datives is riddled with morphological gaps to different extent (%) (Rezac 2008c, forthcoming).

- (69) a. Miren- i_j gozoki- ak_i gustatzen zai- zki_i - o_j .
 Miren-D sweets-PL.A liking R.3pA $_i$.3sD $_j$
 Miren likes candies.
 b. *Ni $_i$ Miren- i_j gustatzen n_i -atzai- o_j .
 I.A Miren-D liking R.1sA $_i$.3sD $_j$
 Miren likes me.
 c. *Zu $_i$ Miren- i_j gustatzen z_i -atzai- zki_i - o_j / zai-(zki_i)- o_j
 you.A Miren-D Liking R.2pA $_i$.3sD $_j$ / R.(3pA $_i$).3sD $_j$
 Miren likes you.

(Basque)

- (70) ABS_S T v_{ABS} [DAT Appl number, *person Agree] [v_P V t_S]]
 $\uparrow$ EPP/subjecthood
 (PCC in applicative unaccusatives)

- (71) a. Nesk- ak_i Peru- ri_j hurbiltzen zai- zki_i - o_j
 girls-PL.A Peru-D approaching R.3pA $_i$.3sD $_j$
 The girls are approaching Peru.
 b. %Ni $_i$ Peru- ri_j hurbiltzen n_i -atzai- o_j
 I.A Peru-D approaching R.1sA $_i$.3sD $_j$
 I am approaching Peru.

(Basque)

- (72) ABS_S T v_{ABS} [v_P V [t_S DAT $_{pp}$]]
 $\uparrow$ EPP/subjecthood
 (No PCC in prepositional unaccusatives)

This is the end of the story in some but not all Basque varieties. In (70), S raises past the dative to the local neighbourhood of T. This does not help for Agree with v_{ABS} , but it does bring it into the range of Agree with T. If T had a phi-probe, it could Agree with S in its derived position and eliminate the PCC, as has been seen in Section 5.2 for Icelandic (ex. (20)). In some Western Basque varieties, such an *absolute displacement* phenomenon exists. In a PCC context, and only there, S switches from absolute to ergative in case and agreement morphology, in both monopredicate (73) and raising (74) constructions. This

ergativization is restricted to PCC contexts (73)b. It cannot occur for the S of plain unaccusatives, the 3rd person S of unaccusatives with an applicative dative (73)a, the S of unaccusatives with a prepositional dative (73)c. For the latter it is banned even when the morphology of a given variety has a gap in the agreement paradigm, as for %*zatzaizkio* in (73)c.³⁴

- (73) a. Itxaso-ri_i liburu-ak/*ek_j gustatzen zai-zkij-o_i / *di-o_i-te_j
 Itxaso-D books-A/*E liking R.3pA_j.3sD_i / *R.3sD_i.3pE_j
 b. Itxaso-ri_i (zu-k/*Ø_j) gustatzen *z_j-atzai-zkij-o_i / di-o_i-zu_j
 Itxaso-D you-E/*A liking *R.2pA_j.3sD_i / R.3sD_i.2pA_j
 c. Zu-Ø/*k_j Itxaso-ri_i etortzen %z_j-atzai-zkij-o_i / *di-o_i-zu_j
 you-A/*E Itxaso-D coming %R.2pA_j.3sD_i / *R.3sD_i.2sE_j
 (Basque, Tolosa T1, Rezac 2008c: 81)

- (74) Nekatuta iruditzen di-da_i-zu_j
 tired seeming R.1sD_i.2pE_j
 You seem tired to me.

(Basque, Erretereria, Rezac 2008c: 82)

The ergativization follows from the Agree/Case theory of the PCC, like Icelandic (20), and the $\mathfrak{R}$ mechanism of the PCC repair. Once S moves to its subjecthood configuration near T, it has by-passed the dative within the ν P, and come within the reach of the potential Agree/Case locus T, (75)³⁵

- (75) $S_{2PL,ERG} \leftrightarrow_{Agree} T_{ERG,2PL}$ ν_{ABS} [DAT_{Appl} [VP V *t*_S]]
 ↑ EPP/subjecthood number, *person Agree

The difference with Icelandic is that the T of unaccusatives does not ordinarily have a phi-probe in Basque. Only in the context of the PCC is it T_{ERG} (and only in some varieties). This distribution of T_{ERG} is predicted by the analysis of the ergative as dependent Case that emerges as needed through $\mathfrak{R}$, (58). In the PCC context, [+person] S fails to be Case-licensed by ν_{ABS} , much as the EA of all transitives fails to be licensed by ν_{ABS} . This parallelism is displayed in (76).

³⁴See Rezac (2008c) for details: dialectal distribution; vacillation in the case of overt S (always ergative in agreement) due to the spellout of the multiple Case and agreement that S gets through ν_{ABS} for number and T_{ERG}; the details of the raising construction; and the interaction with other phenomena such as ‘dative displacement’, which tend to favour the form *nauzu* for *didazu* in some varieties. See also Arregi and Nevins (2008) on many of these points.

³⁵There are several alternatives for both Basque and Icelandic for the exact configuration in which T Agrees with the derived S: Spec-Head as in (75), or under T raising, or T is really Fin, or S lands below T as adopted in (77) below. See further Rezac (2008c: 82f.).

(76) Pattern of ergative activation:

- a. S-ABS $T_{(*ERG)}$ v_{ABS} t_S -ABS (*unaccusative*)
 b. T_{*ERG} EA-ERG v_{ABS} O-ABS (*transitive*)
 c. 3:S-ABS $T_{(*ERG)}$ v_{ABS} DAT t_S -ABS (*applic. unacc.*)
 d. 1/2:S-ERG T_{*ERG} v_{ABS} DAT t_S -(*ABS) (*PCC, repair*)

The mechanics of ergativization in PCC contexts (77) differ from that of transitives (67) to the extent that the ergativized argument originates as S below v_{ABS} , rather than as EA above it. The obligatory Case locus v_{ABS} has a lexically specified phi-probe, which Agrees and Transfers. Agree is successful save in a PCC context, (77)b, where the dative blocks Agree with [+ person] S and the [Case:] of S thus remains unvalued. However, in all contexts, S must independently move to the edge of the v -phase prior to its Transfer by successive-cyclic movement, because it will have to move to satisfy its EPP of T, (77)c. The ordering of this movement and v -S Agree may be left free. Only derivations where S moves converge for the EPP, so only they need be considered. The convergent v -phase therefore does not contain S. It is at the level of the C/T-phase that the lack of Case on a 1st/2nd but not 3rd person S leads to a crashed Transfer, (77)f. At this point, $\mathfrak{R}$ adds a phi-probe to the potential Agree/Case locus T, turning it into active T_{ERG} . The C/T-phase rebuilds and Agree occurs between the new T_{ERG} and S, (77)h. The Transfer of the C/T phase now converges.³⁶

(77) Derivation of dependent ergative in the PCC context

- a. $v_{[\pi: \#, \kappa: A]}$... DAT ... $S_{[\pi: 1, \#, PL, \kappa:]}$ $\rightarrow$ Agree v -DAT
 b. $v_{[\pi: +, \#, \kappa: A]}$... DAT ... $S_{[\pi: 1, \#, PL, \kappa:]}$ $\rightarrow$ Agree v -S
 c. $v_{[\pi: +, \#, (PL?), \kappa: A]}$... DAT ... $S_{[\pi: 1, \#, PL, \kappa:]}$ $\rightarrow$ S Move
 d. $S_{[\pi: 1, \#, PL, \kappa:]}$ $v_{[\pi: +, \#, (PL?), \kappa: A]}$... DAT ... t_S $\rightarrow$ Transfer
 e. T $S_{[\pi: 1, \#, PL, \kappa:]}$ $v_{[\pi: +, \#, (PL?), \kappa: A]}$... DAT ... t_S $\rightarrow$ C/T-phase, EPP
 f. $S_{[\pi: 1, \#, PL, \kappa:]}$ T t_S $v_{[\pi: +, \#, (PL?), \kappa: A]}$... DAT ... t_S $\rightarrow$ *Transfer, $\mathfrak{R}$
 g. $T_{[\pi: \#, \kappa: E]}$ $S_{[\pi: 1, \#, PL, \kappa:]}$ $v_{[\pi: +, \#, (PL?), \kappa: A]}$... DAT ... t_S $\rightarrow$ Agree T-S, EPP
 h. $S_{[\pi: 1, \#, PL, \kappa: E]}$ $T_{[\pi: 1, \#, PL, \kappa: E]}$ t_S ... $v_{[\pi: +, \#, (PL?), \kappa: A]}$... DAT ... t_S $\rightarrow$ Transfer

(Notation: π [person], $\#$ [number], κ [Case], + [+ person] of DAT)

The emergence of the ergative in the PCC repair is thus analysable in the same way as its emergence in transitives. It fits nicely the characterization of dependent

³⁶If it were desirable that S stay in-situ in the vP , it would have to be assumed that a crashed Transfer at v permits the derivation to continue (as seems plausible, Section 5.4), or that Transfer of the v -complement is delayed until C (Chomsky 2001). However, there is evidence that S raises to the edge of the unaccusative vP in Basque (Rezac 2008c: 4.4). Also discussed in Rezac (2008c) is evidence that partial v -S number Agree results in absolutive assignment to S and licensing of the number of S, leaving person unlicensed. Such relativization of Case to phi-features and multiple Case are compatible with the present approach to the PCC (Section 5.2).

Case as last-resort repair through $\mathfrak{R}$. The limits of $\mathfrak{R}$ also correctly circumscribe the scope of ergativization. It cannot apply to the O of transitives, even in a PCC context, because in transitives T_{ERG} already Agrees with the EA. It cannot apply for reasons other than the failure of Transfer to converge, due to modularity, among them the morphological gaps mentioned for (73)c. Finally, $\mathfrak{R}$ cannot usefully apply elements other than T in the above derivation. Most are not potential Agree/Case loci. The P_{DAT} of datives is one, but it would become a full PP, which cannot have an applicative interpretation as will be discussed in Section 5.7.

An issue deferred until Section 5.9 is the parametrization of $\mathfrak{R}$, for only some Basque varieties permit absolutive displacement. In most, PCC contexts irretrievably crash. Paraphrase takes the place of the simplest way to say ‘I like you’.³⁷

5.6.3 Chinook

The ergativization of Basque has a remarkable parallel in Chinook, described in Silverstein (1986) and related to Basque in Rezac (2009).³⁸ The case and agreement of Chinook are introduced through (78):

- (78) (i-kala_i) ga-č_i-t_j-(a)š_k-t-u-√tada ((i)t-šq^wa_j) ((i)š-Gagilak_k)
 3sm-man RPT-3smE-3n-3du-Appl-DIR-threw 3n-water 3du-woman
 He (the man) threw it (the water) at the two of them (at the two women).
 (Chinook, Silverstein 1986: 185)

Chinook cross-references the core arguments on the verb using pronominal affixes of two series, in the order EA-O/S-IO. One series is dedicated to the external argument EA, the other is used for S, O. There is no case or adpositional marking for these arguments. Agreement thus has an ergative-absolutive alignment of EA vs. O/S, and the affix series may be referred to as ergative, glossed E, vs. absolutive, unmarked in the glosses. The treatment of applicative or indirect objects differs from Basque, where they are dative in case and agreement. In Chinook they are coded like S/O: unmarked for case and agreeing using the absolutive series. This parameter of cross-linguistic variation is discussed below.³⁹

³⁷Typically *gustuko(a) zaitut/ditut* lit. ‘I have you/them pleasing’, independent of the PCC.

³⁸The Chinook analogue of absolutive displacement was pointed out to me by D. Harbour, p.c.

³⁹Usually the ergative series = absolutive series + *k*, but there are opaque forms like 3SGM.E č. The O-S-IO identity holds across all phi-features, including allomorphies (1SG *n* → ∅ and 2DU/2PL *nš/nt* → impersonal *q* in the context of 2nd person O/IO, both contiguous, and noncontiguous in EA₁-O-IO₂). The exception is 3DU and 3PL, where S agreement has an extra suffix compared with O/IO agreement. For a similar exception in Itelmen, Bobaljik (2000 note 10) suggests that the realization of the O agreement marker is sensitive to the presence of EA. It is unclear whether S under thematization below uses S or O affixes in 3DU/PL.

The PCC restricts the O of a transitive to 3rd person if there is an IO, (79), as in Basque. Also as in Basque, intransitives with S and IO split into two types, identical in case and agreement but different for the PCC. One class, including ‘go’ in (80), is immune to the PCC. By this and by their meaning they correspond to Basque unaccusatives with an agreeing prepositional dative, like *hurbildu* ‘approach’ in (71), although it is unclear whether their absolutive-like goal of motion should be analyzed in the same manner the Basque dative one (cf. note 7). The other class, including ‘smell’ in (81), permits 3rd but not 1st/2nd person absolutive S to combine with an IO, exhibiting the PCC. Silverstein’s (1986: 191) description suggests that they are intransitives with an applicative argument, corresponding to the Basque *gustatu* ‘like’ class. The missing forms with 1/2.S are supplied by what Silverstein (1986: 191–4) calls *thematization*. The IO is exceptionally coded by the ergative rather than the absolutive series. Thus the expected absolutive *i* banned in (81)b (cf. (81)a) appears as the ergative *č* in (81)c.⁴⁰

- (79) *č-n-a-l-u-√i-amit
 3smE-1s-3sf-²Appl-²DIR-√²take-?
 He is taking me for her. (Transitive + IO: PCC)
- (80) ga-nš-i-gl-u-√ya
 RPT-1p-3sm-?-²DIR-√go
 We (exclusive) went toward him. (Intransitive + goal IO: no PCC)
- (81) a. i-n-l-√ta
 3sm-1s-Appl-√stink
 He wafts towards me, *es shtinkt mir*, I smell him.
 b. *nš-i-l-√ta →
 1p-3sm-Appl-√stink
 c. č-nš-l-√ta
 3smE-1p-Appl-√stink
 He smells us (exclusive). (Intrans. + appl. IO: PCC and repair)
 (Chinook, Silverstein 1986: 190–2)

Chinook thematization is strikingly reminiscent of the absolutive displacement of Western Basque. In both languages, the PCC bars 1st/2nd person O and S in the presence of an applicative argument. Intransitives fall into two

⁴⁰The PCC and *thematization* extend (partly?) to 3SGM animate S: ‘for third person animate nominative and third person indirect object, there is a tendency among speakers’ for the PCC and thematization to occur (Silverstein 1986: 193). Thus *š-i-l-√ta 3du-3sm-Appl-√stink → č-š-l-√ta 3smE-3du. For animacy as a locus of [+person] variation, see Chapter 6 and Finnish below.

classes differentiated by the applicative character of the IO despite their otherwise identical case and agreement. Applicative unaccusatives alone are affected by the PCC, although nonapplicative unaccusatives show the missing morphology. The PCC is repaired by coding one of the arguments in the same way as the EA, ergative.

Unlike in Basque, the ergativized argument of Chinook is the applicative argument rather than S. This difference would derive from another, if it may be posited between Basque and Chinook: whether IO or S satisfies the EPP in (82).

- (82) a. [S T_(ERG) [v_{ABS} IO_{DAT} (Appl) ... t_S]] (Basque)
 b. [IO T_(ERG) [v_{ABS} t_{IO} (Appl_{number/gender}) ... S]] (Chinook)

This Basque-Chinook difference is expected. In languages with ‘asymmetric’ applicative constructions, three Agree/Case patterns appear cross-linguistically. One has been seen so far in Basque, French, and Icelandic. IO has an inherent case, such as the dative. It participates in the PCC, but not in the agreement or Case of S or O. Systems of this type differ in whether they raise IO (Icelandic) or S (Basque, French, Spanish) to satisfy the EPP of T, for ill-understood reasons.

The second asymmetric pattern is seen in English (83). The applicative object IO participates in the same Agree/Case and A-movement as the S/O of non-applicative unaccusatives/transitives. Mohawk, Ojibwa, Nahuatl, and Southern Tiwa are other languages of this type, similar to Chinook in agreement and case morphology (Dryer 1986, Baker 1996: Chapters 5 and 9). The remaining S/O of an applicative unaccusative/transitive must be licensed differently. In English it might be by inherent Case or a silent PP (Larson 1988, Pesetsky 1995, Baker 1997). In Mohawk it incorporates (Baker 1996). In Nahuatl (84) and in Southern Tiwa it controls extra number/gender but not person agreement (Baker 1996: 194f., 2008: 3.3.3). This agreement may be viewed as a number/gender probe on the Appl head of applicative constructions, (82)b, where the IO will not interfere with it (Rezac 2006: 3.7, 2008b: 722). Neither incorporation nor number/gender Agree provide [+person] licensing, so S/O cannot be [+person] in Mohawk or Nahuatl. Thus the applicative IO thus creates the PCC in the most straightforward incarnation of the Agree/Case approach: as a plain DP it pre-empts clausal Agree, and there is no other means to license [+person] S/O.

- (83) a. They_{EA} baked her_{IO} two cakes_O
 b. She_{IO} was baked t_{IO} two cakes_O
 c. *Two cakes_S were baked her_{IO} t_S.

- (84) Ni-mitz-im-maca in huē-hue‘xōlo’.
 1SG.SU-2SG.O-3PL.O2-give IN RED-turkey-PL
 I_{EA} give you_{IO} the turkeys_O.
 (Nahuatl, Baker 1996: 240 note 12, from Launey 1981: 174)

Chinook seems to belong to this group. Its IO behaves exactly like the S/O of nonapplicative unaccusatives/transitives for agreement and case. The remaining S/O of applicative constructions agrees for number/gender, but is ruled out as [+ person]. Systems of this type should raise the applicative IO rather than O/S to satisfy the EPP of T, since it is the closest DP to T and not distinguishable by being dative. This is so in English and apparently in Mohawk. Chinook would then have the structure in (82)b. In Basque (82)a, S is in the range of T to receive last-resort ergative, but in Chinook (82)b, the applicative IO is. The mechanics are as in Basque, save that it is the IO that must escape the ν P. The only convergent derivation is one where it does so prior to (person) Agree with ν_{ABS} , which remains available for S.⁴¹

The discussion of Chinook may end on a sketch of the third asymmetric pattern, because it sheds further light on the ergative as dependent Case. As in the second pattern, IO is not oblique and participates in the Agree/Case system of the core arguments. However, applicative unaccusatives are always treated as transitives, not just when S is [+ person]. The IO is ergative, or the O accusative. Baker (1996: 9.3.2) discusses this system in Ainu and Mayali, but their case and agreement do not indicate whether transitives are ergative or accusative. Other languages do, but do not make for minimal comparison with Chinook. The Chukchi alternation in (85) comes close. In (85)a is an unaccusative with an absolutive experiencer. In (85)b an absolutive theme is added. As a result, the experiencer switches to the ergative, independent of the person value of either argument.

- (85) a. $\text{\textcircled{a}t\textcircled{a}y\textcircled{a}n}$ (pəčy-etə) koryav-ərəkən
 father.ABS food-DAT delight.in-PROG-3SG
 b. $\text{\textcircled{a}t\textcircled{a}y-e}$ pičyə-pič koryo ɬəŋ-ərəkən-en
 father-ERG food-ABS.SG delight AUX-PROG-3SG→3SG
 (Chukchi, Bobaljik and Branigan 2006: 55)

Systems like this have been a mainstay of the analysis of ergative and accusative as (structural) dependent Case, because both ergative and accusative emerge with no thematic relationship and as needed (for the accusative, see Marantz 2000: 16, Kichaga; Harley 1995: 5.1.1, Japanese; for the ergative, Bobaljik and Branigan 2006: 54f., 76 note 11, Chukchi, Inuit; Holmberg and Odden 2004, Hawrami: cf. also Baker 1996: 236, Wichita). The Agree/Case system of unaccusatives transitivizes when the addition of an argument results in two DPs in need of Case. The person values of the DPs are irrelevant, because there is no way to license even 3rd person S by a special number/gender probe,

⁴¹Some Basque varieties mix this and the foregoing applicative patterns: a *dative* controls *absolutive* agreement, and an extra number-only probe appears for the remaining S/O, with the PCC: see Rezac (2006, 2008a,b) for Basque and cross-linguistically. S still raises to satisfy the EPP and ergativizes, (Rezac 2008c: 80 note 13, 85 note 14, forthcoming). This continues to follow from whatever property renders specifically datives unavailable to satisfy the EPP in Basque.

as there is in the second asymmetric pattern above. In Chinook and Basque on the other hand, 3rd person S of unaccusatives is still Case-licensed when an applicative object is added. Only [+person] S fails to be licensed, and then transitivity occurs. A single principle operates across these three patterns, encapsulated in $\mathfrak{R}$: an unaccusative is enriched to the Agree/Case system of transitives as needed to Case-license its arguments.⁴²

5.6.4 Finnish

The last PCC repair in unaccusatives deploys the accusative in a nominative-accusative system, highlighting the unity of the ergative and accusative as structural and dependent Agree/Case relations. It occurs in Finnish. Nominatives are barred in the PCC context, but appear instead as accusatives: the mirror image of ergative repair. The ‘nominative objects’ of Finnish and their nominative-accusative alternation have been copiously discussed in the literature, with a variety of different analyses, including Timberlake (1975), Maling (1993), Reime (1993), Toivainen (1993), Kiparsky (2001), Brattico and Vainikka (2009). The proposal here derives from Rezac (2007), but save for the nature of accusative, it follows a certain consensus discussed in note 49.

The pertinent syntax of Finnish is introduced through (86). The initial constituent of these sentences is in [Spec, TP]; A'-fronting and V-raising may further transform their word order. The nominative EA and S may raise to [Spec, TP], and then they control agreement. However, another elements may fill [Spec, TP] under neutral information structure, such as the expletive *sitä* in (86)c, the adverb *nyt* in (86)d, or oblique subjects seen below. The nominative then stays in a variety of lower positions. In (86)c it is not in-situ, has a marked reading, and controls agreement (Holmberg 2005, Holmberg and Nikanne 2002). In (86)d, it is in-situ, has a neutral reading, and no agreement. This ‘presentational’ construction is restricted to the non-pronominal subjects of intransitives (Kiparsky 2001, cf. English locative inversion, Bresnan 1994). Agreement with a low nominative does occur in equatives, (86)e (Hakulinen et al. 2004: §924). The direct object O is always a nonagreeing accusative, as in (86)a.⁴³

⁴²The three systems discussed here belong to the group that treats the internal arguments of an applicative construction asymmetrically. In symmetric languages, multiple accusative and absolutive relations are available (Bresnan and Kanerva 1990 on Kichaga; MacKay and Trechsel 2008 on Misanla Totonac). One approach to them is through a full probe on the head Appl of applicatives or its P source (see note 7).

⁴³The accusative is morphologically distinctive only for [+person] pronouns, suffix *-t*, otherwise it is syncretic with the genitive *-n* in the singular, and with the nominative *-t* in the plural, as well as for (morphologically singular) numerals from *three* up. The syncretism counts for ellipsis (Kiparsky 2001), as expected for case syncretisms (McCreight 1988), but it should not be viewed as the absence of a syntactic accusative relation (Brattico and Vainikka 2009, cf. Maling 1993). The nominative-accusative syncretism is ancient or aboriginal, the accusative-genitive one comes from a more recent merger of acc. *-m* and gen. *-n* (Hakulinen 1961: 67f.).

- (86) a. Maija katki se-n
 Maija.N hid it-A
 Maija hit it.
- b. Uutise-t jatku-vat.
 new-PL.N continue-3PL
 The news will continue.
- c. Sitä ole-n minä-kin kaynyt Parii-ssa.
 EXPL be-1SG I.N-also gone Paris-INS
 I have been to Paris, too (actually).
- d. Nyt tule-e uutise-t / *minä / *minu-t.
 now come-3SG new-PL.N I.N I-A
 Now there comes the news / *I.
- e. Tämä ole-n minä
 this be-1SG I.NOM
 This is me.

(Finnish)

The principles that allow a low nominative in Finnish are the same as in Icelandic or English. The Agree/Case of T_{NOM} goes onto the highest DP in its domain (Maling 1993). The DP may raise to a high position in the TP and agree, (86)b, (86)c. Alternatively, it stays in-situ, in the type (86)d restricted to non-pronouns and with no agreement for 3PL, as in expletive and locative inversion constructions in Icelandic and English varieties (q.v. note 9). Constructions with in-situ nominatives other than the types (86)d and (86)e are the ones of interest here. They show the following constellation of properties: 3rd person pronouns are fine but do not agree; [+person] pronouns are impossible as nominatives but turn up as accusatives; and there is reason to posit an intervener between T_{NOM} and the nominative. The ban on [+person] nominatives is the PCC, and the accusative its repair.

Oblique-subject unaccusatives will introduce the phenomenon. They are similar to Icelandic dative-subject constructions in Section 5.2. The possessive construction in (87)a combines *be*, an adessive PP interpreted as possessor, and a possessum. The adessive raises to [Spec, TP] to become the oblique subject (diagnosed by binding the subject-oriented possessive suffix as shown). The possessum stays in-situ as a nonagreeing nominative. In minimal contrast, (87)b predicates a nominative subject of a low adessive of accompaniment or temporary possession.

- (87) a. Liisa-lla_i oli Matti_j poika-ystävä-nä ol-le-ssa-an_{i/*j} Ruotsi-ssa.
 Lisa-ADS was M.N boy-friend-as be-INF-INS-her Sweden-INS
 Liisa had Matti.N as a boyfriend when she was in Sweden.

- b. Matti_i oli Liisa-lla_j poika-ystävä-nä ol-le-ssa-an_{i/*j} Ruotsissa.
 M.N was Liisa-ALL boy-friend-ESS be-INF-INS-her Sweden-INS
 He was with Liisa as a boyfriend when she was in Sweden.
 (Finnish, Kiparsky 2001: 355, adapted)

The adessive possessor in [Spec, TP] may be analyzed as an applicative object, like possessor datives elsewhere, (88). Across it, T establishes a nominative relation with, and only with, DPs that are not [+ person], albeit without overt number agreement, (89). In Finnish, [+ person] includes 1st/2nd as well as 3rd person human pronouns, leaving out 3rd person unmarked pronouns.⁴⁴ The restriction against [+ person] nominatives in this configuration parallels the PCC in Icelandic dative-subject constructions (18) (some Icelandic varieties even lack number agreement with 3PL nominatives like Finnish (Sigurðsson and Holmberg 2008)). Yet unlike in Icelandic, [+ person] pronouns are not simply barred. Rather, they appear as accusatives in (89).⁴⁵

- (88) [TP ADS_i T_{NOM} ... [_v(ACC) ... [_{t_i} ... [... NOM/ACC]]]]

- (89) Minu-lla_i on t_i Matti(*-n) / avaime-t / se(*-n) / *sinä / sin-ut.
 me-ADS is Matti.N(*-A) keys-PL.N/A it.N(*-A) you.N you-A
 I have Matti/the keys/it/you.

(Finnish)

This is a repair of the PCC by emergence of the accusative. It falls under $\mathfrak{R}$ as the activation of the potential Agree/Case locus v of unaccusatives to v_{ACC} . The resulting structure is independently expected to evade the PCC. Among strong pronouns, the PCC affects only potentially agreeing ones, including the nominatives of Icelandic and Finnish, not nonagreeing ones, including their accusatives (Section 5.2). In languages like Faroese and Tamil, this may be observed even in unaccusatives, because their dative-subject psych-verbs use the nonagreeing accusative rather than the agreeing nominative for S, and it is then immune to the PCC (Rezac 2007: Appendix, cf. Sigurðsson 2004: 149). The v of the psych-unaccusatives of these languages is always v_{ACC} (Section 5.5). In Finnish, it is

⁴⁴This is a common locus of variation in [+ person], discussed in Chapter 6. It is suggested there that [+ person] specification is cued by the morphology. Finnish 1st/2nd and 3rd human pronouns have distinctive morphological parallelisms: cf. 1st person – 3rd human – 3rd nonhuman NOM.SG *minä* – *hän* – *se*, ACC.SG *min-ut* – *hän-et* – *se-n*, NOM/ACC.PL *me-idät* – *he-idät* – *ne*. (*Kuka* ‘who’ behaves as a [+ person] pronoun if bare but as noun/adjective if modified.) The 3rd person default pronouns are used for nonhumans, as well as for humans in various contexts.

⁴⁵It is possible to A'-front a PP over an agreeing nominative subject to give the informationally marked *Huoneessa olet sinä* ‘In.the.room are.2SG you.NOM’; thus from (87)b of accompaniment or temporary possession *Minulla olet sinä* ‘I have you (with me)’, in contrast to plain possession *Minulla on sinut* ‘I have you’. See Hakulinen and Karlsson (1975: 4.2), Ikonen (1974: 385f.), Toivainen (1993: 121), Sands and Campbell (2001: 293).

ordinarily an inactive v , but becomes activated by $\mathfrak{R}$ to v_{ACC} to avoid the Case licensing failure of the PCC context.

The same principles are at work in Finnish ‘nominative object’ constructions, without counterpart in Icelandic. One is the passive (90). The external argument is pro_{arb} . The nominative goes on the object, save if [+ person], which is accusative.

- (90) Siellä näh-tiin [pro_{arb} v [t_V sinä / *sinu-t / vieras / *viaraa-n]]
 there see-PASS.PAST you.N *you-A guest.N *guest-A
 One saw you/a guest there.

(Finnish)

Here pro_{arb} behaves as the dative intervener does in the core cases of the PCC. D’Alessandro (2004) develops this analysis for a parallel impersonal *si* construction in Italian (91). The external argument is pro_{arb} (*si*), and the object is an agreeing nominative, but only if 3rd person. T_{NOM} is the sole Agree/Case licenser, and pro_{arb} is a defective intervener that blocks [person] but not [number] Agree between T_{NOM} and the object, (92)a. 1st/2nd person objects must occur in the similar but distinct and independently available impersonal *si* construction of (79)c. There the external argument is also pro_{arb} , but v_{ACC} is always activated, and the object is a nonagreeing accusative whatever its person, (92)b. Finnish differs in activating v_{ACC} as last resort, when T_{NOM} fails to a license [+ person] object.⁴⁶

- (91) a. I Rossi/?loro si inviterebbero volentieri.
 the Rossi’s/they SE would.invite.3PL willingly
 The Rossi’s/they would be eagerly invited. (*si* + *nom. object*)
 b. *Tu si inviter-ai volentieri
 you.NOM SE will.invite-2SG willingly (*si* + *acc. object*)
 c. Ti si inviter-à
 you.ACC SE will.invite-3SG
 You will be invited. (*si* + *acc. object*)

(Italian, Burzio 1986: 49)

⁴⁶On Finnish pro_{arb} , cf. Holmberg (forthcoming), Holmberg et al. (1993: 189f.); on its interaction with the binding properties of the object, Kiparsky (2001: 353f.), Manninen and Nelson (2004). There are reasons to think that when the object of the passive is preverbal, it is not in [Spec, TP] but in an A’-position (cf. Hakulinen and Karlsson 1975: 345, but contrast Manninen and Nelson 2004). This assumption is not necessary to exclude a derivation like Icelandic (20)b. Pro_{arb} not only intervenes in [+ person] Agree, but also appears to raise or attach to T, where it is reflected as the special invariant agreement morphology of the Finnish passive and in the Italian T-clitic *si*, and where it is always the closest goal for T (cf. Rezac 2008c: 93f.). Mechanically similar to the Finnish passive is the Finnish imperative with the addressee as intervener (Rezac 2007). (D’Alessandro proposes that Italian *si* reflects the syntactically projected impersonal agent in both agreeing and nonagreeing *si* constructions, but is Merged at a different height in two; I simplify.)

- The same scenario plays out for the objects of structurally poor nonfinite clauses under passives and unaccusatives. In (93), the unaccusative *täytyä* ‘must’ embeds an infinitive whose subject raises to or is controlled by the matrix oblique subject *minun*. The nominative of the matrix T_{NOM} passes across *minun* to the object of the infinitive, which has no Agree/Case system of its own. If the object is [+person], the otherwise unavailable accusative again steps in.⁴⁷

- (Finnish)

It is possible to stack such infinitives as in (94) to introduce an indefinite distance between the nominative assigner, intervener, and object: see Timberlake (1975), Vainikka (1989), Kiparsky (2001), and esp. Brattico and Vainikka (2009).⁴⁸

⁴⁸Finnish nonagreeing nominative/accusative may recurse across multiple DPs through transparent infinitives: *Maija pyysi Jukan lukemaan kirjan* ‘Maija-NOM asked Jukka-ACC to.read book-ACC’ vs. *Pyydä Jukka lukemaan kirja* ‘Ask Jukka-NOM to.read book-NOM’ (Vainikka 1989: 267f., Kiparsky 2001: 356, Hakulinen et al. 2004: §936, Reime 1993: 102 note 9, and esp. Brattico 2009: 90, but perhaps distinct from the partitive recursion discussed there, which occurs over greater distances and has alternatives analyses). It suggests that a locus may Agree with multiple DPs until valued, so the nonagreeing low nominative is a Case assigned without valuation. If so, Section 5.2 (note 9) requires more to be said about why the PCC occurs with such a nominative.

- (94) Minu- n_i täyty-y t_i men-nä kaupunki-in näke-mä-än **sinu-t** / **se**
 me-GEN must-3SG go-INF city-ALL see-INF-ALL you-ACC / it-NOM
 I must go to the city to see **you** / **it**.
 (Finnish)

(95) resumes the Finnish configurations with nominative objects, the PCC, and the repair accusative. They parallel Icelandic oblique-subject constructions and Italian impersonal *si* with nominative object, save for the existence of transparent infinitives whose object depends on an external Agree/Case system. Unlike in Icelandic, the PCC is repaired by an otherwise unavailable accusative (in Italian, the repair would look like the independent impersonal *si* with accusative object).

- (95) a. [ALL T_{NOM} [t_{ALL} ν [t_{ALL} [V S_{NOM}/O_{[+person]ACC}]]]] (*possessive*)
 b. [pro_{arb} T_{NOM} [t_{pro} ν [V O_{NOM}/O_{[person]ACC}]]] (*passive*)
 c. [GEN T_{NOM} [t_{GEN} ν [t_{GEN} [V [V_{INF} O_{NOM}/S<sub>[+person]ACC]]]]] (*necessary*)
 (T_{NOM}-NOM intervener in bold)</sub>

The emergence of the accusative in these constructions follows the same logic as in transitives, and as the parallel emergence of the ergative in transitives and PCC repairs. The highest DP in need of Case relates to the nominative locus T_{NOM}. Usually, it is the highest argument, and it raises to become an agreeing nominative or stays in-situ without overt agreement. If there is a lower DP, the object of transitives, the accusative emerges because it is needed to license it. In the configurations (95), the highest argument is rather an oblique or a defective *pro*. It only relates to T_{NOM} for [person]. Across this intervener, T_{NOM} licenses lower non-[+person] DPs, but not [+person] ones. On them, the accusative appears.

The Finnish accusative fits the profile of last-resort Case provided by $\mathfrak{R}$. The Agree/Case locus ν is activated because a Case licensing failure occurs. The derivation is uniformly that of the dependent accusative seen in (63). The numeration starts off with only T as an active Agree/Case locus, a Case failure leads to crashed Transfer at the C/T-phase, and the potential Agree/Case locus ν of unaccusatives and passives is enriched with a phi-probe. $\mathfrak{R}$ can effectuate no other repairs. In particular, the interveners in (95) cannot be turned into full PPs invisible to T_{NOM}, for they would lose their ability to serve as applicative arguments or *pro_{arb}*; the next section discusses this derivation.⁴⁹

⁴⁹The Finnish nominative object patterns have close areal analogues in North Russian and Lithuanian, bringing confirming or converging evidence, including for the low position of the nonagreeing nominative; see Lavine (2000: Chapter 4). Most analyses of Finnish cited in the introduction to this section share the present basis of nominative assignment to the highest DP, agreeing if sufficiently high, nonagreeing otherwise (cf. Kiparsky 2001, Maling 1993, Timberlake 1975). Relating the alternation of the nonagreeing nominative and [+person] accusative to the PCC is based on Rezac (2007), drawing on Icelandic and Italian as well as the

5.6.5 Overview

With Finnish, the accusative joins the ergative as the dependent Agree/Case relation activated in unaccusatives to repair the PCC. They appear when the obligatory Agree/Case relation has been used up yet there remains a DP in need of licensing. This is the same distribution as that of the dependent ergative and accusative in transitives. In PCC contexts however, the obligatory Case may or may not suffice for one and the same DP, according to its [+person] specification. When it does not, last-resort dependent Case emerges through $\mathfrak{R}$ (58) (repeated):

- (58) $\mathfrak{R}$ (for Agree/Case): A uninterpretable feature (probe) may enter the numeration on a potential Agree/Case locus if needed for Case-licensing.

The examination of $\mathfrak{R}$ in the unaccusative PCC repairs reveals something of its scope and limits. $\mathfrak{R}$ has the capacity to distribute dependent Case in a way more nuanced than selection, which would always activate a given type of T/v, and than reference to a Case competitor DP, because PCC contexts are not defined by DPs but by their [person] specifications. At the same time, $\mathfrak{R}$ is highly conservative, for it only activates the potential Agree/Case capacity of a structure. The potential of unaccusatives to add ergative or accusative for Case licensing surfaces independently of the PCC: in systems where the applicative argument is the Case competitor (Section 5.6.3, ex. (85)), in unaccusatives with a covert Case competitor such as Faroese dative-experiencer psych-verbs (Section 5.5), in simple transitivity of unaccusatives by the addition of an external argument.

Several more technical aspects of the mechanics of $\mathfrak{R}$ have come up. It affects the numeration, or requires limited countercyclicity, in the same way as the repair of transitives in (63) Nothing has needed to be said about where $\mathfrak{R}$ inserts a phi-probe, since the set of potential Agree/Case loci in an applicative unaccusative is limited to T/v (the P of applicative arguments being excluded to keep the applicative interpretation). The parametrization of $\mathfrak{R}$ has been relegated to Section 5.9. The next two sections extend $\mathfrak{R}$ to PCC in transitives.

ergative and accusative repairs in Table 5.1. The usual alternative is that the accusative realizes the low, nonagreeing nominative on [+person] pronouns (sometimes related to hierarchies, Kiparsky 2001: Section 5.3; cf. Maling 1993: 52 note 2). Under Baker's (2008) approach to the PCC (Section 5.2), the matter is empirically moot: the PCC is due to staying low, whether because of an intervener or for some other reason. The present analysis may then proceed in the same manner to provide repair. An alternative view is that the nonagreeing nominative is a realization of the accusative; see Brattico and Vainikka (2009) on Finnish, Lavine (2000: 4.4), Franks and Lavine (2006: 5.3, for objects of infinitives only) on North Russian and Lithuanian.

5.7 Transitive Repairs: Strengthening the PP

When the PCC occurs in transitives, repair by an additional ergative or accusative is unavailable. Both the T/v Agree/Case loci have been used up, and $\mathfrak{R}$ cannot introduce new ones, only add uninterpretable features. Two other repairs occur instead in Table 5.3. The dative intervener turns into a full PP, or the [+ person] DP is strengthened. This and the following sections take them up in turn.

Table 5.3 PCC repairs in transitives

	Person-Case Constraint (α^* banned iff [+ person])	Repair (bold element changes)
French	DAT _{clitic} - ACC _{clitic} [*] (?DAT _{SE(INH)} - ACC _{clitic} [*])	ACC _{clitic} [*] - DAT _{PP} / LOC _{clitic} DAT _{SE(INH)} - ACC _{strong} [*])
West. Basque	DAT _{agr} - ABS _{agr} [*]	ABS _{agr} - DAT _{PP}
Georgian	DAT _{agr} - ABS / ACC _{agr} [*] DAT _{agr} - ABS / ACC _{agr} [*]	ABS / ACC _{agr} - DAT _{PP} DAT _{agr} - [agr's self] . ABS / ACC _{3SG} [*]

The effect of turning a dative intervener into a full PP is to remove it from the clausal Agree/Case system and thus the PCC. Full PPs do not participate in the Agree/Case system of the clause and provide their DP with one of its own. More generally, they isolate their DP from various clausal relationships, including applicative relationships, anaphora binding, and cliticization in French (Sections 4.6 and 4.7). They are complete, opaque domains: phases. The repair of defective dative PPs to full PPs can be analyzed as the activation of the potential Agree/Case system of a defective P, turning it into a phase, like the repair of unaccusatives.

The French repair (96) has been studied in Chapter 4. The PCC in French involves an applicative dative and a [+ person] accusative pronoun, which must independently be a clitic. The repair takes a defective dative PP_{DAT} and turns it into a full PP, virtually a locative PP. It is invisible to the PCC, like other full PPs including locatives. It also acquires other properties that distinguish full PPs from PP_{DAT}. One is the capacity to host full pronouns, suspending the obligatory cliticization of dative pronouns; this is the ostensible sign of the repair. Another is the inability to serve in applicative relations such as the possessor, (97), because they require an (Agree-like) relationship between the DP within and the clause. Cliticization of the accusative cannot be suspended in any of these cases.

- (96) a. Elle *le/*nous_i* *leur_k* a présenté. →_{repair}
 she him/us.A them.D has introduced
 b. Elle *nous_i* a présenté à *eux_k*.
 c. *Elle *leur_k* a présenté *nous_i*.
 (PCC and repair, French, Section 4.3)

- (97) Elle le/*nous leur a jetté(s) dans les bras
 she him/us them.D has thrown into the arms
 She threw him/*us into their arms.
(irreparable PCC, French, Section 4.5)

The following conclusions about French were reached in [Chapter 4](#):

- Accusatives DPs need clausal Agree/Case licensing.
- Pronouns have a prosodic Σ -deficiency. It is met within full PPs (and focussed DPs), where they surface as strong, and CPs, where they are clitics.
- Full PPs like CPs are phases, with their own Agree/Case and Σ -licensing. A DP inside is inaccessible to clausal syntax, including Agree/Case, various binding phenomena, and applicative relationships like possessor.
- Datives are defective PP_{DAT}s. They do not provide Σ -licensing and leave the DP visible to the clause for the relationships above, including to interfere in Agree for the PCC, although it cannot otherwise value a phi-probe.
- The PCC repair transforms the defective PP_{DAT} to a full PP, (nearly) identical to the locative PP, differing from PP_{DAT} only in completeness.

In terms of the present theory phases, a PP with an Agree/Case system in its functional architecture is a phase, because it Agrees with its DP and Transfers. Phasehood will unite the opacity and autonomy characteristics of full PPs. The addition of an Agree/Case system to defective PP_{DAT} turns it into full PP phase, opaque and autonomous. The addition falls under $\mathfrak{R}$ if P_{DAT} is a potential but not active Agree/Case locus for (58) (repeated).

- (58) $\mathfrak{R}$ (for Agree/Case): A uninterpretable feature (probe) may enter the numeration on a potential Agree/Case locus if needed for Case-licensing.

The PCC arises in the transitive ν P when [person] Agree between ν and the direct object fails across PP_{DAT}. This has been seen in (77) for ν_{ABS} , and the outcome is the starting point of (98). All the elements of the ν P are at this point a single phase built from a single numeration. It includes P_{DAT} and its complement, because the defective P_{DAT} without a probe is not a phase head. However, it is a potential Agree/Case locus. Upon crash of the ν P phase, $\mathfrak{R}$ (58) allows the addition of a phi-probe to this numeration. The sole locus available for the addition is P_{DAT}. The enriched P Agrees with its complement, and it is Transferred with deletion of its valued uninterpretable features. The remainder of a numeration rebuilds using the Transferred PP. The interior of the PP is now invisible to the clause and does not intervene in the Agree of ν_{ACC} . No PCC arises, and the ν P converges.

(98) Derivation of full PP PCC repair in transitives

- a. $v_{[\pi: +, \#, \kappa: A]} \dots [P_{[\kappa: P]} \text{pron}_{[\pi: 3, \#, \text{PL}, \kappa: (\vee?)}] \text{DAT}} \dots O_{[\pi: 1, \#, \text{PL}, \kappa:]}] \rightarrow * \text{Transfer}, \mathfrak{R}$
 b. $[P_{[\pi: \#, \kappa: P]} \text{pron}_{[\pi: 3, \#, \text{PL}, \kappa:]}] \text{full} \rightarrow \text{P-Agree/Transfer}$
 c. $v_{[\pi: \#, \#, \kappa: A]} \dots [P_{[\pi: \#, \#, \kappa: P]} \text{pron}_{[\pi: 2, \#, \text{PL}, \kappa:]}] \text{full} \dots O_{[\pi: 1, \#, \text{PL}, \kappa:]}] \rightarrow v\text{-Agree}$
 d. $v_{[\pi: 1, \#, \text{PL}, \kappa: A]} \dots [P_{[\pi: \#, \#, \kappa: P]} \text{pron}_{[\pi: 2, \#, \text{PL}, \kappa:]}] \text{full} \dots O_{[\pi: 1, \#, \text{PL}, \kappa: A]]} \rightarrow \checkmark \text{Transfer}$
 (Notation: π [person], $\#$ [number], κ [Case] (A acc.), $+$ [+ person] of DAT)

This application of $\mathfrak{R}$ has by now familiar properties. It is limited to activating a potential Agree/Case locus. It operates on the numeration or requires counter-cyclicity, because Transfer failure at the vP -level strengthens PP_{DAT} within the vP .

The phasal consequences of $\mathfrak{R}$ may be examined here more closely than up to now. Adding a phi-probe to a potential Agree/Case locus leads to Agree and Transfer, turning the strengthened PP_{DAT} into a phase. In French this is detectable not only in the absence of the PCC, but also in the inaccessibility of the DP within to applicative relationships. This is a property of full PPs that follows if such relationships hold between a DP and something else in the clause, such as possessor-possessum binding, for phasehood prevents this. In consequence, the PCC repairs can never fix applicative arguments by applying to their P head. This restriction explains why PCC repairs in applicative unaccusatives never strengthen the PP. It would be easily detectable, for instance in Basque dative-experiencer psych-unaccusatives, whose agreeing PP_{DAT} would become a nonagreeing full PP. Such a repair is impossible. The phasehood of full PPs explains why (Rezac 2009).

The phasal difference between defective and full PPs may be a sufficient explanation of their difference in Σ -licensing. French (unfocussed) dative and accusative pronouns must cliticize to $T + V$. This is their Σ -deficiency. Full PPs (and focussed pronouns) meet it in some way. A pronoun within them is realized in its strong form. There is no consensus on the nature of Σ -deficiency. Cardinaletti and Starke (1999) view it as the need of a lexical core to have the prosody-related head Σ in its extended functional projection. A clitic pronoun fails to project Σ and so must move to a corresponding Σ in the clause. Under this view, PP_{DAT} needs to be strengthened by the activation or addition of Σ to turn into a full PP. This would fall within the purview of $\mathfrak{R}$ if construed as the addition of some probe to inactive Σ in PP_{DAT} (cf. Section 5.9). If there is no Σ in PP_{DAT} , $\mathfrak{R}$ might be given very limited means to add the functional head correlated with a probe (Section 5.4).

A different view of $\mathfrak{R}$ -deficiency proves more fruitful here. Matushansky (2006) proposes that French cliticization is the morphological attachment of a clitic to $T + V$ from a local specifier reached by the last step of syntactic movement (Section 4.7; cf. Chomsky 1995: 249; Sportiche 1996: 244). This fits in with research highlighting the divorce of prosodic and other morphophonological aspects of cliticization from syntactico-semantic ones (Zribi-Hertz and Diagne 2002, Section 2.3). The Σ -deficiency of French pronouns is then their

need for a host with certain morphophonological properties. In the clause, this is T ($T + \Sigma/v/V$, or even v , which always raises to T). French unfocused pronouns first undergo regular syntactic movement out of the VP, akin to Scandinavian Object Shift. It is only available to them, in the same way as Object Shift is limited to pronouns in Mainland Scandinavian, unlike in Icelandic. Subsequently cliticization itself takes place, as the postsyntactic, morphophonological attachment of the pronoun to T in the local domain of its final syntactic position.

The P head of full PPs but not PP_{DATS} satisfies this morphophonological Σ -deficiency of pronouns to have a host. Phase theory suggests an interesting way to derive this. The complement of a phase-head undergoes Transfer and so is an autonomous unit at PF, including for prosodic independence (Chomsky 2001: 8, 12; Legate 2003, Uriagereka 1999a, b). In virtue of Transfer, phase-heads or the prosodic boundaries they establish might serve as hosts for any adjacent prosodically dependent elements. In full PPs, pronouns are always adjacent to the phase-head P, so their Σ -deficiency would be satisfied. In CPs, pronouns are separated from the phase-head C by [Spec, TP] and T. T might count as the phase-internal incarnation of the C-T phase-head C and serve as host for that reason (Richards 2007, Chomsky 2007, 2008, see Section 5.4). Alternatively, cliticization in the CP might use T as host for a different reason than phase-independence, perhaps reflected by the realization of pronouns in strong form within PPs, in clitic form in CPs.⁵⁰

The morphophonological view of Σ -deficiency lends itself naturally to sort out the problems that $\mathfrak{R}$ can and cannot repair. French has presented the opportunity to see the limits of $\mathfrak{R}$ in Section 4.6. The PCC repair fixes the PCC, but not the other failures of cliticization in (99).

- (99) Dative cliticization failure irreparable by dative→locative:
- | | |
|---------------------|--|
| a. [PF] | Arbitrary clitic cluster gaps |
| b. [PF?] | Multiple dative clitics |
| c. [PF??] | Mediopassive <i>se</i> + dative clitic |
| d. [cliticization] | Coordination and modification |
| e. [cliticization] | Datives in DP or modifier AP |
| f. [cliticization?] | Causatives of unergatives |
| g. [LF] | Condition B / overlapping reference |
- (Section 4.6)

These limits of $\mathfrak{R}$ seem to follow elegantly from its restriction to failures of Full Interpretation (Section 5.4). $\mathfrak{R}$ can be triggered by the illegibility of a syntactic structure to the external systems, notably through the presence of

⁵⁰Strong and clitic pronouns have a different syntax (Section 4.4), but that is orthogonal to their realization: it arises from being inside a full PP or not, outside or inside the VP, or having extra structure around the pronominal core, all of which is independent of how the pronominal core is realized, in clitic form within the CP, in or as part of the strong form in the PP.

uninterpretable features like Case. Modularity prevents it from detecting problems that arise within the external systems or at their output.

Some of the problems in (99) belong to the external systems with reasonable clarity, PF or LF. Arbitrary clitic cluster gaps, likely multiple dative clitic gaps, and perhaps the mediopassive *se* + dative clitic ban, arise within realizational morphology or its use, along with similar gaps elsewhere such as Basque (71) (Rezac 2010a, forthcoming). Binding problems arise within interpretation. These syntax-external problems are invisible to $\mathfrak{R}$ by modularity.

That leaves the problems attributed to cliticization in (99). The Person Case Constraint is clearly not a problem with cliticization, although it bans clitics. Within and outside French, it is independent of cliticization and agreement morphology (Section 5.2). The problems labelled [cliticization] in (99) seem to be with cliticization alone. This is a difference that permits separating them from the PCC. The PCC groups with other problems of Agree/Case licensing, and thus with other activations of Agree/Case loci to meet Full Interpretation. The cliticization problems are purely a failure to meet the Σ -deficiency of clitics, a morphophonological problem at PF along the lines sketched above.

In coordinations, modifications, DPs, modifier APs, and causatives of unergatives, dative pronouns have no cliticization site, yet they cannot cliticize higher because of islandhood. Let us start with coordinations and modifications in (100). Their interior does not offer a cliticization host to satisfy Σ -deficiency, but they are also strong islands. All other requirements are satisfactorily met in them, for instance Case, as seen by replacing the pronoun with a demonstrative.⁵¹

- (100) a. *Elle *vous* parle.
 ??Elle parle à vous autres.
 she you.D speaks to you_{strong} others
 b. Elle parle à ces autres
 she speaks to these others

(French, Section 4.6)

Dative complements of nouns and adjectival and participial modifiers are sketched in (101). These structures offer no cliticization site and are islands for cliticization or other movement. That no other problems arise in them is suggested by Belgian French, which permits dative clitics in past participle modifiers, *une lettre [vous adressée]* ‘a letter [you.D addressed]’ (Section 6.6).

⁵¹It may be that modification and coordination structures are created at Transfer by adjunction of independently convergent phases (Chomsky 2004). The attempt to adjoin the two convergent phases *Elle vous parle* ‘I you.A see’ and *belle et souriante* ‘beautiful and smiling’ then cannot attach the modifier to the clitic *vous*; perhaps the result of the attempt is apposition, *Elle vous parle, belle et souriante*. (The modifier *autres* is not a good candidate for this since it needs a D; its structure may rather be [this/you_D others_N], which continues to make the point in the text.)

Other French varieties do not offer a cliticization site. Its absence thus seems a relatively superficial parameter differentiating closely related systems.

- (101) une fille [(**vous*) reconnaissant (à Marie / **vous*)]
 a girl [(**her.D*) grateful (to Marie / **you_{strong}*)]
 (French, Section 4.6)

Causatives of unergatives in (102) may be analyzed similarly. The ‘restructuring’ causative lacks a cliticization site within the infinitive, perhaps again with variation across French (reflected in the ‘mixed’ causative’ mentioned in Section 4.5). An argument of the infinitive can only cliticize in the matrix clause. However, the accusative causee of an unergative intervenes to block cliticization in (102).⁵²

- (102) Je (**vous*) ferai [_{edge} téléphoner_v **Ilse**_{ACC} [_{InfP} *t_v* (à Maï / **vous*)].
 I (**you.D*) will.make telephone Ilse (to Maï / **you*).
 (French, Section 4.6)

There is thus a natural way to discriminate between the PCC and the cliticization problems in (99). The PCC is a clitic-independent failure of the licensing of [+person] elements. Pure cliticization failure to meet the Σ -deficiency of pronouns is a PF problem. This view of Σ -deficiency is compatible with different ways to meet it, including postsyntactic attachment and syntactic attachment to dedicated Σ -heads of the functional architecture, provided the requirement is not itself visible to syntax as an uninterpretable feature. Modularity draws the right dividing line between the PCC and the extra-syntactic problems in (99).

Transitive repairs akin to that of French are found in Spanish, Basque, Georgian, and probably widely (e.g. Baker 1996: 442 on Mayali). The Western Basque repair is conspicuous both for its underlying identity with that of French and its superficial incarnation in a very different system (Rezac 2009). It was

⁵²The causative may illustrate an independent point about $\mathfrak{R}$. Suppose that the infinitive InfP of this type of causative is a phase (Bobaljik and Branigan 2006). Cliticization out of it must then proceed through the edge of InfP in (102). Once the edge is built, InfP transfers, and it along with its edge is embedded in the matrix phase. At this point the clitic proceeds into the matrix clause, but in (102) it is trapped below the accusative causee. $\mathfrak{R}$ can now do nothing, even if the problem with the clitic were repairable by strengthening the dative to a full PP. The resulting PP cannot be put back inside the already transferred InfP phase, and it cannot remain in its intermediate position, as Bošković (2002: 136–8) shows for successive-cyclic movement generally (cf. *Who has said (*what) Mary ate (what)?*) This entails that even if the ban (99)c on mediopassive *se* + dative clitic were to fall under PCC in (i), where *pro_{arb}* blocks T-DAT Agree necessary for DAT licensing (Sections 4.6 and 4.7), the DAT is irreparable if the *v* is a phase.

(i) T_{NOM} [_{edge} *pro_{arb}* (**DAT_{clitic}*) NOM *v_{mediopassive}* [... *t_{DAT}* [V *t_{NOM}*]]

introduced in Section 5.2 and is shown again in (103). Dative and absolutive arguments obligatorily agree, as prefix and suffix respectively, (103)a. In the PCC context (103)b, dative and 1st/2nd person absolutive agreement are incompatible. Then dative agreement is exceptionally suspended, provided the dative is an indirect object and not a purely applicative argument like possessor ((14)–(15)). The dative becomes a full, nonagreeing PP, which does not independently exist in Western Basque, but does in Eastern Basque (again, for indirect objects only). Absolutive agreement cannot be suspended under any circumstances, even when dative agreement cannot be.

- (103) a. Miren-ij haurr-ak_k eramango di-zki_k-o_j-te / *d-it_k-u-zte
 Miren-D children-PL.A bring.will R.3pA_k.3sD_j.3pE / R.3pA_k.3pE
 b. Miren-ij zu_k eramango za_k-it_k-u-zte / *za_k-i-zki_k-o_j-te
 Miren-D you.A bring.will R.2pA_k.3pE / *R.2pA_k.3sD_j.3pE
 They will bring the children/*you.A to Miren.D (*agreeing dative*).
 They will bring *the children/√you.A to Miren.D (*nonagr. dative*).
 (Basque, = (13))

These properties of the Western Basque repair echo those of the French one. The two repairs may be taken as identical. Both turn the defective PP_{DAT} that may serve in the applicative construction, and cliticizes or agrees, into a full PP that lacks these properties. Basque dative agreement and Romance cliticization and clitic-doubling may even have the same analysis (Rezac 2006, 2008a, Etxepare 2010, Arregi and Nevins 2008). The dative agreement/clitic originates in the dative DP together with the doublee (if any). It moves to the neighbourhood of *v*/T through the clausal Agree/Case system because of its visible [+person] feature (Anagnostopoulou 2003). From there, it attaches to the agreement complex, along the lines discussed for French clitics above. The repair prevents this because DPs inside full PPs are inaccessible to clausal Agree/Move.

The superficial expression of the repair varies across these systems. In French, the repair is only visible for pronouns, since only they cliticize or (under focus) clitic-double. Nonpronouns have the same realization whether as PP_{DAT} (dative) or as full PPs (locative and repaired datives), namely *à* ‘to’ + DP. In Western Basque, the repair is visible for all datives, for they all obligatorily agree. In the minimally different system of Eastern Basque, nonagreeing dative PPs are independently available, so the repair invisible on the surface. Spanish (note 4) and Georgian (Section 5.8) have the same system as Western Basque, visible in the former as the suspension of the otherwise obligatory clitic-doubling of all datives, in the latter of dative agreement. Georgian also offers a last form of the PCC repair, different from the ones seen so far in affecting the direct object and in form. Echoes of it may occur in French and Spanish as well. Its unification with the others is the subject of the next, penultimate section of this chapter.

5.8 Transitive Repairs: Strengthening the DP

In the transitive repairs in Table 5.3, Georgian and perhaps French are shown with a repair that affects the [+person] direct object rather than the dative. They can be straightforwardly modelled through $\mathfrak{R}$ and highlight the issue of its parametrization. However, aspects of this repair will remain mysterious.⁵³

(104) illustrates the case and agreement system of Georgian (Boeder 1968, 2002, 2005, Harris 1981, Anderson 1984, Hewitt 1995, Tuite 1998, Béjar 2003).

- (104) a. $nino-m_i$ **me_j** $da-m_j$ -xat- a_i
 Nino-ERG me[NOM] PV-1s-painted-3sSU.AOR
 Nino painted me (= a picture of me).
 b. $deda-m_i$ $da-m_k$ -i-xat'- a_i (**me_k**) $surat-i_j$
 mother-ERG PV-1s-VO-painted-3sSU me[DAT] picture-NOM
 Mother painted me a picture.
 c. (**me_i**) $da-v_i$ - u_k -xat' e $deda-s_k$ $surat-i_j$
 I[ERG] PV-1s-3D + VO-painted mother-DAT picture-NOM
 I painted mother a picture.
 (Georgian, (a) Nash 1995: 199, (b, c); Anderson 1984: 168)

The c-command relations among the A-positions of the transitive subject EA, intransitive/passive subject S, transitive object O, applicative object IO, are $EA > IO > O$ in transitives, less clear for S and IO (Harris 1981, McGinnis 1997, and note 24). The case marking is nominative (EA/S) – accusative (O) in the present and ergative (EA) – absolutive (S/O) in the past, where the nominative and absolutive are identical and both called nominative. In the present, the accusative case of O is syncretic with the case of IO, and both are called ‘dative’. However, in the aorist, passives, and detransitivizations O becomes nominative while IO remains dative. Thus the ‘dative’ of O reflects a structural Case while that of IO an inherent one. 1st/2nd person pronouns do not mark case; a bracketed gloss indicates the case that a corresponding 3rd person would have.

Verbal agreement has a unique prefix slot for 1st/2nd person, underlined here along with its controller. It shows nominative-accusative alignment in the present and aorist alike, with IO and O controlling one set of morphemes (1SG m in (104)a), and EA and S another (1SG v in (104)b and (104)c). When two potential agreement controllers are 1st/2nd person, O/IO beats EA and IO beats S for control of the prefix; competition between IO and O is blocked by the PCC below. 3rd person IO controls a distinct prefix slot, also underlined, while 3rd person EA/O/S is unmarked by prefixes. These agreement relations are obligatory for the winning agreement controller. The remaining potential controllers are fine without agreement, for instance 1st person EA when O is

⁵³The PCC repairs of Georgian are compared with Basque and French in Rezac (2009).

2nd person (see below for (105)). In the suffix field are marked the person and number of the subject, glossed SU.⁵⁴

The PCC in Georgian bars agreement with 1st/2nd person O in the presence of IO, both in the present where O is has dative case, and in the aorist where it is nominative (absolutive). Two otherwise unavailable structures, repairs, then appear. One suspends the otherwise obligatory agreement of the IO (Boeder 1968: 89, 2002: 97f.; cf. Hewitt 1995: 140f.). In (105)a, the dative *mas* controls no agreement (cf. (105)b). The appearance of a nonagreeing dative IO in the PCC context is parallel to Western Basque in Section 5.7, and can be treated in the same way. IOs must normally be applicative and agree, but in the PCC context they become nonagreeing PPs. Georgian shares the restriction of this repair to nonapplicative datives. Indirect objects can be repaired, but not benefactives, possessors, causees. These are all signaled in Georgian by special applicative morphology known as ‘version’, glossed V, absent in (105)a. A further constraint has no analogue in French or Basque: only 3rd person IOs can be nonagreeing.

- (105) a. mi-**m_j**-q'id-i-s_i **me_j** ma-s_k
 PV-1s-sell-TS-3sSU I[DAT] he-DAT
 b. mi-Ø/**h_k**-q'id-i-s_i **ma-s_k** čem-s tav-s_j
 PV-3D-sell-TS-3sSU s/he-DAT my-DAT head-DAT
 S/he will sell me to him/her.

(Georgian, Boeder 2002: 98, 2005: 28)

The other PCC repair is known as *Object Camouflage* or *tavization*. It is shown in (105)b (Boeder op.cit.; Harris 1981: Chapter 3). The IO remains an agreeing dative, while O is replaced by the 3SG expression *X's tav* ‘head, source, self’, where the possessor pronoun *X* has O’s phi-features: *čems tav* ‘my head’ for *me* ‘me’. Outside the PCC context, *X's tav* cannot be used for pronominal O, so this is a PCC repair. Because *tavization* affects O, it imposes no restrictions on IO. In (106) and (107) *tavization* is the only available repair, because a nonagreeing dative is impossible for applicative or 1st/2nd person datives.

⁵⁴1st/2nd person O and IO are thus particularly close because they do not overtly mark case and control the same person prefix. They remain differentiated as structural vs. inherent Case in detransitivizations, where IO retains IO/O-type agreement, while O comes to control S-type agreement (the EA/S prefix series and subject suffixes). 3rd person IO uses a prefix that combines in principle with 1st/2nd person EA/S, e.g. 1st person EA *v-* + 3rd person IO *s/h-*, but not with 1st/2nd person O by the PCC. For the most part however, only one of the 1/2.EA/S and 3.IO agreement prefixes surfaces (Rezac 2008b: 721 note 21 and references there, adding Boeder 2005: 28f.; Tuite 1998: 89; cf. 74f. for S-IO, 2008: 157). The combination of IO and S occurs in unaccusatives and detransitivizations. The PCC does not occur in such structures, which indicates that S has access to person agreement. In Georgian S does raise higher than O for the purposes of agreement because it aligns with EA not O (Rezac 2008c: 92 note 21), but 1st/2nd IO beats 1st/2nd S for the control of the agreement prefix and some c-command purposes (Harris 1981, McGinnis 1997). The relevant person agreement that permits S to avoid the PCC might rather be seen in the subject agreement suffixes, which S (like EA) and not IO (like O) controls; they exhibit person distinctions (Aronson 1989: 42f., 470; Hewitt 1995: 226ff.; Boeder 2005: 27 (e)).

- (106) važa-m_i da-m_k-i-xat-a_i *sen / *Ø / šeni tav-i_j (me_k)
 V.-ERG PV-1s-V-paint-3sSU.AOR you / Ø / your self-NOM me[DAT]
 Vazha painted you for me.
- (107) anzor-ma_i ga-(***m_j**)-a-lan3yv-in-a_i vano-s_k ***me** / *Ø / čem-i tav-i_j
 A.-ERG PV-(***1s**)-V-insult-CAUS-3sSU V.-DAT me / Ø / my self
 -NOM
 Anzor made Vano insult me.
- (Georgian, Harris 1981: 92, 80)

The PCC and its repairs in Georgian are an extraordinary testament to the independence of these phenomena from the morphological expression of agreement, as Boeder (2002: 104) points out. The 1st/2nd person agreement prefix is unique, so in a combination of 1st/2nd person EA and IO/O as in (108), only IO/O controls the prefix, and the EA is not cross-referenced on the verb (even by suffixes, if singular). Yet that does not prevent it from undergoing *pro*-drop, (108), or appearing as a regular pronoun, and it does not license the use of *X*'s *tav* for it, (109). The PCC also blocks agreement, for 1st/2nd person O in the presence of an agreeing IO. Yet the consequence is the use of *X*'s *tav* in the place of an impossible *pro* or pronoun. The same independence of the PCC from surface agreement has been seen in French, Basque, and Chinook.

- (108) [minda] (***v**)-g-a-ḱoc-o, (***x**)-m-a-ḱoc-o
 [I.want.it] (***1s**)-2s-VN-kiss-OPT (***2s**)-1s-VN-kiss-OPT
 I kiss you, [and] you kiss me.
- (109) *čem-ma tav-ma g-a-ḱoc-o-s
 my-ERG head-ERG 2s-VN-kiss-OPT-3Ssu
 Intended: I kiss you.
 (Georgian, Boeder 2002: 94, 102 (v-g- phototactically fine))

The Georgian repair by a nonagreeing dative falls under the ones seen in Section 5.7, the strengthening a defective, agreeing PP_{DAT} to a full, nonagreeing PP. Tavization may be seen as an analogous strengthening of a DP by providing it with an internal Agree/Case (Rezac 2007, cf. Albizu 1997b). We may think of the relevant type of pronouns as a nominal core N ‘λ_x.x = x’ and a phi-containing functional projection Φ, giving [Φ N] (Déchaine and Wiltschko 2002). Ordinarily, N raises to Φ and the whole is Case-licensed by Agree/Case with the clausal T/v, (110)a. These are the ordinary agreeing strong pronouns and *pro*.

- (110) a. [DP (δ_[Case:D]) [Φ + N]_[Case:] t_N] → bare pronoun
 b. [DP δ_[phi:,Case:D] Φ_[Case:D] N_[Case:]] → possessive pronoun + *tav* ‘self’
 (cf. Rezac 2007: 125f.)

In the tavization (110)b, the pronoun is ‘strengthened’ by an active Agree/Case licenser δ for the phi-set Φ within the DP. A phi-set licensed by DP-internal Case is naturally realized as a genitive/possessive pronoun, as in English. The N head is left in-situ, and Case-licensed by the clause, where it agrees as 3SG. It is realized by the lexical item closest to its meaning ‘ $\lambda x.x = x$ ’, namely *tav* ‘self’. The striking form of tavization thus has a fairly natural explanation and falls within the purview of $\Re$ as the activation of an Agree/Case licenser.

X’s *tav* avoids the PCC because it is 3SG, even when interpreted as 1st/2nd person. The regular strong pronouns or *pro* of Georgian would not help, since they must agree and are subject to the PCC, as in Basque. They must lack their own internal Agree/Case licenser for [+person]. In order for $\Re$ to apply to (one of) them, there ought to be within them a potential Agree/Case licenser δ for $\Re$ to activate, at least optionally, unless $\Re$ is given the power to introduce a host for the probe it adds. Ideally, δ would be active somewhere else in the language or in a similar linguistic system, much as the PP_{DAT} of French has a full PP analogue in locatives, and that of Western Basque in Eastern Basque. Within Georgian, *X*’s *tav* expressions mostly serve as a subject-oriented object reflexives, although not as logophora (Harris 1981: 23–6, 281 note 4; Amiridze 2006). This is a wide-spread use of *X*’s *self/head* expressions, including Basque *X-GEN buru*, and does not lead their availability for PCC repairs. However, Boeder (2002: 100–2, 2005: 54–6) notes uses as nonanaphoric emphatic pronouns, which have no analogues in Basque, such as the vocative *čem-o tav-o* ‘my-VOC head-VOC’ = ‘O me!’. Given a potential Agree/Case locus δ (optionally) present in Georgian (strong) pronouns, $\Re$ works in tavization in the same way as when strengthening a defective to a full PP. When the vP phase crashes because of the PCC, a potential Agree/Case licenser within its numeration, P_{DAT} or δ , is enriched with a phi-probe.

The facility of modeling both repairs by $\Re$ contrasts with the conspicuous absence of the analogues of tavization in languages such as Basque. In order for a pronoun to avoid the PCC, $\Re$ needs the potential Agree/Case licenser δ , and the activation of δ must result in a pronoun that can value the clausal Agree/Case number probe that reaches it in the PCC context. In Georgian these are the properties of 3SG *X*’s *tav* forms. In Icelandic, Finnish, and Basque, such pronouns should not to exist. That appears to be the case. As discussed in Section 5.2, in agreeing contexts their 1st/2nd person pronouns are 1st/2nd person in need of external licensing, even when strong. In non-agreeing contexts, their strong pronouns seem to have their own Agree/Case licenser, but perhaps not the 3SG phi-specification that would let them serve as the goal of the probe of an agreeing context if placed there. Basque does have 3SG *X*’s *head/self* where *X* = 1st/2nd/3rd person, but only as reflexive, so its active δ may be presumed to have additional lexical content that requires an antecedent. The availability of tavization in Georgian alone may thus follow from the independent availability of pronouns with a 3SG N core, 1st/2nd person

phi-features, and the potential Agree/Case locus δ that can be activated to license those features.⁵⁵

Nevertheless, matters are not so straightforward. It has been discussed in Section 4.3 that French perhaps has a PCC repair using accusative strong pronouns in one context: when the dative is an inherent clitic, (111).

- (111) (*)*Je me rappelle vous* (*dans un beau costume de bain).
 I SE(INH) remember you in a beautiful bathing suit.
 (French, Section 4.3)

Intuitively, the accusative repair is limited to the context of an inherent dative clitic because inherent clitics are idiom chunks without further structure, including an activable P_{DAT} . Under this description, $\Re$ in French targets the accusative only if there is no P_{DAT} (without paying attention to the availability of applicative interpretation for the PP_{DAT} , as modularity requires). Technically, the right result would be achieved if $\Re$ were to operate not on the numeration, but on the structure built from it, and proceed top-down, since the dative clitic c-commands the direct object. This entails that $\Re$ is intuitively counter-cyclic in the sense discussed earlier in Sections 5.4, 5.5, and 4.6. A probe would have to be added to P_{DAT} within the already constructed νP , permitted to Agree to turn the PP_{DAT} into a phase, freeing up the probe of ν for the direct object. Keeping rather to the proposal here where $\Re$ applies to the numeration, it may be more difficult to activate the Agree/Case locus in DPs than in PPs; PPs autonomous of clausal Agree/Case are more common than DPs, including in French. However, the implementation remains unclear.

Georgian and Spanish are pertinent to the evaluation of these options, although they do not presently lead to a solution. Georgian tavization has been described as a free option beside the use of a nonagreeing IO, as seen in (105) (Boeder 1968: 1.6, 2002). This contrasts with the $PP_{DAT} > ACC$ repair preference in French, and fits well with $\Re$ applying freely to the numeration.

⁵⁵French has focused 1st/2nd person pronouns that may not need Agree, but several properties bar them as repairs: their δ may be lexically specified as focussed, they may not be 3SG, and they require clitic-doubling if 1st/2nd person which is unavailable in a PCC context (Kayne 2000: Chapter 9 shows the pronouns are unavailable when clitic doubling is impossible). Arabic might have a repair on the direct object in ditransitives by a special strong pronoun (Bonet's 1991: 206f.; citing Fassi-Fehri 1988). However, Fassi-Fehri's (1993: 3.1.2) discussion indicates that the strong pronouns in question are available for a number of other uses, leaving it unclear if and when they are repairs. Rosen (1990: 692–7) extends tavization to an apparent PCC repair in Southern Tiwa. The reflexive of a plain transitive looks like an intransitive. When an applicative object is added, the PCC would block reflexives for 1st/2nd person, as for intransitives generally in that language. An otherwise unavailable reflexivization steps in, which Rosen analyzes a regular transitive with O coded as the 3rd person noun 'self'. This might fit if the language has *self/head*-type reflexives like Basque and Georgian, but their δ is not an active Agree/Case locus so they do not surface ordinarily; the PCC repair activates it and lets them emerge.

However, other dialects of Georgian are reported to differ (Boeder 1968: 1.6, 2002; Harris 1981: Chapter 3 and 282f. note 4; Tuite 1998: 21f.). The Tbilisi dialect only allows tavization, which may be captured by a parameter that does not allow the P_{DAT} of IO to host the probe added by $\mathfrak{R}$ (Section 5.9). Other dialects apparently only allow tavization if IO is 1st/2nd person. Since 1st/2nd person datives cannot become nonagreeing under the PCC repair in Georgian generally, this resembles the French condition that permits the strengthening of O only if IO is an inherent reflexive. It might again be modelled by supposing that the P_{DAT} of 1st/2nd person IO is parametrically inaccessible to $\mathfrak{R}$, which may in turn be connected with the near identity of O and IO case and agreement for 1st/2nd person but not 3rd pronouns in Georgian (note 54; see Rezac 2008a, b and references there for person, Harris 1981: Chapter 15; Tuite 1998 for number). Much remains to be learned about this dialect, including whether tavization is allowed in the presence of applicative IO, which also cannot become nonagreeing (from French, one would not expect so). In Spanish a similar interaction of 1st/2nd–3rd person occurs (note 4). Its PCC repair also targets the IO unless it is 1st/2nd person, when it may target either the IO or O. Spanish 1st/2nd person O and IO along with 3rd person IO are fully symmetric in morphology and syntax, and their repair takes the same form of suspending otherwise obligatory clitic doubling and focus. The symmetry explains why either IO or O can be targeted if 1st/2nd person, but not why 3rd person IO is preferred to 1st/2nd person O, like in Georgian. Some Spanish varieties prefer to repair the IO always.⁵⁶

In the end, it remains unclear how to constrain the repair of the direct object. Nothing is needed for the Georgian variety in (106), nor for Spanish 1/2.O + 2/1.IO interactions. Elsewhere, perhaps a preference exists for repairing the indirect object that remains to be understood. The repair itself can be naturally modelled by $\mathfrak{R}$ in the same way as that of PP_{DAT}, despite the distinctive form of tavization, and the cross-linguistic variation in its availability has a promising treatment.

5.9 Conclusion: The Scope and Limits of $\mathfrak{R}$

5.9.1 Aspects of $\mathfrak{R}$

In this chapter, the repairs of the Person Case Constraint in Table 5.1 and dependent Case have been unified under $\mathfrak{R}$ (1), instantiated in the Agree/Case system as (58) (repeated here). This concluding section returns to the

⁵⁶Related to these issues appears to be the crosslinguistic tendency for 1st/2nd person to require agreement or clitic doubling where that of 3rd person can be suspended, including in PCC contexts (see Simpson 1983: 193f. for Warlpiri). However, this is absolute, not relative to another argument. Moreover, in French this 1st/2nd–3rd asymmetry exists (Morin 1982, Kayne 2000: Chapter 9), but does not prevent the PCC repair from targeting 1st/2nd person datives.

general properties of $\mathfrak{R}$, the link between Case and person licensing and Full Interpretation, and explores $\mathfrak{R}$ as a mechanism to satisfy other Full Interpretation requirements.

- (1) $\mathfrak{R}$: An uninterpretable feature may enter the numeration only if needed for Full Interpretation of the syntactic structure built from it.
- (58) $\mathfrak{R}$ (for Agree/Case): A uninterpretable feature (probe) may enter the numeration on a potential Agree/Case locus if needed for Case-licensing.

$\mathfrak{R}$ is an interface algorithm that operates on the numeration in virtue of its non-convergence for Full Interpretation. It leads to *syntactic* structures that do not exist otherwise, unlike operations at PF and LF, which can only affect realization or interpretation (see Section 2.3 on PF, on LF Fox 2000a, esp. pp. 130–3). The limits of $\mathfrak{R}$ are set by a strong modular architecture that encapsulates syntax, PF, LF, and the lexicon beyond modular barriers. $\mathfrak{R}$ can respond to the illegibility of a syntactic structure to the interfacing systems of PF and LF by modifying its numeration interface with the lexicon. It cannot detect problems within or beyond PF and LF, affect syntactic computation, or access the lexicon to find lexical items or build new combinations of sound and meaning. A general principle of structure preservation lets $\mathfrak{R}$ add but not delete material. These natural limits on $\mathfrak{R}$ correspond to the empirical properties of the repairs. They do not respond to PF and LF-internal problems, they are conservative of the ‘basic’ interpretable (legible) content of a numeration or the structure built from it, and they consist in enrichment of the numeration with uninterpretable features.

In these limitations, $\mathfrak{R}$ stands in stark contrast to the fully global framework of Optimality Theory, but also to more narrow principles that let syntax access LF or PF (Section 5.3). It remains a global, ‘last-resort’ mechanism by which a syntactic structure is licensed through reference to a poorer version of itself. Behind the globality lies the intuition that the Agree/Move mechanism should not be enriched with the power to account for the pathless interactions among arguments needed to unify the repairs, although such a move is theoretically envisageable. An example is Bitter and Hale’s (1996) incorporation of the notion of Case-competitor in an A-movement domain for Case assignment, to capture dependent Case, one of the phenomena that here have been subsumed under $\mathfrak{R}$ (Section 5.5).

Laka (2000: 109–13) approaches dependent Case in another way, which sheds revealing light on the globality of $\mathfrak{R}$ and its alternatives; earlier Levin and Massam (1984) develop the same idea. The cornerstone of the proposal is a distinction between [+active] Agree/Case probes that require a goal, and [–active] ones that do not.⁵⁷ The Obligatory Case Parameter puts a [+active]

⁵⁷I adapt Laka’s checking terminology to Agree. The [$\pm$ active] distinction does not reduce to the [$\pm$ strong] distinction of Chomsky (1995), now Agree vs. Move, or Move pre vs. post Transfer.

probe on v_{ABS} in an ergative-absolutive system and on T_{NOM} in a nominative-accusative one. The remaining Agree/Case locus has a [–active] probe, T_{ERG} and v_{ACC} . Either probe can seek to Agree freely. In transitives both are needed (112)a. In unaccusatives, if the [–active] probe Agrees (112)b, the [+active] probe is left without a goal, and the derivation crashes. On the other hand, if the [+active] probe Agrees (112)c, it is the [–active] probe that has no goal, which it tolerates.

- (112) a. $T_{\text{ERG}, -\text{active}}$ EA_{ERG} $v_{\text{ABS}, +\text{active}}$ O_{ABS} ✓
 b. $T_{\text{ERG}, -\text{active}}$ $v_{\text{ABS}, +\text{active}}$ S_{ERG} * (no goal for [+active] probe)
 c. $T_{\text{ERG}, -\text{active}}$ $v_{\text{ABS}, +\text{active}}$ S_{ABS} ✓ (no goal for [–active] probe)

This is a dependent Case mechanism that makes no reference to the obligatory Case relationship or to the argument that participates in it as the Case competitor. It also makes no reference to crash to license dependent Case as last-resort. The [–active] probes of dependent Case are freely present and freely Agree. Full Interpretation filters out those derivations where the Agree of a [–active] probe leaves an [+active]’s probe need to Agree unsatisfied, and those where the failure to Agree of a [–active] probe leaves a DP without Case. There is no globality, only the filtering of syntactic structures by convergence.

In the domain of Case-licensing requirements, [–active] and $\mathfrak{R}$ -added probes are coextensive, and reflect closely related intuitions. The ontological [$\pm$ active] distinction can be recast as phi-probe distribution in the lexicon. [+active] probes correspond to regular lexical items that only come with a probe, T_{NOM} , v_{ABS} . [–active] probes can be implemented as pairs of lexical items with and without a probe, v/v_{ACC} , T/T_{ERG} . The resulting lexical duplication over-generates, by allowing v_{ACC} , T_{ERG} where they usurp the goal needed by T_{NOM} , v_{ABS} , and is filtered by convergence. $\mathfrak{R}$ is the inverse mechanism to assign optional probes to the potential Agree/Case loci v , T when needed for convergence. The parallelism extends to the PCC and other person Case-licensing requirements, for which Béjar and Rezac (2009) posit ‘added probes’ similar to Laka’s [–active] ones.

Yet the role of crash in filtering the availability of nonobligatory Agree/Case relations is different under the two proposals: to permit them only when needed or weed them out only when detrimental. In consequence, they partition syntactic phenomena in different ways, intensionally, even when extensionally equivalent. The global but not the nonglobal approach claims that there is a difference of mechanisms between regular Agree/Move dependencies that depend on the lexical properties of the target, goal, and the path between them, and those that depend on the global properties of the surrounding structure, like PCC repairs.

Outside Full Interpretation failures, the two views are not equivalent. In contexts where Agree by a [–active] probe does not cause a crash, it should be available optionally. Datives in French need not only Case licensing but also a cliticization site. Agree with their head P provides both in Section 5.7, creating locative-like full PPs. If this phenomenon is analyzed by giving P_{DAT} a [–active]

probe, such Agree is always available. If it does not lead to a crash by blocking a [+active] probe, it should emerge as optional, and as obligatory when a cliticization site is unavailable. By contrast, $\mathfrak{R}$ can add a probe to P_{DAT} only when necessary for Full Interpretation. The latter expectation is met in PCC repairs: datives turn into locatives only to repair the PCC, not optionally and not for other reasons. Theoretically, this is the touchstone to discriminate between the two approaches.⁵⁸

These are the general properties of $\mathfrak{R}$ in PCC repairs and dependent Case. A more technical aspect of its mechanics remains to be addressed: its parametrization. The case studies in this chapter have focussed on systems where PCC repairs are detectable, like Western Basque, and their siblings where they would be invisible, like Eastern Basque. Yet beside Western Basque varieties and Finnish that transitivize unaccusatives to repair the PCC, there stand other Western Basque varieties and Icelandic that cannot, despite appearing to have all the right properties. Similarly, the strengthening of an agreeing dative to a nonagreeing one in transitives is available to many but not all speakers of Western Basque (cf. Artiagoitia 2001: 405). Georgian dialects in Section 5.8 appear to present the same variation, while their own strengthening of a DP is unavailable to Basque.

Ideally, the parameters needed to permit $\mathfrak{R}$ would reduce to independent properties of the structures involved, such as the presence of a potential Agree/Case licenser. T , v , P_{DAT} , and δ would have interpretable [Case] to assign in some but not other systems, modulating their activation by the addition of a phi-probe. That seems plausible for P_{DAT} and δ , and it may well have independently detectable correlates as suggested for Georgian X 's *tav* pronouns in Section 5.8. However, in Icelandic and Finnish v_{ACC} , and in all varieties of Basque T_{ERG} , assign their accusative in transitives in the same way, yet in only some of these systems are they available for PCC repairs. At this point, it seems necessary to posit a property P that allows a potential Agree/Case-licenser to host the probe added by $\mathfrak{R}$ (cf. Béjar and Rezac 2009: 56). It may eventually prove feasible to eliminate P , for instance through the need of morphological resources to resolve multiple Agree by the added and core probe (Rezac 2008c).

5.9.2 *Person and Case Licensing*

Table 5.4 illustrates the close parallelism between the PCC and its repairs on the one hand, and on the other the person hierarchy interaction of transitive subject and object in Chapter 3 (cf. Haspelmath 2005). In both, there is a regular coding of the participating arguments in 'direct' contexts, and it is unavailable when the lower argument is [+person], 'inverse' contexts. In them, a more marked and otherwise unavailable coding appears, the repair. A wider look across such

⁵⁸It remains to be developed, since no attempt has been made here to examine the plausibility of blocking [-active] probes by the needs of [+active] ones whenever empirically undesirable.

Table 5.4 PCC and person hierarchy interactions

	French	Chinook	Arizona Tewa
High argument	IO, dative	IO, bare, agrees	EA, bare, agrees
Low argument	O, accusative	S, bare, agrees	O, bare, agrees
Direct	*IO-1/2.O	*IO-1/2.S	*EA-1/2.O
Inverse	IO → full PP	IO → ergative case and agreement	EA → marked case, poorer agreement

S unaccusative subject, EA transitive subject, O direct object, IO applicative object

Table 5.5 Global case splits (Béjar and Rezac 2009, Georgi 2009)

	Normal/direct	Repair/inverse	Conditions on repair
Separate EA/O licensing			
Basque	-	EA _{ERG} O _{NOM}	1/2/3 _{EA} → 1/2/3 _O
Icelandic	-	EA _{NOM} O _{ACC}	1/2/3 _{EA} → 1/2/3 _O
1/2 > 3 interaction			
Ariz. Tewa	EA _Ø O _Ø	EA _{ERG} O _{NOM}	3 _{EA} → 1/2 _O , 1/2 _{EA} → 1/2 _O
Yurok	EA _{NOM} O _{NOM}	EA _{NOM} O _{ACC}	3 _{EA} → 1/2 _O
1 > 2 > 3 interaction			
Kashmiri	EA _{NOM} O _{NOM}	EA _{NOM} O _{ACC}	2 _{EA} → 1 _O , 1/2 _{EA} → 3 _O , 3 _{EA} → 3 _O
Mohawk	EA _{Ø/AGR} O _Ø	EA _Ø O _{Ø/AGR}	2 _{EA} → 1 _O , 1/2 _{EA} → 3 _O , 3 _{EA} → 3 _O

transitives in Table 5.5 reveals transitivity to both the ergative and accusative as repairs of interverse contexts, strengthening the parallelism with the PCC repairs.

This parallelism suggests that the transitive EA-O combinations of Arizona Tewa behave essentially like unaccusatives IO-S combinations in the PCC. The direct context of transitives has only one person licensing system, the EA is an intervener for certain person relations of the O, and as a result the repair transitivity the structure to license both EA and O. This view of EA-O and IO-S/O interactions is developed in Béjar and Rezac (2009) in a way compatible with the present theory of repairs (using [–active] probes instead of $\mathfrak{R}$). Albizu (1997a, b) is the seminal proposal for such a one- vs. two-licenser view of transitives, the relationship of EA-O interactions to the PCC, and of inverses to PCC repairs. Elements of this ensemble are also found in Béjar (2003), Bianchi (2006), Lochbiher (2008), and Nichols (2001).⁵⁹

⁵⁹Table 5.5 also indicates the need of tools for parametrizing the person hierarchies, developed in Béjar and Rezac (2009). Analogous parametrization does not occur in the PCC because applied object always stops a higher probe (Béjar and Rezac 2009: 46 note 6, Section 3.4), save if the lower object belongs to the same point on the hierarchy. These apparently vary in being treated as non-PCC/direct or PCC/inverse contexts, giving the so-called weak vs. strong PCC (Nevins 2007, Anagnostopoulou 2005, but see Section 4.6 for qualms about its existence). Further EA-O interactions reveal much additional but here irrelevant complexity, for instance transitives with different loci for person and number, EA-O person interaction for v in a system with person probes on T and v , etc.; see Béjar (2003), Rezac (2003), Béjar and Rezac (2009).

In EA-O and IO-S/O person hierarchy interactions alike, repairs activate the ergative and accusative agreement and case relations. Beside them stands the emergence of the ergative and accusative for the Case licensing of any DP regardless of person, in ordinary transitives of the English or Basque sort, or the applicatives discussed in Section 5.6.3. All are unified through the dependent Case view of the ergative and accusative as reflexes of a last-resort Agree/Case relationship created by $\mathfrak{R}$. The Full Interpretation problem to which $\mathfrak{R}$ responds has also been accorded a uniform treatment as a Case-licensing failure. In this has been followed Anagnostopoulou's (2003) proposal that the problem of [+person] licensing in PCC contexts is a Case problem. The unification of person and Case licensing is independent of $\mathfrak{R}$ itself, and may be discussed further.

Structural Agree/Case relations are about two phenomena. One is the alternation of nominative and accusative or ergative and absolutive case and agreement, without correlated interpretive properties in Section 5.5. The other is the use made of the syntactic theory of this phenomenon in order to explain constraints on DP (A-)positions, starting with Rouveret and Vergnaud (1980) and Chomsky (1980, 1981, 1986b). This is the Case Filter and the Inverse Case Filter in Section 5.4.

In Chomsky (2000a et seq.), the driving force of Agree/Move dependencies is the need of phi-probes to be valued and eliminated through Agree for Full Interpretation, sometimes termed the Inverse Case Filter. However, the Case Filter remains in vigour as the need of the Case of DPs to be likewise valued and eliminated and continues to model generalizations both wide-ranging and subtle. Among them are the Case licensing of the direct object DPs in (113) (Chomsky 1986b: 3.3.3.2, Pesetsky 1982, 1995, Baker 1988, 1997, Bošković 1997); of small clause subject DPs by unergatives but not unaccusatives in (114) (Rothstein 1992, Burzio 1986); of infinitival subject DPs by ECM verbs only if an applicative DP does not intervene in (115) (cf. Postal 1993, Bošković 1997). In all these environments the DP in bold is barred if Case is unavailable. All other conditions are met, including thematic and subject position ('EPP') licensing.

- (113) a. She asked/*wondered **the time**. (*cf.* She wondered what the time is)
 b. Kate (*was) passed **the letter**. (*Kate as recipient*)
- (114) a. The river thundered/cascaded **its way** down the ravine.
 b. *The river fell/flowed **its way** down the ravine.
- (115) a. She showed (the students/to the students) [that seven is a prime].
 b. She showed [**seven** to be a prime] to the students.
 c. She showed (***the students**) [**seven** to be a prime].
 d. She showed (***the students**) [there to be **a prime** in the set].

(see further (39))

Person hierarchy interactions exhibit the same two phenomena. On the one hand, there is the alternation of agreement and case morphology: absolutive to ergative, nominative to accusative. On the other, there is the licensing of DPs, for pronouns banned by the PCC are not salvageable by nonagreement (Section 5.2). It has even been possible to closely parallel the transitivity of unaccusatives due to the addition of a DP and due to the PCC (Section 5.6). Remarkable correspondences thus exist between the emergence of dependent Agree/Case for general DP licensing and for [+person] licensing. They are captured by $\mathfrak{R}$, through which the dependent relations are the last-resort response to Case licensing failure, (58).

Nevertheless, these observations demand only that $\mathfrak{R}$ activate Agree/Case loci in response to Full Interpretation failures, perhaps distinct from Case licensing. The assimilation of [+person] and Case licensing as a single failure seems promising, but it has alternatives. They bring out the fundamental gap in present understanding: what are [+person] and Case licensing?

Case started out as a morphological well-formedness requirement on nominal stems, motivated by Latin where noun stems always come with case markers (Rouveret and Vergnaud 1980: Appendix). It is an elegant hypothesis, and suggests other ways to satisfy Case than by syntactic licensing, such as adjacency or incorporation (cf. Neeleman and Weerman 1999). However, for English nonpronouns, Georgian 1st/2nd person pronouns, or Chinook DPs, Case must be reconstructed as an abstract requirement wholly independent of surface morphology. More problematic is the availability of default case morphology for DPs in various contexts outside the ‘core’ domain where DPs are subject to the Case Filter: apposition, ellipsis, coordinate and modification structures, gapping, and so on as in (116) (Schütze 1997, 2001, Quinn 2005). Default case cannot rescue a DP that finds itself outside the reach of the Agree/Case system in contexts like (115).

- (116) a. Me/*I, I like beans.
 b. [Her and us] / *[She and we] have been friends for ages.
 (Schütze 2001:211, 214)

It seems possible to continue with a hypothesis like Rouveret and Vergnaud’s, but with Case as an abstract requirement on the input to PF independent of and irreparable by its language-specific properties like default Case. The same observation applies to motivations of Case on the LF side, for instance through theta-assignment or temporal anchoring (Chomsky 1981: 2.3, 1986b: 3.3.3.3.1, 3.4.3, Pesetsky and Torrego forthcoming, Wiltschko 2003, Brandt 2003). They must be gratuitously extended to contentless nominals that yet require Case, like idiom chunks and expletives, and so be viewed as a pure legibility requirement of LF (see Chapter 6). Other proposals for Case seem to lead to the same conclusions, including Case for pied-piping (Chomsky 2000a: 127), and tokenization (Uriagereka 1996). We may distinguish such pure legibility requirements on the input to the external systems, irremediable within them, from requirements such as linearizability that may be met either within syntax or the external

systems. Case is of the former kind. One way to implement it is through PF/LF-illegible features on lexical items.⁶⁰

The licensing of [+person] elements will be seen in Chapter 6 to have the same PF/LF-independent profile, but here the interest is its relationship to Case licensing. [+person] licensing has been partly or wholly subsumed under Case licensing in Baker (1996: 5.3), Anagnostopoulou (2003), Rezac (2003), Béjar and Rezac (2009), and the literature cited there. The profile of its repairs strongly hints at it as well, for they clearly fix [+person] restrictions by deploying an extra Case. Moreover, movement to an *independently* available higher Case domain might also have the same effect, discussed by Baker (forthcoming). A key problematique for this view is the differential licensing of 1st/2nd and 3rd persons (cf. Ormazabal 2000). In the PCC context, a dative intervenes for the agreement and licensing of [+person] but not other DPs. The cited works make proposals that allow a uniform approach to the Case licensing of all DPs, such as the separation of person and number and the absence of person on 3rd person DPs. One particular approach has been adopted here in Sections 5.2 and 5.4.

Other construals of [+person] licensing would work for $\mathfrak{R}$, provided they are failures of Full Interpretation (legibility) at PF/LF, and repairable by the activation of an Agree/Case system. The PF possibility in (1) is inspired by the (distinct) proposals of Ormazabal and Romero (2002), Nevins (2007), Anagnostopoulou (2008), and Sigurðsson and Holmberg (2008):⁶¹

- (117) A phi-probe Agrees with both the applicative and lower [+person] argument in a PCC context, and the resulting combination of person values on a single terminal fails Full Interpretation.

$\mathfrak{R}$ does not see PF-internal problems like arbitrary gaps. However, if (114) were a *legibility* problem at the input to PF, $\mathfrak{R}$ could respond to it in the same way as proposed in this chapter. Full Interpretation is not met, and the creation of a new Agree/Case domain or phase by the addition of a phi-probe fixes the problem by removing one of the arguments into a separate Agree domain. Adopting (114) shifts [+person] licensing to the legibility of probes rather than DPs, because the agreement of a probe with multiple goals permits the apparent interaction of their phi-features to be stated as a property of the probe.

⁶⁰Comparably to the extension of the Stray Affix Filter from the morphological need of affixes to attach to stems to all overt and covert head movement in Chomsky (1995).

⁶¹The view of (117) as a (PF) *legibility* problem relates to Ormazabal and Romero (2002) proposal that feature mismatch cancels the derivation (cf. Chomsky 1995: 233–5, 262f., 281, 308f.). Sigurðsson and Holmberg's (2008) analysis suggests rather that (117) is a PF-internal problem remediable by syncretisms, albeit not fully (Sigurðsson 1996: ex. 68–70) (cf. Boeckx 2000, Schütze 2003). However, empirically PCC repairs do not occur for PF-internal problems like agreement or clitic gaps (Sections 5.2 and 5.6). Other PF proposals are Albizu's (1997a) constraint on person prominence, and Bonami and Boyé's (2006: 304f.) condition on paradigm formation.

It would be possible to subsume the general Case Filter under the same idea by extending it to multiple [number] values, if desired. The trade-off between the needs of probes and goals for different licensing conditions remains under investigation (cf. note 9).

Similarly, an LF view of [+person] licensing is fundamentally compatible with $\mathfrak{R}$. Bianchi (2006) and related work discussed in Chapter 6 proposes that [+person] licensing is an LF requirement for interpretable [+person] arguments to relate to interpretable [+person] functional heads. If it could be construed as an LF Full Interpretation requirement, it would be visible to $\mathfrak{R}$. Various possibilities then exist for how the addition of an Agree/Case system would repair the PCC. For instance, the Agree/Case system might be responsible for relating [+person] features to their corresponding functional heads, or there may be an entailment relationship between the presence of the two systems in the CP.

5.9.3 Licensing, Full Interpretation, and $\mathfrak{R}$

The two alternatives sketched above for failures of [+person] licensing do not rely on features intrinsically illegible at the input to PF/LF, but on some other problem that arises at the input. It may be implausible to construe the multiply-valued probe of (117) as illegible at the input to PF, rather than as a problem within PF that may or may not be repaired there. Yet the idea brings out the following point: The formulation of $\mathfrak{R}$ in (1) can respond to *any* Full Interpretation failure, (118)a, both those that arise for a lexical item α in a given syntactic context, and those that arise for α in all contexts in virtue of its content, (118)b.⁶²

(118) Consequence of $\mathfrak{R}$:

- a. $\mathfrak{R}$ may responds to any Full Interpretation failure (LF or PF).
- b. If α requires the presence of an uninterpretable feature F (probe) in all numerations, $\mathfrak{R}$ licenses F in all numerations with α .

These observations have the potential to extend $\mathfrak{R}$ beyond the last-resort phenomena considered so far. They bring within its scope failures of Full Interpretation other than illegible features, and lead to the central question of the Strong Minimalist Thesis. Why and how do features illegible to PF and LF (uninterpretable features) exist in a syntax ‘designed’ to meet optimally Full Interpretation?

For an important class of syntactic dependencies, their formation may be attributed to PF or LF requirements. A *wh*-word might only be interpretable if it occurs in both a thematic and a peripheral/scopal position, and *wh*-movement

⁶²For the latter point, cf. Heck and Müller’s (2003) discussion of their *Phase Balance*.

satisfies this requirement. This is particularly so for the A'-system, with its characteristic interpretive consequences (Rizzi 1997, 2006). Movement scopes a quantifier above a proposition, turns a sentence into a relative clause, creates a topic-focus articulation. Yet empirically, such dependencies make use of features that are not interpretable at LF. In (119), each step of *wh*-movement must take place to satisfy the interpretive requirements of the *wh*-word, but they are accompanied by uninterpretable phi-agreement in English or Passamaquoddy (Bruening 2001), or syntactic category agreement Chamorro, Welsh, and Breton (Chung 1998: 6.2; Willis 1998: 3.4; Rezac 2004b).

- (119) Where are the **boys**_i **who**_i Tom **think(s)** *t*_i Dick **believe(s)** *t*_i Harry **expect(s)** *t*_i to be late?
(Boston English, Kimball and Aissen 1971: 246; Section 1.3)

It has been proposed that uninterpretable features are simply the optimal device to build syntactic dependencies like *wh*-movement. If so, the features are motivated *as a class* by the need of PF/LF for there to be syntactic dependencies (cf. Chomsky 2000a: 120f., 2008: 140f., 148). On standard assumptions, these uninterpretable features are the lexical properties of items like the interrogative C_Q, and thus a departure from the Interpretability Condition (34)b that lexical items consists only of PF/LF properties.

If the PF/LF conditions that need syntactic dependencies were construable as Full Interpretation requirements, they could become the direct source of *individual occurrences* of uninterpretable features through $\mathfrak{R}$. At each nonfinal step of *wh*-movement in (119), the *wh*-word fails to scope over a question. If this is a Full Interpretation problem for LF, $\mathfrak{R}$ can insert an uninterpretable feature to drive *wh*-movement without there being one in the lexicon. This potential is partly exploited in Chomsky's antecedents (46)–(47) of $\mathfrak{R}$, for successive-cyclic and terminal A'-movements (cf. Chomsky 1995: 294, 377, 2000a: 109, 2001: 34). If this were feasible, it would not be necessary to posit uninterpretable features on lexical items, contrary to the Interpretability Condition. They could be *always* viewed as the direct, dynamic response of syntax to the needs of Full Interpretation.⁶³

However, structural Agree/Case relationships do not seem to occur to meet LF needs, as Section 5.4 has discussed. They exist without thematic, scopal, binding correlates, and include DPs without autonomous referential or quantificational content (cf. (36)). They also do not appear to meet obvious PF needs, unlike for instance displacements that may be sensitive to PF content (Chomsky 2001, Lasnik 2009, Holmberg 2000, 2005, Joutteau 2005). Moreover, the uninterpretable features behind these systems seem partly fixed by the

⁶³The choice of the inserted uninterpretable features is a technical matter: specific features such as [wh:] on C_{interrogative} and [Q:] on a *wh*-word, or generalized Edge Features (Chomsky 1995: 289ff., 2000a: 109, 128ff., 149 note 91; Rizzi 2006, Chomsky 2001: 6, 34, 2007, 2008: 151).

parametric properties of lexical items that do not transparently reduce to PF/LF legibility, so that languages may differ in the inventory of lexical items with phi-probes in ways that are synchronically arbitrary. French and Icelandic both have the past participle morphology to reflect agreement with fronted objects, but only some varieties of French do so. This is a parameter that appears irreducible to PF or LF, but depends on the arbitrary presence of a phi-probe on the participle in active structures. It is technically feasible to construct a system without lexically specified uninterpretable features for these systems, but it does not seem to lead to deeper insight into them.⁶⁴

Even in the domain of A'-dependencies, it is not clear that $\mathfrak{R}$ is the right mechanism. PCC repairs have motivated $\mathfrak{R}$ in the domain of global dependencies that are not easily stated as properties of the target, goal, and the path between them. Successive-cyclic movement belongs here as well. It requires look-ahead to the terminal dependency without which it cannot occur, so it is global (Bošković 2002: 136–8, 2007). At the same time, it is driven by the probe-goal system, reflected even at the intermediate steps through agreement morphology, as in (119) (McCloskey 2002, Chung 1998, Kimball and Aissen 1971, Bruening 2001, Carstens 2005). Chomsky (2000a: 107f., 2001: 34) reconciles these two properties through the antecedent of $\mathfrak{R}$ in (46)–(47). Under $\mathfrak{R}$, each phase with a *wh*-word not in its terminal position fails Full Interpretation, licensing the insertion of a probe for it (cf. Heck and Müller 2003, Bošković 2007).

Extending $\mathfrak{R}$ to the remaining, terminal, A'-dependencies is more dubious. Some of them do appear to refer to PF/LF directly, rather than to the fixed featural content of lexical properties. Extraposition is a convenient example. It avoids Condition C in (120)a, so it occurs in the syntax, but (120)b shows that it can only apply if not string-vacuous, so it refers to a PF property (Fox 2000: 75f.; but see Fox 2002: 75 for reanalysis as a parsing preference, cf. Sportiche 2005).

- (120) a. I introduced him₁ (??to the woman that John₁ likes) yesterday (to the woman that John₁ likes).
 b. ??I introduced him₁ [to the woman that John₁ likes].
 (Fox 2000: 76)

Other examples are quantifier raising and scrambling only to allow new scope in Fox (2000), Reinhart (2006), Miyagawa (2005, 2006), scrambling only to allow focus assignment in Krifka (1998), Icelandic Object Shift only

⁶⁴It may seem that the difference between obligatory (lexically specified) and dependent ($\mathfrak{R}$ -created) Agree/Case relations would be lost if both reduced to $\mathfrak{R}$. However, if Agree/Case reflected PF/LF requirement, obligatory Case loci could be supposed to have an interpretable requirement to relate to a DP, while the dependent Case loci to satisfy rather the requirement of a DP, paralleling the difference between interrogative and successive-cyclic C for *wh*-movement.

to avoid new-information interpretation in Chomsky (2001: 34ff.), *wh*-movement only if not string-vacuous in Chomsky (1986a: 48–54), Fox (2000: 75f.).

The conditions on these dependencies refer to the external systems: scope commutativity and string adjacency belong to LF and PF, not syntax. It is possible to formulate them as requirements on the input to these systems, Full Interpretation, and thus visible to $\mathfrak{R}$ (Reinhart 2006: 1.3, 2.7; Chomsky 1995: 377, 2000: 109 for quantifier raising). However, they encroach on ground that belongs properly within the external systems and is invisible to syntax and to $\mathfrak{R}$, like allomorphy or overlapping reference. This is particularly so if the same conditions also constrain mechanisms within the external systems, as Fox (2000: Chapter 4) shows for variable binding. It may be best leave them there.⁶⁵ Regular A'-dependencies then may not refer to the external systems and remain driven by lexically fixed properties. Evidence that the latter are uninterpretable features comes from morphology as in (119), from synchronically arbitrary parametrization independent of PF and LF, and from 'constructional' uses of A'-dependencies without their expected interpretation, if these exist (Culicover and Jackendoff 1999, 2005; Jackendoff 2002).

These considerations suggest that $\mathfrak{R}$ may not be the right way to think about nonglobal syntactic dependencies. They make use of the properties of lexical items. Among them are the lexicalized uninterpretable features of the Agree/Case system, not motivated by PF or LF and so an 'imperfection' for the Strong Minimalist Theses. Their origins lie in the synchronic residue of diachrony, consequences of acquisition, and in domains still unknown (cf. Bever 2009, Chomsky 2009 on the EPP, and generally Chapter 6). Outside the Agree/Case domain, the situation is unclear. It is conspicuous that theoretically, it seems possible to replace dedicated A'-features with a generalized Edge Feature (Chomsky 2008: 151), and empirically, that the morphological reflexes of A'-probes are often phi-features, as in (119), perhaps under a disguise elsewhere.

For global dependencies, $\mathfrak{R}$ has the right properties. Over the development of the Minimalist Program, there has been a move away from global mechanisms such as Minimize Structure or Fewest Steps for the core Agree/Move dependencies, while analogues of $\mathfrak{R}$ have remained for others such successive-cyclic movement (cf. Reinhart 1995, 2006, Yang 1997, Collins 1997, Jacobson 1997, Johnson and Lappin 1999, Frampton and Gutmann 1999, Chomsky 2000a, Potts 2002). This partitions syntactic phenomena into two intuitively significant groups: nonglobal Agree/Move dependencies that depend on the lexical properties of target, goal, and the path between them, and global ones that depend on the global convergence of an entire structure. The latter are the

⁶⁵For instance, rather than quantifiers moving only for new scope, they move freely in syntax, and it is interpretation that decides to use the lowest copy unless a higher one gives a different reading (D. Fox, p.c., citing M. Brody, p.c.; independently proposed by Adger 1994: 93–5, 1996).

province of $\mathfrak{R}$ as an interface algorithm at the edges of syntax, relating the numeration to legibility at PF and LF, within the bounds of modularity.

The place of $\mathfrak{R}$ in the larger architecture of language remains all but unexplored. Reinhart (2006) proposes a unification of different global mechanisms as interface repair strategies that respond to the failure of the computational system to meet Full Interpretation. At PF, globality in morphology has mostly turned on the unclear existence of blocking principles beyond the realization of terminal nodes (Embick and Marantz 2008). Persuasive evidence has amassed for global mechanisms at LF (Fox 2000, Reinhart 2006, Katzir 2008). Fox points out that they respect a strong version of modularity, operating only over the convergent structures sent them by syntax, and accessing only the logical aspects of meaning (Fox 1995: notes 9, 10, 64, 2000: 70–4, 130–3; Fox and Hackl 2006). It may be that there is a generalization of $\mathfrak{R}$ that encompasses them: a mechanism to enrich an interface representation in order to meet interface requirements, at the same or at other interfaces. The numeration of syntax is enriched with uninterpretable features if it fails at PF/LF. The syntactic input to LF might be enriched with symbols to allow nonlocal variable binding if needed by the systems of inference, satisfying this requirement directly, or permitting further computation to do so. The viability of such a unification turns on the common properties of global mechanisms across the core systems of syntax, PF, and LF modules, and on potential global phenomena beyond them in the ‘systems of use’ (q.v. Jacobson 1997).

It would be helpful to have on these issues a perspective from other cognitive domains where modularity has been investigated. It may be that the organization of other ‘mental organs’ bears little resemblance to the faculty of language (Chomsky 1980). However, many of the themes raised here reappear elsewhere, as in Pylyshyn’s (1999) review of low-level vision (cf. Section 1.2). Among them are its nearly complete encapsulation from an agent’s knowledge and goals, and the partial encapsulation of distinct vision-for-perception and vision-for-action components from each other, which may nevertheless share some primitives and computations. Pylyshyn also reports a narrow channel of communication between vision and the general cognitive systems by attention modulation, recalling intriguingly the interface algorithms of Reinhart (2006), Fox (2000), and $\mathfrak{R}$.

References

- Abels, Klaus. 2003. Successive cyclicity, anti-locality, and adposition stranding. Doctoral dissertation, University of Connecticut.
- Abney, Steven Paul. 1987. The English noun phrase in its sentential aspect. Doctoral dissertation, MIT.
- Adger, David. 1994. Functional heads and interpretation. Doctoral dissertation, University of Edinburgh.
- Adger, David. 1996. Economy and optionality. *Probus* 8: 117–135.

- Adger, David. 2008. A minimalist theory of feature structures. Ms., Queen Mary, University of London.
- Adger, David, and Daniel Harbour. 2007. Syntax and syncretisms of the person case constraint. *Syntax* 10: 2–37.
- Agirre, Julen Manterola. 2004. Datiboaren lekualdatzeaz. Ms., University of the Basque Country.
- Albizu, Pablo. 1997a. Generalized person-case constraint: A case for a syntax-driven inflectional morphology. In *Theoretical issues on the morphology-syntax interface*, eds. Myriam Uribe-Etxebarria and Amaya Mendikoetxea, 1–33. Donostia: UPV/EHU.
- Albizu, Pablo. 1997b. The syntax of person agreement. Ms., University of Southern California, Los Angeles.
- Albizu, Pablo. 2001. Datibo sintagmen izaera sintaktikoaren inguruan: eztabaidarako oinarritzko zenbait datu. In *On Case and agreement*, eds. Beatriz Fernández and Pablo Albizu, 49–69. Bilbao: UPV/EHU.
- Albizu, Pablo. 2002. Basque verbal morphology: Redefining cases. In *Erramu Boneta*, eds. Xabier Artiagoitia, Patxi Goenaga, and Joseba A. Lakarra, 1–19. Bilbao: UPV/EHU.
- Albizu, Pablo. 2009. Construcciones inacusativas con dativos posesivos y dativos de interés en vasco. Handout of talks at LyCC, CSIC, May 11 2009, and UMR 5478, Bayonne, June 9 2009. On-line: <http://www.ile.csic.es/linguistica/Albizu.pdf>. Accessed September 14, 2010.
- Albizu, Pablo, and Beatriz Fernández. 2006. Licit and illicit ERG-DAT pairings. In *Andolin gogoan*, eds. Beatriz Fernández and Itziar Laka, 69–96. Bilbao: UPV/EHU.
- Albizu, Pablo, Ricardo Etxepare, and Milan Rezac. In preparation. The structural character of Basque ergative and the theory of Case. Ms., University of the Basque Country, IKER-UMR 5478/Bayonne, and CNRS UMR 7023/Université de Paris 8.
- Alexiadou, Artemis. 2001. *Functional structure in nominals*. Amsterdam: Benjamins.
- Amiridze, Nino. 2006. Reflexivization strategies in Georgian. Doctoral dissertation, University of Utrecht.
- Anagnostopoulou, Elena. 2001. Two classes of double object verbs. In *Progress in Grammar*, eds. Marc van Oostendorp and Elena Anagnostopoulou. On-line: <http://www.meertens.nl/books/progressinggrammar>
- Anagnostopoulou, Elena. 2003. *The syntax of ditransitives*. The Hague: Mouton de Gruyter.
- Anagnostopoulou, Elena. 2005. Strong and weak person restrictions. In *Clitic and affix combinations*, eds. Lorie Heggie and Francisco Ordóñez, 199–235. Amsterdam: Benjamins.
- Anagnostopoulou, Elena. 2008. Notes on the person case constraint in Germanic. In *Agreement restrictions*, eds. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 15–48. Berlin: Mouton de Gruyter.
- Anand, Pranav, and Andrew Nevins. 2006. The locus of ergative assignment: Evidence from scope. In *Ergativity: Emerging issues*, eds. Alana Johns, Diane Massam, and Juvenal Ndayiragije, 3–26. Dordrecht: Kluwer.
- Anderson, Stephen R. 1984. On representations in morphology: Case, agreement and inversion in Georgian. *Natural Language and Linguistic Theory* 2: 157–218.
- Andrews, Avery. 1982. The representation of case in Modern Icelandic. In *The mental representation of grammatical relations*, ed. Joan Bresnan, 427–503. Cambridge, MA: MIT Press.
- Andrews, Avery D. 1990. Unification of morphological blocking. *Natural Language and Linguistic Theory* 8: 507–557.
- Aronson, Howard I. 1989. *Georgian: A reading grammar*. Columbus, OH: Slavica.
- Arregi, Karlos. 2004. The *have/be* alternation in Basque. Ms., University of Illinois.
- Arregi, Karlos, and Andrew Nevins. 2008. A principled order to postsyntactic operations. Ms., University of Illinois at Urbana-Champaign and Harvard University. On-line: lingbuzz.000646

- Artiagoitia, Xabier. 2001a. Seemingly ergative and ergatively seeming. In *Features and interfaces in Romance*, eds. Julia Herschensohn, Enrique Mallén, and Karen Zagona, 1–22. Amsterdam: Benjamins.
- Artiagoitia, Xabier. 2001b. Irudiak eta emaleak. Ms., University of the Basque Country.
- Artiagoitia, Xabier. 2009. Multiple genitive case in Basque and multiple checking. Ms., University of the Basque Country.
- Baker, Mark. 1988. *Incorporation*. Chicago, IL: University of Chicago Press.
- Baker, Mark. 1996. *The polysynthesis parameter*. Oxford: Oxford University Press.
- Baker, Mark. 1997. Thematic roles and syntactic structure. In *Elements of grammar*, ed. Liliane Haegeman, 73–137. Dordrecht: Kluwer.
- Baker, Mark. 2008. *The syntax of agreement and concord*. Cambridge: Cambridge University Press.
- Baker, Mark. forthcoming. When agreement is for number and gender but not person. *Natural Language and Linguistic Theory*.
- Barnes, Michael P. 1986. Subject, nominative, and oblique case in Faroese. *Scripta Islandica* 7: 13–46.
- Béjar, Susana. 2003. Phi-syntax: A theory of agreement. Doctoral dissertation, University of Toronto.
- Béjar, Susana, and Diane Massam. 1998. Multiple case checking. *Syntax* 2: 65–79.
- Béjar, Susana, and Milan Rezac. 2003. Person licensing and the derivation of PCC effects. In *Romance linguistics: Theory and acquisition*, eds. Anna-Teresa Pérez-Leroux and Yves Roberge, 49–62. Amsterdam: Benjamins.
- Béjar, Susana, and Milan Rezac. 2007. Cyclic agree. Ms., University of Toronto, Toronto, ON, and Université de Nantes. On-line: ling.auf.net/lingBuzz
- Béjar, Susana, and Milan Rezac. 2009. Cyclic agree. *Linguistic Inquiry* 40: 35–73.
- Belletti, Adriana, and Luigi Rizzi. 1988. Psych-verbs and Theta Theory. *Natural Language and Linguistic Theory* 6: 291–352.
- Bever, Thomas G. 2009. Remarks on the individual basis for linguistic structures. In *Of minds and language*, eds. Massimo Piattelli-Palmarini, Juan Uriagereka, and Pello Salaburu, 278–298. Oxford: Oxford University Press.
- Bitter, Maria, and Kenneth Hale. 1996. The structural determination of Case and agreement. *Linguistic Inquiry* 27: 1–68.
- Bianchi, Valentina. 2006. On the syntax of personal arguments. *Lingua* 116: 2023–2067.
- Bobaljik, Jonathan David. 1993. Ergativity and ergative unergatives. In *Papers on case and agreement 2, MIT working papers in linguistics*, ed. Colin Phillips, vol. 19, 45–88. Cambridge, MA: MITWPL.
- Bobaljik, Jonathan David. 2000. The ins and outs of contextual allomorphy. In *University of Maryland working papers in linguistics 10*, eds. Kleantes K. Grohmann and Caro Struijke 35–71. College Park, MD: University of Maryland.
- Bobaljik, Jonathan David. 2008. Where's phi? In *Phi theory*, eds. Daniel Harbour, David Adger, and Susana Béjar, 295–328. Oxford: Oxford University Press.
- Bobaljik, Jonathan David, and Phillip Branigan. 2006. Eccentric agreement and multiple case checking. In *Ergativity: Emerging issues*, eds. Alana Johns, Diane Massam, and Juvenal Ndayiragije, 47–77. Dordrecht: Kluwer.
- Bobaljik, Jonathan David, and Susi Wurmbrand. 2002. Notes on agreement in Itelmen. *Linguistic Discovery* 1.1. On-line: linguistic-discovery.dartmouth.edu/WebObjects/Linguistics. Accessed September 14, 2010.
- Boeckx, Cedric. 2000. Quirky agreement. *Studia Linguistica* 54: 354–380.
- Boeckx, Cedric. 2003. Intricacies of Icelandic agreement. Ms., Harvard University.
- Boeckx, Cedric. 2008. The person-case constraint and patterns of exclusivity. In *Agreement restrictions*, eds. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 87–102. Berlin: Mouton de Gruyter.

- Boeder, Winfried. 1968. Über die Versionen des georgischen Verbs. *Folia Linguistica* 2: 82–152.
- Boeder, Winfried. 2002. Syntax and morphology of polysynthesis in the Georgian verb. In *Problems of polysynthesis*, eds. Nicholas Evans and Hans-Jürgen Sasse, 87–111. Berlin: Akademie-Verlag.
- Boeder, Winfried. 2005. The South Caucasian languages. *Lingua* 115: 5–89.
- Bok-Bennema, Reineke. 1981. Clitics and binding in Spanish. In *Levels of syntactic representation*, edd. Jan Koster and Robert May, 9–32. Dordrecht: Foris.
- Bonami, Olivier, and Gilles Boyé. 2006. French pronominal clitics and the design of paradigm function morphology. In *On-line Proceedings of the 5th Mediterranean Morphology Meeting (MMM5)*. University of Bologna. On-line: mmm.lingue.unibo.it/
- Bonami, Olivier, and Danièle Godard. 2001. Inversion du sujet, constituency et ordre des mots. In *Cahier Jean-Claude Milner*, ed. Jean-Marie Marandin, 117–174. Paris: Verdier.
- Bonet, Eulàlia. 1991. Morphology after syntax: Pronominal clitics in Romance. Doctoral dissertation, MIT.
- Bonet, Eulàlia. 1994. The person-case constraint: A morphological approach. In *MIT Working Papers in Linguistics 22: The morphology-syntax connection*, eds. Heidi Harley and Collin Phillips, 33–52. Cambridge, MA: MITWPL.
- Bošković, Željko. 1997. *The syntax of nonfinite complementation: An economy approach*. Cambridge, MA: MIT Press.
- Bošković, Željko. 2002. A-movement and the EPP. *Syntax* 5: 167–218.
- Bošković, Željko. 2007. On the locality and motivation of move and agree. *Linguistic Inquiry* 38: 589–644.
- Bošković, Željko. forthcoming. Last resort with move and agree in derivations and representations. In *The Oxford handbook of linguistic Minimalism*, ed. Cedric Boeckx. Oxford: Oxford University Press.
- Brandt, Patrick. 2003. Constructing cipient predication. Doctoral dissertation, LOT.
- Brattico, Pauli. 2009. Long-distance case assignment in Finnish and the theory of phases. *Biolinguistica Fennica Working Papers* 1: 79–104.
- Brattico, Pauli, and Anne Vainikka. 2009. The accusative puzzle: Long distance case assignment and the AgrP in Finnish. Ms., University of Jyväskylä.
- Bresnan, Joan. 1982. The passive in lexical theory. In *The mental representation of grammatical relations*, ed. Joan Bresnan, 3–86. Cambridge, MA: MIT Press.
- Bresnan, Joan. 1994. Locative inversion and the architecture of Universal grammar. *Language* 70, 71–131.
- Bresnan, Joan, and Jonni M. Kanerva. 1990. Locative inversion in Chicheŵa. *Linguistic Inquiry* 20: 1–50.
- Bresnan, Joan, and Lioba Moshi. 1990. Object asymmetries in comparative Bantu syntax. *Linguistic Inquiry* 21: 147–185.
- Bruening, Benjamin. 2001. Syntax at the edge: Cross-clausal phenomena and the syntax of Passamaquoddy. Doctoral dissertation, MIT.
- Burston, Jack L. 1983. Clitic object sequences and cooccurrence restrictions in French. *Linguistic Analysis* 11: 247–75.
- Burzio, Luigi. 1986. *Italian syntax: A Government-Binding approach*. Dordrecht: D. Reidel.
- Caha, Pavel. 2009. The nanosyntax of case. Doctoral dissertation, University of Tromsø/CASTL.
- Cardinaletti, Anna, and Michael Starke. 1999. The typology of structural deficiency. In *Clitics in the languages of Europe*, ed. Henk van Riemsdijk, 145–233. Berlin: Mouton de Gruyter.
- Carstens, Vicky. 2005. Agree and EPP in bantu. *Natural Language and Linguistic Theory* 23: 219–279.

- Chomsky, Noam. 1980. *Rules and representations*. New York, NY: Columbia University Press.
- Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- Chomsky, Noam. 1986a. *Barriers*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 1986b. *Knowledge of language*. New York, NY: Praeger.
- Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000a. Minimalist inquiries: The framework. In *Step by step*, eds. Roger Martin, David Michaels, and Juan Uriagereka, 89–156. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000b. *New horizons in the study of language and mind*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2004. Beyond explanatory adequacy. In *Structures and beyond*, ed. Adriana Belletti, 104–131. Oxford: Oxford University Press.
- Chomsky, Noam. 2005. Three factors in the language design. *Linguistic Inquiry* 36: 1–22.
- Chomsky, Noam. 2007. Approaching UG from below. In *Interfaces = recursion + language?*, eds. Hans M. Gärtner and Uli Sauerland, 1–30. Berlin: Mouton de Gruyter.
- Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory*, eds. Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133–166. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2009. Opening remarks. In *Of minds and language*, eds. Massimo Piattelli-Palmarini, Juan Uriagereka, and Pello Salaburu, 278–298. Oxford: Oxford University Press.
- Chomsky, Noam, and Howard Lasnik. 1995. The theory of principles and parameters. In *The minimalist program*, ed. Noam Chomsky, 13–128. Cambridge, MA: MIT Press.
- Chung, Sandra. 1998. *The design of agreement*. Chicago, IL: University of Chicago Press.
- Collins, Christopher. 1997. *Local economy*. Cambridge, MA: MIT Press.
- Collins, Christopher. 2002. Eliminating labels. In *Derivation and explanation in the minimalist program*, eds. Samuel David Epstein and T. Daniel Seely, 42–64. Oxford: Blackwell.
- Contreras, Heles. 1979. Clause reduction, the Saturation Constraint, and clitic promotion. *Linguistic Analysis* 5: 161–182.
- Couquaux, Daniel. 1975. Une règle de réanalyse en français. *Recherches linguistiques de Vincennes* 4: 32–72.
- Cuervo, Christina. 2003a. Datives at large. Doctoral dissertation, MIT.
- Cuervo, María Christina. 2003b. Structural asymmetries but same word order: The dative alternation in Spanish. In *Asymmetry in grammar*, vol. 1, ed. Anne Marie Di Sciullo, 117–144. Amsterdam: Benjamins.
- Culicover, Peter W., and Ray Jackendoff. 1999. The view from the periphery: The English comparative correlative. *Linguistic Inquiry* 30: 543–571.
- Culicover, Peter W., and Ray Jackendoff. 2005. *Simpler syntax*. Oxford: Oxford University Press.
- Culicover, Peter, and Robert D. Levine. 2001. Stylistic inversion in English: A reconsideration. *Natural Language and Linguistic Theory* 19: 283–310.
- D'Alessandro, Roberta. 2004. Impersonal *si* constructions. Doctoral dissertation, University of Stuttgart.
- D'Alessandro, Roberta, and Ian Roberts. 2010. Past participle agreement in Abruzzese. *Natural Language and Linguistic Theory* 28: 41–72.
- Déchaine, Rose-Marie, and Martina Wiltschko. 2002. Decomposing pronouns. *Linguistic Inquiry* 33: 409–442.
- Den Dikken, Marcel. 1995b. *Particles*. Oxford: Oxford University Press.
- Den Dikken, Marcel. 2001. 'Pluringulars', pronouns and quirky agreement. *The Linguistic Review* 18: 19–41.

- Den Dikken, Marcel. 2004. Agreement and 'clause union'. In *Verb clusters*, eds. Kalalin É. Kiss and Henk van Riemsdijk, 445–98. Amsterdam: Benjamins.
- Den Dikken, Marcel. 2006. On the functional structure of locative and directional PPs. Ms., City University of New York.
- Di Sciullo, Anna Maria, and Edwin Williams. 1986. *On the definition of word*. Cambridge, MA: MIT Press.
- Dotlačil, Jakub. 2004. The syntax of infinitives in Czech. MA thesis, University of Tromsø.
- Dryer, Matthew S. 1986. Primary objects, secondary objects, and antitativity. *Language* 62: 808–845.
- Elordieta, Arantzazu. 2001. Verb movement and constituent permutation in Basque. Doctoral dissertation, University of Leiden.
- Embick, David, and Alec Marantz. 2008. Architecture and blocking. *Linguistic Inquiry* 39: 1–53.
- Epstein, Samuel David, Erich Groat, Ruriko Kawashima, and Hisatsugu Kitahara. 1998. *A derivational approach to syntactic relations*. Oxford: Oxford University Press.
- Epstein, Samuel David, and T. Daniel Seely. 2002. Rule applications as cycles in a level-free syntax. In *Derivation and explanation in the minimalist program*, eds. Samuel David Epstein and T. Daniel Seely, 65–89. Oxford: Blackwell.
- Etxepare, Ricardo. 2003. Urruneko komunztadura eta menpeko infinitiboak euskaraz. *Lapurdum* 8: 167–206.
- Etxepare, Ricardo. 2006. Number long distance agreement in (substandard) Basque. In *Studies in Basque and Historical Linguistics in Memory of R.L. Trask*, *Anuario del Seminario de Filología Vasca "Julio de Urquijo" XL: 1–2*, eds. Joseba Lakarra and Jose Ignacio Hualde, 303–350. Donostia: Diputación Foral de Gipuzkoa.
- Etxepare, Ricardo. 2010. Contact and change in a restrictive theory of parameters. Paper presented at Linguistic Variation in the Minimalist Framework, Universitat Autònoma de Barcelona, January 14–15, 2010.
- Etxepare, Ricardo, and Beñat Oyharçabal. 2008a. Bi datibo egitura ifar-ekialdeko zenbait hizkeratan. Handout from Aldaketak, aldaerak, bariazioak euskaran eta euskal testugintzan, IKER-UMR 5478, Bayonne, December 2008.
- Etxepare, Ricardo, and Beñat Oyharçabal. 2008b. Locational datives and dative agreement in the eastern dialects of Basque. Handout from European Dialect Syntax III, Venice, September 2008.
- Fassi-Fehri, Abdelkader. 1988. Agreement in Arabic, binding and coherence. In *Agreement in natural language*, eds. Michael Barlow and Charles A. Ferguson, 107–158. Stanford, CA: CSLI.
- Fassi-Fehri, Abdelkader. 1993. *Issues in the structure of Arabic clauses and words*. Dordrecht: Kluwer.
- Folli, Raffaella, and Heidi Harley. 2007. Causation, obligation, and argument structure: On the nature of little *v*. *Linguistic Inquiry* 38: 197–238.
- Fox, Danny. 1995. Economy and scope. *Natural Language Semantics* 3: 283–341.
- Fox, Danny. 2000. *Economy and semantic interpretation*. Cambridge, MA: MIT Press.
- Fox, Danny. 2002. Antecedent-contained deletion and the copy theory of movement. *Linguistic Inquiry* 33: 63–96.
- Fox, Danny, and Martin Hackl. 2006. The universal density of measurement. *Linguistics and Philosophy* 29: 537–586.
- Frampton, John, and Sam Gutmann. 1999. Cyclic computation, a computationally efficient minimalist syntax. *Syntax* 2: 1–27.
- Frampton, John, Sam Gutmann, Julie Legate, and Charles Yang. 2000. Remarks on derivation by phase. Ms., Northeastern University and MIT.
- Franks, Steven, and James E. Lavine. 2006. Case and word order in Lithuanian. *Journal of Linguistics* 42: 239–288.
- Freidin, Robert. 1999. Cyclicity and minimalism. In *Working Minimalism*, eds. Samuel David Epstein and Norbert Hornstein, 95–126. Cambridge, MA: MIT Press.

- Freidin, Robert and Rex A. Sprouse. 1991. Lexical case phenomena. In *Principles and parameters in comparative grammar*, ed. Robert Freidin, 392–416. Cambridge, MA: MIT Press.
- García, Erica C. 2001. The cognitive implications of unlike grammars: Variable clitic-clustering in Spanish vs. Italian. *Neuphilologische Mitteilungen* 102: 389–417.
- Georgi, Doreen. 2009. Local modelling of global Case splits. MA thesis, University of Leipzig.
- Ginzburg, Jonathan, and Ivan A. Sag. 2000. *Interrogative investigations*. Stanford, CA: CSLI.
- Grimshaw, Jane. 2001. Optimal clitic positions and the lexicon in romance clitic systems. In *Optimality-theoretic syntax*, eds. Geraldine Legendre, Jane Grimshaw, and Sten Vikner, 205–240. Cambridge, MA: MIT Press.
- Hagstrom, Paul. 2003. What questions mean. *Glott International* 7: 188–201.
- Haiman, John, and Paola Benincà. 1992. *The Rhaeto-Romance languages*. London: Routledge.
- Hakulinen, Lauri. 1961. *The structure and development of the Finnish language*. Bloomington, IN: Indiana University Press.
- Hakulinen, Auli, and Fred Karlsson. 1975. Suomen akkusatiivi: funtionaalinen näkökulma. *Virtittäjä* 1975: 339–363.
- Hakulinen, Auli, Maria Vilku, Riitta Korhonen, Vesa Koivisto, and Tarja Riitta Heinonen ja Irja Alho. 2004. *Iso suomen kielioppi* (web version 2008). On-line: scripta.kotus.fi/visk/etusivu.php.
- Halle, Morris, and Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In *The view from building 20*, eds. Kenneth Hale and Jay Keyser, 111–176. Cambridge, MA: MIT Press.
- Harley, Heidi. 1995. Subjects, events, and licensing. Doctoral dissertation, MIT.
- Harris, Alice. 1981. *Georgian syntax: A study in Relational Grammar*. Cambridge, MA: Cambridge University Press.
- Haspelmath, Martin. 2004. Explaining the ditransitive person case constraint: A usage-based approach. *Constructions* 2. On-line: www.constructions-online.de/articles/35
- Haspelmath, Martin. 2005. Ditransitive alignment splits. Ms., Max Planck Institute for Evolutionary Anthropology.
- Heck, Fabian and Gereon Müller. 2003. Derivational optimization of *wh*-movement. *Linguistic Analysis* 33: 97–148.
- Heim, Irene, and Angelika Kratzer. 1998. *Semantics in generative grammar*. Oxford: Blackwell.
- Hewitt, B.G. 1995. *Georgian: A structural reference grammar*. Amsterdam: Benjamins.
- Hiraiwa, Ken. 2010. Scrambling to the edge. *Syntax* 13: 133–165.
- Holmberg, Anders. 2000. Scandinavian stylistic fronting. *Linguistic Inquiry* 31: 445–483.
- Holmberg, Anders. 2005. Is there a little *pro*? Evidence from Finnish. *Linguistic Inquiry* 36: 533–563.
- Holmberg, Anders. forthcoming. The null generic subject pronoun in Finnish. In *Passives and impersonals in European languages*, eds. Elsi Kaiser, Satu Manninen, Katri Hietamä, and Virve Vihman. Oxford: Oxford University Press.
- Holmberg, Anders, and Þorbjörg Hröarsdóttir. 2003. Agreement and movement in Icelandic raising constructions. *Lingua* 113: 997–1019.
- Holmberg, Anders, Urpo Nikanne, Irmeli Oraviitta, Hannu Reime, and Trond Trosterud. 1993. The structure of INFL and the finite clause in Finnish. In *Case and other functional categories in Finnish syntax*, eds. Anders Holmberg and Urpo Nikanne, 177–206. Berlin: Mouton de Gruyter.
- Holmberg, Anders, and Urpo Nikanne. 2002. Expletives, subjects, and topics in Finnish. In *Subjects, expletives, and the EPP*, ed. Peter Svenonius, 71–106. Oxford: Oxford University Press.

- Holmberg, Anders, and David Odden. 2004. Ergativity and role-marking in Hawrami. Handout from Syntax of the World's Languages 1, University of Leipzig, August 5–8 2004. On-line: www.eva.mpg.de/~cschmidt/SWL1/handouts/Holmberg-Odden.pdf
- Holmberg, Anders, and Christer Platzack. 1995. *The role of inflection in Scandinavian syntax*. Oxford: Oxford University Press.
- Hornstein, Norbert, Ana Maria Martins, and Jairo Nunes. 2008. Perception and causative structures in English and European Portuguese. *Syntax* 11: 198–222.
- Hrafnbjargarsson, Gunnar. 2004. Person meets Case. Ms., Institutt for lingvistiske fag/UiO.
- Hualde, José Ignacio, and Jon Ortiz de Urbina. 2003. *A grammar of Basque*. Berlin: Mouton de Gruyter.
- Itkonen, Terho. 1974–1975. Ergattiivisuutta suomessa. *Virittäjä* 1974: 379–398, 1975: 1–65.
- Jackendoff, Ray. 2002. *Foundations of language*. Cambridge, MA: MIT Press.
- Jacobson, Pauline. 1997. Where (if anywhere) is transderivationality located? In *The limits of syntax*, eds. Peter Culicover and Louise McNally, 303–336. New York, NY: Academic Press.
- Johns, Alana. 1992. Deriving ergativity. *Linguistic Inquiry* 23: 57–87.
- Johnson, David E. and Shalom Lappin. 1999. *Local constraints vs. economy*. Stanford, CA: CSLI.
- Jónsson, Jónhannes Gíslí. 2009. Covert nominative and dative subjects in Faroese. In *Nordlyd* 36.2: *NORMS Papers on Faroese*, 142–164, eds. Peter Svenonius, Kristine Bentzen, Caroline Heycock, Jógvan í Lon Jacobsen, Janne Bondi Johannessen, Jeffrey K. Parrott, Tania E. Strahan, and Øystein Alexander Vangsnes. On-line: HYPERLINK <http://www.ub.uit.no/munin/nordlyd>. Accessed September 14, 2010.
- Jouitteau, Mélanie. 2005. La syntaxe comparée du breton. Doctoral dissertation, Université de Nantes.
- Karimi, Yadgar. 2010. Unaccusative transitives and the person-case constraint effects in Kurdish. *Lingua* 120: 693–716.
- Karttunen, Lauri. 1977. The syntax and semantics of questions. *Linguistics and Philosophy* 1: 3–44.
- Katzir, Roni. 2007. A note on Case and licensing. Ms., MIT.
- Katzir, Roni. 2008. Structural competition in grammar. Doctoral dissertation, MIT.
- Kayne, Richard. 1975. *French syntax*. Cambridge, MA: MIT Press.
- Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.
- Kayne, Richard. 2000. *Parameters and universals*. Oxford: Oxford University Press.
- Kayne, Richard. 2004. Prepositions as probes. In *Structures and beyond*, vol. 3, ed. Adriana Belletti, 192–212. Oxford: Oxford University Press.
- Kimball, John, and Judith Aissen. 1971. I think, you think, he think. *Linguistic Inquiry* 2: 241–246.
- Kiparsky, Paul. 2001. Structural case in Finnish. *Lingua* 111: 315–376.
- Kitahara, Hisatsugu. 1997. *Elementary operations and optimal derivations*. Cambridge, MA: MIT Press.
- Koskinen, Päivi. 1998. Features and categories: Nonfinite constructions in Finnish. Doctoral dissertation, University of Toronto.
- Koskinen, Päivi. 2000. Subject-verb agreement and covert raising to the subject in Finnish. In *Toronto Working Papers in Linguistics*, vol. 17, 213–226. Toronto, ON: University of Toronto.
- Krifka, Manfred. 1998. Scope inversion under the rise-fall contour in German. *Linguistic Inquiry* 29: 75–112.
- Kučerová, Ivona. 2007. Agreement in Icelandic: An argument for derivational theory of intervention effects. In *Proceedings of WECOL 34*, 272–284. Fresno, CA: California State University.
- Laenzlinger, Christopher. 1993. A syntactic view of Romance pronominal sequences. *Probus* 5: 241–270.
- Lafon, René. 1980 [1944]. *Le system du verbe Basque au XVI^e siècle*. Baiona: Elkar.
- Laitinen, Lea, and Maria Vilkkuna. 1993. Case marking in ncessive constructions and split intransitivity. In *Case and other functional categories in Finnish syntax*, eds. Anders Holmberg and Urpo Nikanne, 23–48. Berlin: Mouton de Gruyter.

- Laka, Itziar. 1993a. The structure of inflection. In *Generative studies in Basque linguistics*, eds. José Ignacio Hualde and Jon Ortiz de Urbina, 21–70. Amsterdam: Benjamins.
- Laka, Itziar. 1993b. Unergatives that assign ergative, unaccusatives that assign accusative. In *Papers on case and agreement I, MIT Working Papers in Linguistics*, vol. 18, 149–172. Cambridge, MA: MITWPL.
- Laka, Itziar. 2000. Thetablind Case: Burzio's Generalisation and its image in the mirror. In *Arguments and case*, ed. Eric Reuland, 103–129. Amsterdam: Benjamins.
- Langendoen, Terence D. 2002. Linguistics at the beginning of the 21st century. *Journal of Linguistics* 38: 627–643.
- Larson, Richard. 1988. On the double object construction. *Linguistic Inquiry* 19: 335–392.
- Lasnik, Howard. 1999. *Minimalist analysis*. Oxford: Blackwell.
- Lasnik, Howard. 2008. On the development of Case theory: Triumphs and challenges. In *Foundational issues in linguistic theory*, eds. Robert Freidin, Carlos Otero, and Maria Luisa Zubizarreta, 17–41. Cambridge, MA: MIT Press.
- Lasnik, Howard. 2009. Island repair, non-repair, and the organization of grammar. In *Interphases*, ed. Kleanthes K. Grohmann, 339–353. Oxford: Oxford University Press.
- Launey, Michel. 1981. *Introduction à la langue et à la littérature aztèques*. Paris: L'Harmattan.
- Lavine, James. 2000. Topics in the syntax of nonagreeing predicates in Slavic. Doctoral dissertation, Princeton University.
- Lavine, James, and Steven Franks. 2008. On accusative first. In *Formal approaches to slavic linguistics: The stony brook meeting*, eds. John Bailyn, Andrei Antonenko, and Christina Bethin, 231–247. Ann Arbor, MI: Michigan Slavic Publications.
- Lavine, James and Robert Freidin. 2002. The subject of defective tense in Russian. *Journal of Slavic Linguistics* 9: 253–290.
- Legate, Julie. 1999. The morphosyntax of Irish agreement. In *Papers on morphology and syntax, cycle one, MIT working papers in linguistics*, ed. Karlos Arregi, vol. 33, 219–240. Cambridge, MA: MITWPL.
- Legate, Julie Anne. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34: 505–516.
- Legate, Julie Anne. 2006. Split absolutive. In *Ergativity: Emerging issues*, eds. Alana Johns, Diane Massam, and Juvenal Ndayiragije, 143–172. Dordrecht: Kluwer.
- Legate, Julie. 2008. Morphological and abstract case. *Linguistic Inquiry* 39: 55–101.
- Levin, Juliette, and Diane Massam. 1984. Surface ergativity. In *Proceedings of NELS 15*, 286–301. Amherst: GLSA.
- Lochbihler, Bethany. 2008. Person licensing: The Algonquian-Romance connection. In *Proceedings of Canadian Linguistics Association 2008*. On-line: www.chass.utoronto.ca/~cla-acl/actes2008/actes2008.html
- Luján, Marta. 1980. Clitic promotion and mood in Spanish verbal complements. *Linguistics* 18: 381–484.
- MacKay, Carolyn, and Frank R. Trechsel. 2008. Symmetrical objects in Misantla Totonac. *International Journal of American Linguistics* 74: 227–255.
- Mahajan, Anoop Kumar. 1996. Universal grammar and the typology of ergative languages. In *Universal grammar and typological variation*, eds. Artemis Alexiadou and T. Alan Hall, 35–57. Amsterdam: Benjamins.
- Maling, Joan. 1993. Of nominative and accusative: The hierarchical assignment of grammatical cases in Finnish. In *Case and other functional categories in Finnish syntax*, eds. Anders Holmberg and Urpo Nikanne, 49–74. Berlin: Mouton de Gruyter.
- Maling, Joan and Rex A. Sprouse. 1995. Structural case, specifier-head relations, and the case of predicate NPs. In *Studies in comparative Germanic syntax*, eds. Hubert Haider, Susanne Olsen, and Sten Vikner, 167–186. Kluwer: Dordrecht.
- Manninen, Satu, and Diane Nelson. 2004. What is a passive? The case of Finnish. *Studia Linguistica* 58: 212–251.
- Marantz, Alec. 2006. Phases and words. Ms., New York University.

- Marantz, Alec. 2000. Case and licensing. In *Arguments and Case*, ed. Eric Reuland, 11–30. Amsterdam: Benjamins. Originally published as: Marantz, Alec. 1991. Case and licensing. In *ESCOL '91: proceedings of the eighth eastern states conference on linguistics*, 234–253, eds. German Westphal, Benjamin Ao, and Hee-Rahk Chae. Cornell, Ithaca: Cornell Linguistics Club.
- Massam, Diane. 2006. Neither absolutive nor ergative is nominative or accusative. In *Ergativity: Emerging issues*, eds. Alana Johns, Diane Massam, and Juvenal Ndayiragije, 47–77. Dordrecht: Kluwer.
- Masullo, Pascual. 1992. Two types of quirky subjects: Spanish versus Icelandic. In *Proceedings of NELS 23*, 303–317. Amherst, MA: GLSA.
- Matushansky, Ora. 2006. Head movement in linguistic theory. *Linguistic Inquiry* 37: 69–109.
- McCloskey, James. 1984. Raising, subcategorization, and selection in Modern Irish. *Natural Language and Linguistic Theory* 1: 441–485.
- McCloskey, James. 2002. Resumption, successive cyclicity, and the locality of operations. In *Derivation and explanation in the minimalist program*, eds. Samuel Epstein and Daniel Sealey, 184–226. Oxford: Blackwell.
- McCreight, Katherine. 1988. Multiple case assignment. Doctoral dissertation, MIT.
- McGinnis, Martha. 1997. Case and locality in I-syntax. In *Proceedings of the UPenn/MIT roundtable on argument structure and aspect*, *MIT working papers in linguistics* 32, 139–158. Cambridge, MA: MITWPL.
- McGinnis, Martha. 1998. Locality in A-movement. Doctoral dissertation, MIT.
- McGinnis, Martha. 2001. Variation in the phase structure of applicatives. In *Linguistic variation yearbook* 1: 101–142.
- Medová, Lucie. 2009. Reflexive clitics in the Slavic and Romance languages. Doctoral dissertation, Princeton University.
- Miyagawa, Shigeru. 2005. EPP and semantically vacuous scrambling. In *The free word order phenomenon*, eds. Joachim Sabel and Mamoru Saito, 181–220. Berlin: Mouton de Gruyter.
- Miyagawa, Shigeru. 2006. On the ‘undoing’ property of scrambling: A response to Bošković. *Linguistic Inquiry* 37: 607–624.
- Moore, John, and David M. Perlmutter. 2000. What does it take to be a dative subject? *Natural Language and Linguistic Theory* 18: 373–416.
- Morin, Yves-Charles. 1982. De quelques [I] non étymologiques dans le français du Québec: Notes sur les clitiques et la liaison. *Revue québécoise de linguistique* 11: 9–47.
- Müller, Gereon. 2004. Phrase impenetrability and *wh*-intervention. In *Minimality effects in syntax*, eds. Arthur Stepanov, Gisbert Fanselow, and Ralf Vogel, 289–325. Berlin: Mouton de Gruyter.
- Nash, Léa. 1995. The internal ergative subject hypothesis. In *Proceedings of NELS 26*, 195–209. Amherst, MA: GLSA.
- Neeleman, Ad, and Fred Weerman. 1999. *Flexible syntax*. Dordrecht: Kluwer.
- Nevins, Andrew. 2007. The representation of third person and its consequences for person-case effects. *Natural Language and Linguistic Theory* 25: 273–313.
- Nichols, Lynn. 2001. The syntactic basis of referential hierarchy phenomena. *Lingua* 111: 515–537.
- Nunes, Jairo. 2001. Sideward movement. *Linguistic Inquiry* 32: 303–344.
- O’Herin, Brian. 2000. *Case and agreement in Abaza*. Arlington, VA: SIL International and University of Texas at Arlington.
- O’Herin, Brian. 2001. Abaza applicatives. *Language* 77: 477–493.
- Ormazabal, Javier. 2000. A conspiracy theory of case and agreement. In *Step by Step*, eds. Roger Martin, David Michaels, and Juan Uriagereka, 235–260. Cambridge, MA: MIT Press.
- Ormazabal, Javier, and Juan Romero. 1998. On the syntactic nature of the *me-lui* and the person-case constraint. *Anuario del Seminario “Julio de Urquijo”* 32: 415–434.

- Ormazabal, Javier, and Juan Romero. 2002. Agreement restrictions. Ms., University of the Basque Country and University of Alcalá de Henares.
- Ormazabal, Javier, and Juan Romero. 2007. Object agreement restrictions. *Natural Language and Linguistic Theory* 25: 315–347.
- Ormazabal, Javier, and Juan Romero. 2010a. Object clitics and agreement. Ms., University of the Basque Country and Universidad de Extremadura. On-line: ling.auf.net/lingBuzz. Accessed on September 14, 2010.
- Ormazabal, Javier, and Juan Romero. 2010b. The derivation of dative alternations. In *Argument structure and syntactic relations from a crosslinguistic perspective*, eds. Maya Duguine, Susana Huidobro, and Nerea Madariaga, 203–232. Amsterdam: Benjamins.
- Ortiz de Urbina, Jon. 1989. *Parameters in the grammar of Basque*. Dordrecht: Foris.
- Oyharçabal, Beñat. 1992. Structural Case and inherent case marking: Ergaccusativity in Basque. In *Syntactic theory and Basque syntax*, eds. Joseba A. Lakarra and Jon Ortiz de Urbina, 309–342. Donostia: Gipuzkoako Diputazioa.
- Oyharçabal, Beñat. 1999. A propos de l'ergativité: Le cas du basque. *Cérès* 120: 237–259.
- Perlmutter, David. 1971. *Deep and surface constraints in syntax*. New York, NY: Rinehart & Winston.
- Pesetsky, David. 1982. Paths and categories. Doctoral dissertation, MIT.
- Pesetsky, David. 1995. *Zero syntax: Experiencers and cascades*. Cambridge, MA: MIT Press.
- Pesetsky, David and Esther Torrego. 2001. T-to-C movement: Causes and consequences. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 355–426. Cambridge, MA: MIT Press.
- Pesetsky, David, and Esther Torrego. 2004. Tense, case, and the nature of syntactic categories. In *The syntax of time*, eds. Jacqueline Guéron and Jacqueline Lecarme, 495–537. Cambridge, MA: MIT Press.
- Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture*, eds. Simin Karimi, Vida Samiian, and Wendy K. Wilkins, 262–294. Amsterdam: Benjamins.
- Pesetsky, David, and Esther Torrego. forthcoming. Case. In *The Oxford handbook of linguistic Minimalism*, ed. Cedric Boeckx. Oxford: Oxford University Press.
- Polinsky, Maria, and Eric Potsdam. 2006. Expanding the scope of control and raising. *Syntax* 9: 171–192.
- Poser, William J. 1992. Blocking of phrasal constructions by lexical items. In *Lexical matters*, eds. Ivan Sag and Anna Szabolcsi, 111–130. Stanford, CA: CSLI.
- Postal, Paul M. 1990. French indirect object demotion. In *Studies in relational grammar*, vol. 3, eds. Paul M. Postal and Brian D. Joseph, 104–200. Chicago, IL: University of Chicago Press.
- Postal, Paul M. 1993. Some defective paradigms. *Linguistic Inquiry* 24: 347–364.
- Postal, Paul M. 2003. *Skeptical linguistic essays*. Oxford: Oxford University Press.
- Potsdam, Eric, and Jeffrey T. Runner. 2001. Richard returns: Copy-raising and its implications. In *Proceedings of the CLS 37*, 206–222. Chicago, IL: CLS.
- Potts, Christopher. 2002. Comparative economy conditions in natural language syntax. Paper presented at the North American Summer School in Logic, Language, and Information, Workshop on Model-Theoretic Syntax, Stanford University, June 28, 2002.
- Preminger, Omer. 2009. Breaking agreements. *Linguistic Inquiry* 40: 619–666.
- Pylkkänen, Liina. 2002. Introducing arguments. Doctoral dissertation, MIT.
- Pylyshyn, Zenon. 1999. Is vision continuous with cognition? *Behavioral and Brain Sciences* 22: 341–365.
- Quinn, Heidi. 2005. *The distribution of pronoun case forms in English*. Amsterdam: Benjamins.
- Rebuschi, Georges. 1995. Weak and strong genitive pronouns in northern Basque. In *Towards a history of the Basque language*, eds. José Ignacio Hualde, Joseba A. Lakarra, and R. L. Trask, 313–356. Amsterdam: Benjamins.
- Reime, Hannu. 1993. Accusative marking in Finnish. In *Case and other functional categories in Finnish syntax*, eds. Anders Holmberg and Urpo Nikanne, 89–110. Berlin: Mouton de Gruyter.

- Reinhart, Tanya. 1995. Interface strategies. *OTS working papers TL-95-002*. Utrecht: Utrecht University/OTS.
- Reinhart, Tanya. 2006. *Interface strategies*. Cambridge, MA: MIT Press.
- Rezac, Milan. 2003. The fine structure of cyclic Agree. *Syntax* 6: 156–182.
- Rezac, Milan. 2004a. Elements of cyclic syntax. Doctoral dissertation, University of Toronto.
- Rezac, Milan. 2004b. The EPP in Breton: An uninterpretable categorial feature. In *Triggers*, eds. Henk van Riemsdijk and Anne Breitbarth, 451–492. Berlin: Mouton de Gruyter.
- Rezac, Milan. 2005. The syntax of clitic climbing in Czech. In *Clitic and affix combinations*, eds. Lorie Heggie and Francisco Ordóñez, 103–140. Amsterdam: Benjamins.
- Rezac, Milan. 2006. Agreement displacement in Basque. Ms., University of the Basque Country. On-line: www.umar7023.cnrs.fr/spip.php?article675
- Rezac, Milan. 2007. Escaping the person case constraint: Referential computation in the phi-system. *Linguistic Variation Yearbook* 6: 97–138.
- Rezac, Milan. 2008a. Phi-Agree and theta-related case. In *Phi theory*, eds. Daniel Harbour, David Adger, and Susana Béjar, 83–129. Oxford: Oxford University Press.
- Rezac, Milan. 2008b. The forms of dative displacement: From Basauri to Itelmen. In *Gramatika jaietan*, eds. Xabier Artiagoitia and Joseba A. Lakarra, 709–724. Zarautz: UPV/EHU.
- Rezac, Milan. 2008c. The syntax of eccentric agreement: The person case constraint and absolutive displacement in Basque. *Natural Language and Linguistic Theory* 26: 61–106.
- Rezac, Milan. 2009. On the unifiability of repairs of the person case constraint. In *Festschrift for Beñat Oyharçabal*, Anuario del Seminario de Filología Vasca “Julio de Urquijo” XLIII, eds. Ricardo Etxepare, Ricardo Gómez, and Joseba A. Lakarra, 769–790. Donostia: Diputación Foral de Gipuzkoa.
- Rezac, Milan. 2010a. Ineffability through modularity: Gaps in French clitic clusters. In *Defective paradigms*, eds. Matthew Baerman, Greville G. Corbett, and Dunstan Brown, 151–180. Oxford: Oxford University Press.
- Rezac, Milan. 2010b. Phi-Agree vs. movement: Evidence from floating quantifiers. *Linguistic Inquiry* 41: 496–508.
- Rezac, Milan. 2010c. Dative-locative syncretisms in Romance clitics and the relationship between syntax and morphology. Ms., CNRS UMR 7023/Université de Paris 8.
- Rezac, Milan. forthcoming. Person restrictions in Basque intransitives. *Lapurdum*.
- Richards, Norvin. 1999. Featural cyclicity and the ordering of multiple specifiers. In *Working Minimalism*, ed. Samuel D. Epstein and Howard Lasnik, 127–158. Cambridge, Mass.: MIT Press.
- Richards, Mark. 2004. Object shift and scrambling in North and West Germanic languages. Doctoral dissertation, University of Cambridge.
- Richards, Norvin. 2005. Person-Case effect in Tagalog and the nature of long distance extraction. In *Proceedings of the 12th Annual Conference of the Austronesian Formal Linguistics Association, University of California at Los Angeles Working Papers in Linguistics* 12, 383–394. Los Angeles, CA: University of California at Los Angeles.
- Richards, Mark. 2007. On feature inheritance: An argument from the phase impenetrability condition. *Linguistic Inquiry* 38: 563–572.
- Richards, Mark. 2008. Quirky expletives. In *Agreement restrictions*, eds. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 181–214. Berlin: Mouton de Gruyter.
- Rivas, Alberto. 1977. Clitics in Spanish. Doctoral dissertation, MIT.
- Rizzi, Luigi. 1990. *Relativized minimality*. Cambridge, MA: MIT Press.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar*, ed. Liliane Haegeman, 281–337. Dordrecht: Kluwer.
- Rizzi, Luigi. 2006. On the form of chains: Criterial positions and ECP effects. In *Wh-movement: Moving on*, eds. Lisa Cheng and Norbert Corver, 97–134. Cambridge, MA: MIT Press.
- Rosen, Carol. 1990. Rethinking Southern Tiwa: The geometry of a triple-agreement language. *Language* 66: 669–713.

- Rothstein, Susan. 1992. Case and NP licensing. *Natural Language and Linguistic Theory* 10: 119–139.
- Rouveret, Alain and Jean-Roger Vergnaud. 1980. Specifying reference to the subject: French causatives and conditions on representations. *Linguistic Inquiry* 11: 97–202.
- Runner, Jeffrey. 2006. Lingerin challenges to the raising-to-object and object-control constructions. *Syntax* 9: 193–213.
- Sakuma, Jun'ichi. 1998. The Case-marking of the object of the second infinitive instructive in the Finnish language. *The Journal of the Faculty of Literature, Nagoya University* 44: 1–14.
- Sakuma, Jun'ichi. 1999. On the semantic conditions of the nominative marking of the object in the Finnish language. *The Journal of the Faculty of Literature, Nagoya University* 45: 61–74.
- Sands, Kristina and Lyle Campbell. 2001. Non-canonical subjects and objects in Finnish. In *Non-canonical marking of subjects and objects*, eds. Alexandra Y. Aikhenvald, R. M. W. Dixon, and Masayuki Onishi, 251–305. Amsterdam: Benjamins.
- Schäfer, Florian. 2007. On the nature of anticausative morphology. Doctoral dissertation, University of Stuttgart.
- Schütze, Carson T. 1997. INFL in child and adult language: Agreement, Case, and licensing. Doctoral dissertation, MIT.
- Schütze, Carson. 1999. English expletive constructions are not infected. *Linguistic Inquiry* 30: 467–484.
- Schütze, Carson T. 2001. On the nature of default Case. *Syntax* 2: 205–238.
- Schütze, Carson T. 2003. Syncretism and double agreement with Icelandic nominative objects. In *Grammatik i fokus/Grammar in focus*, eds. Lars-Olof Delsing, Cecilia Falk, Gunlög Josefsson, and Halldór Ármann Sigurðsson, vol. II, 295–303. Lund: Department of Scandinavian Languages.
- Shklovsky, Kirill. 2009. Person-case effects in Tsel'tal. Ms., MIT.
- Sichel, Ivy. 2007. Raising in DP revisited. In *New horizons in the analysis of control and raising*, eds. William D. Davies and Stanley Dubinsky, 15–34. Dordrecht: Springer.
- Sigurðsson, Halldór Ármann. 1991. Icelandic case-marked PRO and the licensing of lexical arguments. *Natural Language and Linguistic Theory* 9: 327–363.
- Sigurðsson, Halldór Ármann. 1992. *Verbal syntax and case in Icelandic*. Reykjavík: Institute of Linguistics, University of Iceland.
- Sigurðsson, Halldór Ármann. 1996. Icelandic finite verb agreement. *Working Papers in Scandinavian Syntax* 57: 1–46.
- Sigurðsson, Halldór Ármann. 2002. To be an oblique subject: Icelandic vs. Russian. *Natural Language and Linguistic Theory* 20: 691–724.
- Sigurðsson, Halldór Ármann. 2004. Icelandic non-nominative subjects. In *Non-nominative subjects*, vol. 2, ed. Peri Bhaskararao and K.V. Subbarao, 137–159. Amsterdam: John Benjamins.
- Sigurðsson, Halldór Ármann. 2006. The nominative puzzle and the low nominative hypothesis. *Linguistic Inquiry* 37: 289–308.
- Sigurðsson, Halldór Ármann. 2010. Minimalist C/case. Ms., Lund University.
- Sigurðsson, Halldór Ármann. forthcoming. On the new passive. *Syntax*.
- Sigurðsson, Halldór Ármann, and Anders Holmberg. 2008. Icelandic dative intervention: Person and number are separate probes. In *Agreement restrictions*, eds. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 251–281. Berlin: Mouton de Gruyter.
- Silverstein, Michael. 1986. Hierarchy of features and ergativity. In *Features and projections*, eds. Peter Muysken and Henk van Riemsdijk, 163–232. Dordrecht: Foris. Originally published as: Silverstein, Michael. 1976. Hierarchy of features and ergativity. In *Grammatical categories in Australian languages*, ed. R.M.W. Dixon, 112–171. Canberra: Australian Institute of Aboriginal Studies.
- Simpson, Jane Helen. 1983. Aspects of Warlpiri morphology and syntax. Doctoral dissertation, MIT.

- Sobin, Nicholas. 1997. Agreement, default rules, and grammatical viruses. *Linguistic Inquiry* 28: 318–343.
- Sportiche, Dominique. 1996. Clitic constructions. In *Phrase structure and the lexicon*, eds. Johan Rooryck and Laurie Zaring, 213–276. Dordrecht: Kluwer.
- Sportiche, Dominique. 2005. Reconstruction, binding, and scope. In *The Blackwell companion to syntax*, eds. Martin Everaert and Henk van Riemsdijk, vol. 4, case 54. Oxford: Blackwell.
- Svenonius, Peter. forthcoming. Case alternations in the Icelandic passive and middle. In *Passives and impersonals in European languages*, eds. Satu Manninen, Katrin Hietam, Elsi Kaiser, and Virve Vihman. Oxford: Oxford University Press.
- Szucsich, Luka. 2007. Nothing wrong with finite T: Non-agreeing accusative impersonal sentences. In *Proceedings of Formal Approaches to Slavic Linguistics 15*, 401–419. Ann Arbor, MI: Michigan Slavic Publications.
- Taraldsen, Knut Tarald. 1986. On the distribution of nominative objects in Finnish. In *Features and Projections*, eds. Peter Muysken and Henk van Riemsdijk, 139–161. Dordrecht: Foris.
- Taraldsen, Knut Tarald. 1995. On agreement and nominative objects in Icelandic. In *Studies in comparative Germanic syntax*, eds. Hubert Haider, Susan Olsen, and Sten Vikner, 307–237. Dordrecht: Kluwer.
- Timberlake, Alan. 1975. The nominative object in Finnish. *Lingua* 35: 201–230.
- Toivainen, Jorma. 1993. The nature of the accusative in Finnish. In *Case and other functional categories in Finnish syntax*, eds. Anders Holmberg and Urpo Nikanne, 111–128. Berlin: Mouton de Gruyter.
- Thráinsson, Höskuldur. 2007. *The syntax of Icelandic*. Cambridge: Cambridge University Press.
- Tuite, Kevin. 1998. *Kartvelian morphosyntax*. München: Lincom Europa.
- Tuite, Kevin. 2008. Early Georgian. In *The ancient languages of Asia Minor*, ed. Roger D. Woodard, 145–165. Cambridge, MA: Cambridge University Press.
- Uriagereka, Juan. 1996. Formal and substantive elegance in the Minimalist Program. In *The role of economy principles in linguistic theory*, eds. Chris Wilder, Hans-Martin Gärtner, and Manfred Bierwisch, 170–204. Berlin: Akademie-Verlag.
- Uriagereka, Juan. 1999a. Multiple spell-out. In *Working Minimalism*, eds. Samuel David Epstein and Norbert Hornstein, 251–282. Cambridge, MA: MIT Press.
- Uriagereka, Juan. 1999b. Minimal restrictions on Basque movements. *Natural Language and Linguistic Theory* 17: 403–444.
- Vainikka, Anne Marjatta. 1989. *Deriving syntactic representations in Finnish*. Doctoral dissertation, University of Massachusetts at Amherst.
- Williams, Edwin. 1997. Blocking and anaphora. *Linguistic Inquiry* 28: 577–628.
- Williams, Edwin. 2007. Dumping lexicalism. In *The Oxford handbook of linguistic interfaces*, eds. Gillian Ramchand and Charles Reiss, 353–382. Oxford: Oxford University Press.
- Willis, David. 1998. *Syntactic change in Welsh*. Oxford: Oxford University Press.
- Wiltschko, Martina. 2003. On the interpretability of Tense on D and its consequences for Case theory. *Lingua* 113: 659–696.
- Woolford, Ellen. 1997. Four-way case systems: Ergative, nominative, objective, and accusative. *Natural Language and Linguistic Theory* 15: 181–227.
- Woolford, Ellen. 2006. Lexical Case, inherent Case, and argument structure. *Linguistic Inquiry* 37: 111–130.
- Yang, Charles. 1997. Minimal computation. MSc. thesis, MIT.
- Yip, Moira, Joan Maling, and Ray Jackendoff. 1987. Case in tiers. *Language* 63: 217–250.
- Yoon, James. 1996. Ambiguity of government and the chain condition. *Natural Language and Linguistic Theory* 14: 105–162.
- Zribi-Hertz, Anne, and Lamine Diagne. 2002. Clitic placement after syntax: Evidence from Wolof person and locative markers. *Natural Language and Linguistic Theory* 20: 823–884.

Chapter 6

Phi in Syntax and Phi Interpretation

6.1 Phi-Alphabets

Chapter 5 concludes on the possible motivations of Agree/Case and of person hierarchy interactions in the requirements of the external systems that interface with syntax. Such inquiry is at the heart of the Minimalist Program. Under the Strong Minimalist Thesis, syntax is an optimal solution to the legibility requirements of PF and LF, to Full Interpretation. The sources of the properties manipulated by syntax and the reasons for their arrangements are to be sought there, under the guidelines in (1).

- (1) a. *Full Interpretation*: Objects submitted by syntax to external systems must be fully legible to them, both features and their arrangements.
- b. *Interpretability Condition*: Lexical items have no features other than those interpreted at the interfaces, properties of sound and meaning.
- c. *Inclusiveness Condition*: Syntax does not introduce new features, such as indices or deletion marks.

(see Section 5.4)

Research motivated by these guidelines suggests a departure from the Interpretability Condition: purely syntactic features that are not legible to the interfacing systems of realization, PF, or interpretation, LF. Among them are the phi- and Case-features of the Agree/Case system, and the descendants of the Extended Projection Principle that drive (some) movement. At the input to PF and LF, such features are illegible, uninterpretable. They must be deleted within syntax through the mechanisms of syntactic dependency formation, establishing syntactic dependencies.

The ultimate motivation of uninterpretable features has been sought in syntax-external factors beyond legibility. Legibility alone may permit single-word expressions like *Hervor! Beware!* to converge, or expressions with arguments in their thematic positions like *Quest of Hervor: The sword Tyrfin*, but illegible features may be necessary to permit the construction of richer objects, moving arguments from thematic to scopal/peripheral positions (Chomsky

2000a: 120f., 2008: 140f., 148). They may be a by-product of acquisition through canonical templates integrated as requirements of lexical items (Bever 2009). They may reflect the acquisition of PF patterns that have no synchronic motivation but are the diachronic residue of earlier interpretable properties and configurations (discussed in this chapter). Nevertheless, the Interpretability Condition continues to invite search for the source of all the properties of lexical items in the legibility requirements of the interfacing systems of PF and LF, phi and Case among them.

Phi-features are an ideal tool for this inquiry, because they appear to be an alphabet shared across various linguistic modules. They have been seen in morphology in Chapter 2, and in syntax in Chapters 3–5. An example from syntax is the transfer of phi-features from the controller to the remote verb in (2), or the person interactions of Chapters 3 and 4. An example from morphology is the transfer of number and gender from the dative to the accusative clitic in (3).

- (2) There **seem** to be **three guests** arriving at Pohjola. (Chapter 1)
- (3) Si ellas_i me quieren comprar el caballo_j, yo *se_i* **las_j** venderé.
 If they(F) me wish buy the horse(M) I SE 3PLF.ACC will.sell
 If they want to buy my horse, I will sell it (*lo* > *las*) to them (*les* > *se*)
 (Spanish, Chapter 2)

Phi-features also exist in interpretation. In (4), they play a role in the patterns of compatibility and entailment among the expressions *they*, *them* (3PL), *me* (1SG), *us* (1PL), *you* (2SG/PL).

- (4) a. Because they_i know me_k, Hervor considers us/*them/*you_{i+k} friends.
 → b. Hervor considers me and one or more others friends.

It is a common hypothesis that the phi-featural phenomena across these systems use a single, shared phi-alphabet, (5) (e.g., in work on morphology, Noyer 1992, Bonet 1995a, on interpretation, Wechsler and Zlatić 2000, Kratzer 2009).

- (5) Common phi-alphabet hypothesis: The alphabets (symbols and relations) of phi-features in morphology, syntax, and interpretation are isomorphic.

This common phi-alphabet hypothesis holds that there are one-to-one correspondences among interpretation, syntax, and morphology. For instance, the interpretive speaker (author) of a context corresponds to 1st person in pronominal and agreement paradigms. The foundations of the hypothesis are systematic correspondences between interpretive phi patterns like those in (4) and morphological phi patterns. The speaker and someone else may be picked up by *we* and not *you*; 1PL pronouns may be constructed out of 1st but not 2nd

person pronouns and plural elements, as in Chinese *wǒ-men* ‘we = I-PL’ (Corbett 2000: 76f.). Limited exceptions are widespread, for instance the morphological plurality *we* ‘speaker + addressee’ in some but not other languages, and may call for limited departures from (5). However, often they reappear within morphology, say as different types of plurality, and might be profitably addressed by a more refined analysis of phi-features (e.g. Kratzer 2009, Harbour 2008).

The existence of a common phi-alphabet across linguistic modules is a striking and surprising property of language. Interpretation might have been about phi-less things – loci in the referential space, their modes of grouping, centres of deixis or consciousness – that map only indirectly onto the person, number, and class/gender that morphology provides to some but not all languages (see Aronoff et al. 2005: Section 4). Morphology and interpretation do not typically share alphabets. The interpretation of (6) uses quantifier-variable relations, predicate-argument relations, degrees. The realization of (6) refers rather to attachment requirements, linear adjacency, prosodic weight, vowel height. The two sets have no simple relationship, whence their mismatches. The suffix *-er* attaches to *easy*, but the comparative degree scopes over *uneasier* and *ever*; *lover* is adjacent to *seemed* and *her*, but the argument of *sleep*; *lover* and *ever* share a syllable, but no meaning. Between interpretation and realization, syntax mediates. To realization, it is not isomorphic. Its relationship to interpretation is less clear.

(6) [Her_{i/k} lover] seemed to Hervor_k [to *t* sleep [uneasier than ever]].

The common phi-alphabet of syntax and interpretation is a tool to explore the syntax-interpretation relationship. The syntax-realization relationship may serve as a guideline. The morphological realization of arguments often reflects the phi-features seen in syntax and interpretation, but there are clear mismatches, including the phi-feature syncretisms and transfers discussed in Chapter 2. We may investigate the same question for syntax and interpretation. The syntactic phi-features of arguments are usually held to correspond to those of interpretation rather than realization. This chapter suggests that this is not always so. There are arguments whose syntactic phi-specification appears to be autonomous of interpretation. Among them are person features and the [+ person] of person hierarchy interactions. If this is right, the syntactic requirement of [+ person] licensing is not reducible to an interpretive need. It involves purely syntactic, externally illegible features, converging with the uninterpretability of Agree/Case relations discussed in Chapters 1 and 5. Their source lies elsewhere. In some cases, the source is the acquisition of patterns left in PF as the diachronic residue of earlier interpretable phi-features.

The principles of the inquiry are clear. The conclusions are ever more tentative as we proceed. Section 6.2 establishes what syntax-interpretation phi-mismatches might look like, and introduces the evidence for number and gender mismatches from the work of Wechsler and Zlatić (2000, 2003). Section 6.3

bolsters the results through the French pronoun *on*, IPL for interpretation, but 3SG for syntax from its roots in Latin *homo* ‘man’. The [+person] of the Person Case Constraint is added in Section 6.4 through its presence on idiom chunks and its optional grammaticalization. Section 6.5 turns to wholly inconclusive yet important and intriguing interpretive manipulations of [+person], which may eventually contribute to understanding what [+person] truly is, and how interpretation and syntax relate. Section 6.6 draws the conclusion to the chapter and the book.

6.2 Syntactic and Interpretive Phi-Mismatches

The phi-features of interpretation are relatively accessible to inspection through phenomena like remote anaphora and entailments, illustrated in (4).

- (4) a. Because they_i know me_k, Hervor considers us/*them/*you_{i+k} friends.
 → b. Hervor considers me and one or more others friends.
- (7) a. [[1st]] = $\lambda x.x$ includes the speaker. x
 b. [[2nd]] = $\lambda x.x$ includes the addressee (and excludes the speaker). x
 c. [[3rd]] = $\lambda x.(x$ excludes the speaker and the addressee). x
 d. [[singular]] = $\lambda x.x$ is an atom. x
 e. [[plural]] = $\lambda x.(x$ is a plurality). x

Consider the analysis where phi-features introduce presuppositions along the lines of (7) (Heim and Kratzer 1998, Schlenker 2005, Sauerland 2008, Heim 2008). Both the 1st and 3rd person pronouns introduce a variable. The former presupposes that the variable refers to the speaker. The latter may explicitly presuppose that it does not refer to the speaker. Alternatively, it may rather implicitly presuppose so through the principle *Maximize Presuppositions*, which forces the choice of 1st person to refer to the speaker (see (43) below). These presuppositions give the patterns of compatibility and entailment among expressions in (4). They are in the first place grammaticality judgments, not a speaker’s conceptualization of the world. French *route* ‘road’ and *femme* ‘woman’ share the feminine gender, *pont* ‘bridge’ and *homme* ‘man’ masculine, including for pronominal anaphora, but it need not follow that a speaker believes that they share extralinguistic properties (but see Boroditsky et al. 2003, and the articles in Gentner and Goldin Meadow 2003).

Mismatches between the phi-features of syntax and interpretation are plentiful but often only apparent. Among them are different ways of referring to the same entities, including different descriptions of the speaker and addressee in (8), (9), (10). Nothing need prevent a 3rd person description from accidentally or necessarily referring to the speaker, in the same way that *two* and *an even prime* are coextensive: *the one who writes/wrote these words*, *the present writer*, *this writer*, *yours truly*, *my person*. Reference to the speaker lets these 3rd person

(8) The group in which I was presented itself/*ourselves/us to its/our hosts.
 (9) They_i know the present writer_k. Jane considers us_{i+k}/*them_{i+k} friends.
 (10) The present writers_{i/j} think that they_i/we_j have been misrepresented.
 (*i* may include the speaker, or refer to the authors of what one is reading)
 ((10) from Collins and Postal 2008)

(11) Each_i of us_i evaluates herself_i/themselves_i/*ourselves_{i/j} (in our_i report).

- (12) Condemned prisoner: I am traditionally allowed to order whatever I want for my last meal. (i.e. The condemned prisoner is traditionally...)
- (13) Don't we_k look nice in our_k new hat! But it's bit too large for you_k.
- (14) We parked ourselves out back and (we) got a coffee/#stolen.
- (15) I'm the ham sandwich and (I'm) rather satisfied/#tasty.

¹ Also illustrated in (11) is Sauerland's proposal that plural is underspecified, and so may refer to atoms to avoid the gender presuppositions associated with the more specified singular.

Table 6.1 Serbo-Croatian agreement mismatches

	Pragmatic	Concord	Index
<i>sudija</i> ‘judge’	SGM/F	SGM/F	SGM/F
<i>sudije</i> ‘judges’	PLM/F	PLF	PLF
<i>vrata</i> ‘door(s)’	SGN	PLN	PLN
<i>devojče</i> ‘girl’	SGF	SGN	SGN
<i>gospoda</i> ‘gentlemen’	PLM	SGF	PLN (pronouns PLM)
<i>braća</i> ‘brothers’	PLM	SGF	PLN
<i>deća</i> ‘children’	PLM/N/F	SGF	PLN

Pragmatic: Co-referential pronouns through pragmatic redescription.

Concord: DP modifiers (including relative pronouns) and secondary predicates.

Index: Pronouns (bound, resumptive, coreferential, relative), participle and predicate adjective, finite verb (number only).

and might be set aside as politeness marking or as emergence of the default (Wechsler 2004, Sauerland 2008). Wechsler and Zlatić (1998, 2000, 2003) discuss the more egregious number and gender mismatches in Table 6.1 that resist such analysis. They conclude that nouns may come with different phi-sets for different mechanisms. All may mismatch, as may be illustrated by the noun *deća* ‘children’:

- *Index* phi-set, *neuter plural*, for subject-predicate and antecedent-pronoun matching (through phi-matching in Discourse Representation Structures).
- *Concord* phi-set, *feminine singular*, for modifier and secondary predicate matching (through subcategorization in HPSG).
- *Semantic* phi-set, e.g. *masculine plural*, that surfaces under redescription, including by a pronoun (through pragmatics).

These mismatches illustrate two points. One is that grammatical and not only ‘semantic’ gender counts for conditions on pronominal anaphora, such as the neuter versus masculine gender of *braća* ‘brothers’ in (16). These conditions are thought to be interpretive at least in cases like (16) where they span clauses.

- (16) Streo sam braću_i. Ona_i su došla. / Oni_i su došli
 I.met brothers **3PLN** came.**PLN** **3PLM** came.**PLM**
 I met the brothers. They (plural neuter/masculine) came.
 (Serbo-Croatian, Wechsler and Zlatić 2000: 815, adapted)

Wechsler and Zlatić (1998, 2003: Chapter 9) find that both grammatical (index) and semantic gender is available for bound and coreferential pronouns in Serbo-Croatian:

- Grammatical gender for nominative-bound reflexives in the type *The/ every girl_i likes herself_i* (SGN for *devojče* ‘girl’).
- Semantic gender on reflexives bound by non-nominatives, and on pronouns in *He told the/ every girl_i that he likes her_i* (SGF for *devojče* ‘girl’).

- Either gender for non-c-commanded pronouns on co-referential and e-type readings (SGN or SGF for *devoјče* ‘girl’).

A similar state of affairs obtains in French for nouns like SGF *sentinelle* ‘patrol’, PLF *lunettes* ‘eyeglasses’, although with different preferences and occasional difficulty in picking any gender (cf. Morin 1978: 362, or cases like the ‘the pregnant fish/tyrant’ where *poisson* ‘fish’, *tyrant* ‘tyrant’ are SGM). Thus some grammatical gender appears to be present in the interpretive component.²

The second point illustrated by the mismatches in Table 6.1 is that even the purely grammatical gender/number detected by pronominal anaphora may mismatch another grammatical gender indicated by other linguistic phenomena like concord, as for *déca* ‘children’ above. Similarly, English *committee*-type collectives in (15) may be singular or plural for agreement and local anaphora, but require singular determiners for concord (Pollard and Sag 1994: 71, Wechsler and Zlatić 2003: 4.3, Sauerland and Elbourne 2002). A case from French with its richer concord morphology is *laideron* ‘ugly woman’ (18). It is masculine for DP-internal concord, but feminine for floating quantifiers, predicate adjectives, secondary predicates, and all pronominal anaphora (with some speaker variation; cf. Morin 1978: 362, Larrivée 1994: 103, Kayne 2000: 181 note 35).³

(17) This_{SG}/*these_{PL} committee are_{PL} (all/each) voting themselves_{PL} a raise.

(18) Les_{PL} vieux_{PLM} laiderons ne pensent toutes_{PLF} qu’à
 The.PL old.PLM ugly.women think all.PLF only about
 elles-mêmes_{PLF}.
 themselves.PLF.

(French; gender other than indicated is ungrammatical)

²These considerations seem serious obstacles to the view of grammatical gender as purely syntactic, uninterpretable, and deleted by LF (Rezac 2004a: 28, Bošković 2009). One could remove arbitrary gender from interpretation if phi-matching in anaphora were extralinguistic, of the same kind as the reference to linguistic properties in *the trochaic foot ending of the last-mentioned epicene feminine noun*, but that seems implausible (cf. Lewis 1972: 195). Sauerland (2007) proposes that arbitrary gender matching occurs through semantic identity conditions on the ellipsis of the definite descriptions that give rise to pronouns. This intriguing proposal would remove arbitrary gender from interpretation, provided the conditions work out. However, it seems not to allow for mismatches with arbitrary gender that go to another arbitrary gender, as for Serbo-Croatian *braća* ‘brothers’ in Table 6.1, nor the impossibility of using the semantic gender, as for *laideron* in (18) or in Serbo-Croatian under the conditions discussed by Wechsler and Zlatić. The relevant ellipsis might be made sensitive to morphological identity instead, raising issues for indirect licensing (Fiengo and May 1994, Fox 2000, Sauerland 2004, 2007). Wechsler and Zlatić (1998) present evidence that arbitrary gender does matter in sloppy identity.

³Kayne reduces the set of phenomena by giving floating quantifiers a silent pronoun in this case.

Table 6.2 French pronouns

Strong	Possessive (-concord)	Weak subject	Cliticobject	
1SG	moi m-on/a/es	je	me	} DAT/ACC, disjoint/reflexive
2SG	toi t-on/a/es	tu	te	
1PL	nous notre,-s	nous, on	nous	
2PL	vous votre,-s	vous	vous	
3SGM	lui s-on/a/es	il	ACC le,	} DAT lui; DAT/ACC refl. se
3SGF	elle s-on/a/es	elle	ACC la	
3PLM	eux leur-Ø/s	ils	ACC les, DAT leur, DAT/ACC refl. se	
3PLM	elles leur-Ø/s	elles		

Note 1: Possessives concord with the head noun (some M/F and PL, some SG/PL).

Note 2: Strong pronouns are preposition objects, dislocated, doubled, focussed.

be the quasi-universal ‘one’. The quasi-existential *on* is unavailable as the subject of unaccusative, passive, copulative, and raising structures (Cinque 1988).

Finally in (19)c is the 1PL *on*. It has the same meaning and properties as the older 1PL weak subject *nous*, with which it co-occurs in some registers for some speakers, as in (20) (cf. Morin 1982: 24f., Fauconnier 1974: 206).⁶ 1PL *on* is available in both generic and episodic contexts wherever *nous* is or was, including where the quasi-universal and quasi-existential *on* are possible. It links to the same 1PL anaphora as the older *nous* and only to them (save for *se* as discussed below).⁷ Also like *nous*, *on*_{1PL} is a pronoun for binding conditions, quantifier-variable binding, ‘fake indexicals’, and so on.

⁶Register is important; in (20) replacing *nous soyons sages* by *nous aillions traître les vaches* ‘we go milk the cows’ is ungrammatical, since *aillions* go.1PL.SUBJ is not found in the same register as 1PL *on* (it is fine with quasi-existential *on*).

⁷Creissels (2008b) describes the restriction of 1PL *on* to *nous*-type anaphora situation (cf. Taylor 2009 on Brazilian Portuguese *a gente* below). However, Morin (1982: 25 note 9) observes that some speakers also allow *soi*-type anaphora, as in (ia). I have found both grammars. Speakers with (ia) seem to permit mixing of the *nous* and *soi*-type anaphora, as in the rest of (i). The *on* in (i) is the 1PL *on*, since the quasi-universal *on* is incompatible with left-dislocated pronouns (cf. Morin 1982: 15 note 2) and plain episodic contexts (Creissels 2008b). Speakers with this pattern, like others, cannot use *soi*-anaphors for pronouns other than *on*, including *nous*. (One thinks of Cinque’s 1988: 3.4 suggestions about the emergence of 1PL readings from the other readings of Italian *si*, but the anaphora in that case are 1PL. I am grateful to M. Joutiteau for discussion.)

- (i) a Ils ne sauraient pas revenir, mais nous_i / *vous_i / [lui et moi/*toi]_i,
They would not know how to return, but we_i / *you_i / [he and I/*you]_i
quand on_i perd notre_i/(*)son_i chemin, on_i finit toujours par le retrouver.
when we (on_i) loses our_i/(*)son_i way, we (on_i) always ends up finding it again.⁷
b Nous_i, quand on_i a perdu notre_i/(*)son_i chemin dans le bois, on l’a retrouvé.
We_i, when on_i lost our_i/son_i way in the woods, on_i found it again.
c [Toi et moi]_i, on_i s_i écoute nous_i-mêmes/(*)soi_i-même.
[You and me]_i, on_i se_i listens.to our_i-selves/(*)soi_i-self.
d Nous_i, on_i finira notre_i/(*)sa_i vie dans notre_i lit.
We_i, we_i (on) will finish our_i/(*)son_i life in our_i bed.

- (20) **On** savait que Maman voulait qu'**on** soit sages / que **nous** soyons sages.
We (*on*) knew that mom wanted that **we** (*on/nous*) be good.

The 1PL use of *on* is not a special use of the quasi-existential or quasi-universal *on*, for it occurs in the same contexts as they, and has distinctive anaphoric properties (Creissels 2008b). Unlike 1PL *on*, the quasi-existential *on* is inert for anaphora and quantification. The quasi-universal *on* is visible to them like 1PL *on*, and its meaning intersects with that of *we/you* pronouns on their generic, quasi-universal use (cf. Moltmann 2006). However the quasi-universal *on* only antecedes *soi*-type anaphora and 1PL *on* only 1PL anaphora, in the same way as *one, we, you* even on their shared generic use: *One_i paints one's/*our home in a unique way, We (all) paint our/*one's home in a unique way, You paint your/*one's home in a unique way* (similarly in French).⁸

In all the uses of *on*, it controls 3SG agreement on the verb, and the 3rd person subject-oriented reflexive *se*, both as the inherent reflexive of the verb *se fier* 'trust' in (19), and as a true reflexive and reciprocal in (21). This phi-set comes to *on* from its source in Latin *homo* 'man'. It is in striking contrast with the 1PL phi-set of the 1PL *on* for all other purposes. The reflexive object clitic of 1PL *on* must be *se*, not 1PL *nous*, (21)a, (21)c. By contrast, if a phrasal anaphor doubles the clitic, it must be the 1PL *nous-même*, (21)b, and likewise all other anaphoric pronouns must also be 1PL (cf. Table 6.2). The 1PL phi-set of 1PL *on* also has the effect of barring the 1PL *nous* as a disjoint object clitic due to Condition B, so that if *nous* is present, the quasi-universal or quasi-existential reading of *on* is forced, as in (21)d, (21)e (cf. Morin 1978: 364).

- (21) a. *Nous_i, on_i s'est_i présenté à nos_i hôtes d'abord.* (*on*_{1PL})
 We_i (*nous*), we_i (*on*) introduced ourselves_i (*se*) to our_i (*nous*) hosts first.

⁸Quasi-universal *on* can relate to other quasi-universal pronouns at a distance, as in English (i); in French they are *nous* 'we', *vous* 'you(PL)', but not *te* 'you(SG)', suggesting a basic plurality to *on* (Morin 1978: 364, 1982: 14 note 1, Oukada 1982: 103, 105, Creissels 2008b: 5.4, Kayne 1975: 172 note 123, 2000: 184 note 50, Grevisse and Goosse 2008: §574(e)). In 'simulations' of the type (ii), both the 1PL and quasi-universal *on* appear in French, as can be seen from the linked pronouns (cf. Morin 1978: 4.2, 1982: 14f., Oukada 1982, Creissels 2008b: 6.2.3).

- (i) We all have to adjust to a new culture. At first you really have to watch yourself/
 *oneself. You/one can easily get in trouble.
 (cf. Wechsler and Zlatić 2000: 804)
- (ii) a *Alors, on_i ne pense qu' à soi_i/nous_i/*toi_i?*
 So, we/one_i (*on*) think(s) only about oneself_i/ourselves_i/*yourself_i?
 b *(*Et toi_i/vous_i,) on_i se_i croit loyal*
 (*And you(SG/PL),) one_i (= you) believes oneself_i/oneselves_i loyal.SG
 à ses_i/leurs_i/*vos_i principes?
 to one_i's/their_i/*your_i principles?

- b. $On_i se_i$ présente nous-mêmes_i aux élections. (on_{1PL})
 We_i (*on*) will present ourselves_i (*se*...*nous-mêmes*) at the elections.
- c. A Noël $on_i se_i/nous_{*i}$ présente nos_i proches. (on_{1PL})
 At Christmas we_i (*on*) present each other (*se/*nous*) our_i (*nos*) friends.
- d. A Noël $on_i se_i/nous_k/*i$ présente ses_i/nos_k proches. (on_✓)
 At Christmas one_i (*on*) presents eachother/us_{k/*i} (*se/nous*) one's_i/our_k (*ses/nos*) friends.
- e. $On_i nous_k/*i$ a présenté à nos_{k/*i} hôtes d'abord. (on_{∃/*1PL})
 Someone introduced us to our hosts first.
 *We introduced ourselves/us to our hosts first.

The 3SG verb agreement and *se* that *on* controls do not have 1PL uses without a local *on*: in (22)a when anteceded by the older 1PL *nous*, in (22)b by a relative operator linked to *nous*, or by *on* in another clause in (22)c.⁹

- (22) a. $Nous_i nous_i$ sommes présentés à nos_i hôtes.
 We_i have.1PL introduced ourselves_i (*nous*) to our_i hosts.
- a' * $Nous_i s_i'$ est présenté(s) à nos hôtes_i.
 *We_i have.3SG introduced ourselves_i (*se*) to our_i hosts.
- b. $C'est nous_i qui_i nous_i$ sommes exilés.
 It's us_i who_i have.1PL exiled ourselves_i (*nous*)
- b' . * $C'est nous_i qui s_i'$ est exilé(s).
 *It's us_i who_i have.3SG exiled(PL) ourselves_i (*se*).
- c. Quand on_i dit aux gens_k de PRO_k vous_i/nous_i/**se*; photographeur...
 When we/one_i tell(s) people_k to PRO_k photograph you_i/us_i/**se*...
 (French, (c) cf. Kayne 1975: 172 note 123)

It is envisageable that the 3SG phi-set of 1PL *on* is transmitted to the verb and to *se* by morphology rather than syntax, because the three are always adjacent.¹⁰ However, control shows that the 3SG of *on* is in syntax. In (23), the matrix *on* obligatorily controls the embedded PRO. Despite its 1PL reading,

⁹Morin (1978: 4.3) reports spoken French varieties that regularly use 3SG when relativizing any strong pronoun, but they are not easily accessible for my consultants, nor are the resumptive relatives of the type *nous qu'on*... 'we (*nous*) that we (*on*) = we who' of Lambrecht (1981: 30).

¹⁰There exist similar phi-feature transmissions that are candidates for morphology, as in (i), where the plural object clitic anomalously controls subject agreement (a grammaticality judgment for some, although usually a production error, as in Franck et al. 2010; for similar phenomena, see Harris and Halle 2005, Kayne and Pollock 2008).

- (i) Le professeur *les* prend/(*)prennent pour de cons!
 The professor them.ACC (*les*) take.SG/PL (*prend/prennent*) for idiots!

PRO binds the 3rd person anaphor *se*, and only sometimes and uneasily 1PL *nous* (cf. Oukada 1982: 102, Kayne 2007). Inversely in (23), the older 1PL *nous* controls PRO that binds the 1PL anaphor *nous*, not *se*. These constraints reflect the transmission of phi-features under obligatory control. Obligatory control is not a morphological phenomenon, since it operates across phrase-structurally unbounded distances and CP boundaries. It is likely not interpretive either, since we would expect 1PL *on* to use its 1PL features, as for other pronominal anaphora. It is syntactic.¹¹

- (23) a. Toi et moi, on_i aime bien PRO_i *se_i/??nous_i* sentir utiles (à nos_i amis).
 b. Toi et moi, on_i aime bien PRO_i *se_i/??nous_i* faire utiles (à nos_i amis).
 You and me, we_i (on) like PRO_i to feel/make ourselves_i (*se_i/??nous*)
 useful (to our_i friends).
 c. On_i a essayé de PRO_i faire semblant de *se_i/??nous_i* laver.
 We_i tried to pretend PRO_i to wash ourselves_i (*se_i/??nous*).
 (French, (c) cf. Kayne 2007)
- (24) a. Nous_i aimons bien PRO *nous_i/*se_i* faire utiles.
 b. Vous_i aimez bien PRO *vous_i/*se_i* faire utiles.
 (French)

Landau's (2000, 2008) Agree-based theory of obligatory control in (25) provides a suitable tool. The controller Agrees with a head in its clause, T for subject control, and another Agree transmits its phi-features to the PRO of the embedded clause (directly as indicated, or through C). In turn, PRO controls the phi-features of the infinitival T and of the reflexive *se* through T-PRO and T-*se* Agree.¹²

- (25) We T _{*t_{we}*} like to C PRO T SE _{*t_{PRO}*} feel useful.
 [] [] Agree relations

¹¹The *nous* object clitic is fine if disjoint to a quasi-universal/existential rather than 1PL *on* controller, as expected. It also improves under deeper embedding even for 1PL *on*, as Kayne (2007) points out for (23)c, perhaps to be related to partial control discussed in Landau (2000) or the *je... nous* phenomenon discussed in Rooryck (2006). It seems wholly unavailable for certain interpretation (*On va se/* nous suivre* 'We are going to follow each other') and for inherent *se* (*On a essayé de s/* nous attaquer au problème* 'We tried to attack the problem') Uncontrolled arbitrary PRO appears to have the same possibilities as in English, e.g. *Before PRO_{arb} descending oneself/yourself/ourselves, it is necessary to inspect the rope (oneself = French se/soi-type).*

¹²The mechanism may appear to be counter-cyclic: the matrix T-subject Agree determines the value of T-PRO Agree that determines the value of PRO-T and T-*se* Agree. That need be no more than appearance. Under the proposal of Frampton and Gutmann (2000) and Pesetsky and Torrego (2006), Agree collapses the phi-sets it relates into a single multiply linked object. Embedded T-PRO and T-*se* Agree links the features of T, PRO, *se* into a single object; Agree between the matrix T and PRO adds to it the phi-features of matrix T; and finally matrix T-subject Agree values the phi-features of this single object at all the positions to which it is linked.

There is independent evidence that T-subject Agree determines the person of the reflexive in French. In inversion constructions (26), agreement with the postverbal subject is for 3rd person, even if the preverbal subject would require 1st/2nd person. The reflexive shares the phi-features of agreement, not of the subject. The postverbal subject in such constructions is low, below T, and agreement occurs by T-subject Agree rather than the movement of any interpretable content (Rezac 2010b). The reflexive appears to get its person feature through subsequent T-reflexive Agree, as Reuland (2006) and Chomsky (2008: 148) propose, and so has the same features as verb agreement.¹³

- (26) a. [Marie et moi] *nous* trouvions près de l'église.
 [Marie and I] found.1PL ourselves (*nous*) near the church.
 b. *[Marie et moi] *se* trouvaient près de l'église.
 *[Marie and I] found.3PL themselves (*se*) near the church.
 c. Près de l'église *se* trouvaient [Marie et moi].
 lit. Near the church found.3PL themselves_i (*se*) [Marie and I].
 d. *Près de l'église *nous* trouvions [Marie et moi].
 *lit. Near the church found.1PL ourselves_i (*nous*) [Marie and I].
 (French, cf. Bonami, Godard and Marandin
 1999, Bonami and Godard 2001; %)

To take stock, 1PL *on* has interpretive 1PL phi-features for nearly all linked pronouns, from phrasal reflexives doubling *se*, through c-commanded pronouns at any distance, to cross-clausal anaphora. However, for agreement, for the object reflexive clitic, and for obligatory control, 1PL *on* is 3SG.

3rd person expression may refer to 1st/2nd person, as pointed out at the beginning of this section, but theirs is not behaviour of *on*. This may be brought out by comparing *our group* in (27). It is a 3SG collective that corefers with 1PL *we*. Its 3SG phi-features are accessible to agreement, local reflexives, and remote anaphoric pronouns. It has no 1PL phi-features, and so local reflexives cannot be 1PL, local disjoint 1PL pronouns are fine, and remote 1PL pronouns may corefer.

- (27) a. [Our_i group]_k presented itself_k/*ourselves_i/us_i to its_k/our_i hosts.
 b. [Our_i group]_k decided PRO to present itself_k/?*ourselves_i/us_i to its_k/
 our_i hosts.

With *on*, agreement, the reflexive clitic, and control must be 3SG, as with *our group*. All other pronouns must be 1PL, so for them *on* is interpretively wholly 1PL. Moreover, local object clitics cannot be 1PL, so for them as well *on* is 1PL, to rule them out by Condition B.¹⁴ *Our group* is syntactically and interpretively

¹³The same facts hold of expletive constructions, see Fauconnier (1974: 214).

¹⁴The same is true of overlapping reference, ruling out 1SG local object clitics in **On m'a tous choisi pour nous représenter* 'We (*on*) all chose me to represent us'; see Section 4.4.

of *on* might also be so removed, and the masculine of French *laideron* in (18). They must somehow be marked for deletion, since other lexically specified phi-features on arguments remain. A possibility is that they are distinguished by occurring on otherwise contentless elements, on expletives. The phi-features of expletives themselves are in this situation, including French 3SG *il* in *Il arrive trois filles*, lit. ‘It arrives three girls’, i.e. ‘There arrive three girls’. The phi-set on an otherwise contentless element might be illegible to LF, and deleted automatically (cf. Chomsky 2000a: 128, 149 note 90, 2001: 7, 16, 1995: 4.5.3, 4.9). There is an interesting further possibility: it may be a condition on deletion that the eliminated phi-set form a syntactic dependency with an interpretable one, much as Agree-valued uninterpretable features must. The 3SG of 1PL *on* would then have to Agree with 1PL somewhere, either within the rich structure of *on* itself, or perhaps within the CP along the lines discussed in Section 6.4 resuming Bianchi (2006).

Another matter is the invisibility of the interpretive 1PL of *on* to syntactic Agree. Perhaps 1PL is added to *on* during the process that eliminates 3SG, through Agree with the CP layer of the clause or through Vocabulary Insertion, and it is not visible earlier. However, 1PL would also be adequately rendered inert to Agree by locality, if it were embedded within *on* and projected over by its 3SG phi-set. This seems to allow more latitude for the treatment of pronouns like *a gente* in (29), with projection of one or the other of their two phi-sets, perhaps of both with resolution. The matter also depends on the proper treatment of local phrasal reflexives, for which *on* is 1PL, and which might belong to syntax.¹⁵

1PL *on* and similar pronouns indicate that syntactic phi-specifications may be autonomous of interpretive ones. Perhaps interpretive phi-specifications are also autonomous of syntactic ones, but that has not been determined, since *on* might be 1PL in syntax. This verdict for the autonomy of syntax from interpretation is tentative, since one can imagine reasonable alternatives. 1PL *on* might have some interpretable phi-set that conflicts with those of the pronouns and agreement to which it is linked, in such a way that the conflict is resolved to 3SG for some elements and 1PL for others, either at realization, or in interpretation (through Maximize Presuppositions (43)). A broader look at similar mismatches suggests this is not so, for they do not uniformly involve resolution to unmarked values, neither of number and gender (Section 6.2), nor of person (e.g. Ainu 1PL inclusive for 2SG; see Corbett 2000: Chapter 7, Cysouw 2005). It seems rather that the syntactic phi-features of an argument may be acquired from the evidence supplied by the morphology rather than the interpretation of agreement or pronouns. In the case of 1PL *on* from Latin 3SG *homo* ‘man’, this evidence is the synchronic residue of phi-features that at an earlier stage were

¹⁵Cf. Wechsler and Zlatic’s (2003) result that they need rather than may respect grammatical gender, discussed in Section 6.2.

interpretable. The next section draws a parallel conclusion for [+person] phi-specifications.¹⁶

6.4 Person in Syntax

The Person Case Constraint PCC of Chapter 4 and 5 makes use of a syntactically visible distinction between 1st/2nd(/reflexive) and 3rd person arguments. It has been referred to as a distinction between [+person] arguments and others, leaving in abeyance its ultimate character. In (30), the PCC bans [+person] 1SG in the context of a dative clitic. In response, an unfocussed dative pronoun can exceptionally appear as a strong pronoun (underlined) rather than a clitic (italics).

- (30) a. Elle *la*/**me* *lui* a présenté.
 b. Elle **l'/m'* a présenté à lui.
 she her/me.ACC him.DAT has introduced to him
 She introduced her/me to him.

The view adopted and developed in Chapter 5 is that [+person] pronouns need [+person] Agree for their uninterpretable [Case] feature to be valued and

¹⁶The number of *on* also suggests an uninterpretable SG value. 1PL *on* necessarily includes more than one entity. However, it controls plural or singular participles and predicate adjectives agreement in (i), reminiscent of *The committee_i has_i/*have_i made its_i/their_i choice* (Sauerland and Elbourne 2002), or *Someone_i said /*he_i/*they_i saw her* (Sauerland 2008). However *on* can have singular adjectives in (i), (ii) with *all* or with *be similar/equal*, where plural agreement is required for *committee* and *someone* (cf. Winter 2002: 500 note 6, Kayne 2007: note 5) (so Grevisse and Goose 2008: §438b; many speakers do then require plural, cf. (ii)). Yet participle and predicate adjective number/gender agreement in French is ordinarily semantic rather than syntactic, e.g. singular for 2PL as 2SG *polite* and 1PL for 1SG *authorial* (Wechsler 2004, Corbett 2000; Grevisse and Goosse 2008: §438a).

Similar issues may arise for plural predicate adjective agreement with quasi-universal *se/si*, optional in French, obligatory in Italian, impossible in Spanish (Mendikoetxea 2008: 296), as well as 1PL *a gente* in (29), agreeing optionally for plural in BPP' and not at all in BPP. In a syntactic solution, D'Alessandro (2004) proposes a syntactic PL phi-specification dedicated to concord for Italian *si*, cf. the work of Wechsler and Zlatić in Section 6.2. However, there are diverse types of interpretive plurality to be considered (Corbett 2000; Kratzer 2009, Sauerland 2008, Heim 2008, Harbour 2008, Rullmann 2004, Chierchia 1998, forthcoming). Particularly relevant may be 1st/2nd vs. 3rd splits for number agreement, for object clitics in Romance (optional vs. obligatory in Italian, Belletti 2005: 2.2, impossible vs. optional in Catalan, Muxi 1996), and for subject-verb agreement (obligatory vs. impossible across Basque dialects, Rezac 2006: 1.2.2.3).

- (i) On_i est (tous_i) égal/égaux (à nos_i rois).
 on is all equal.SG/PL to our kings
 We are (all) equal.SG/PL (to our kings)
 (ii) Toi et moi, on *se* croit égaux / égal.
 You and I, we believe ourselves equal.PL/SG
 ((ii): from the questionnaire of Chapter 4, *égal* (SG) for 4/11, *égaux* (PL) 11/11)

deleted, and this is blocked in PCC contexts. Unvalued [Case] is a purely syntactic feature that must be valued for legibility to PF and deleted for legibility to LF.

Instead of resorting to uninterpretability, the Minimalist Program invites search within the interfacing systems for both the features of syntax and the relationships they require, under the guidelines in (1). Person hierarchy interactions including the PCC have been explored in terms of these guidelines. The point of departure is the hypothesis that the [+person] features involved are interpretive, such as the set of discourse participants. The source of person hierarchy interactions has been sought in their interpretive requirements, among them the following (see Chapter 5.9 for how to relate them to PCC repairs and $\mathfrak{R}$):

- Bianchi (2006: 2047–9): Pronouns are variables that must establish a syntactic relationship with a clausal head corresponding to their person feature, in order to be valued to deictic elements of the speech act like the speaker (cf. Speas and Tenny 2003, Sigurðsson 2004, Schlenker 2005).
- Nichols (2001, esp. p. 535): The highest-ranking argument on the person hierarchy must be syntactically related to the functional head Tense, to anchor referential arguments to utterance time.
- Albizu (1997b, cf. 1997a): A person feature cannot be c-commanded (in the same minimal domain) by another less (or equally) presuppositional.
- Aissen (1997): The relative prominence of arguments on the person and grammatical function hierarchies should match.
- Boeckx (2000: 366f.): A dative and a 1st/2nd person both code Point-of-View. If an intervening dative prevents a 1st/2nd person nominative from raising to the Point-of-View projection, there is a Point-of-View clash.

However, it is not obvious that the point of departure is right: that [+person] corresponds to an interpretive notion. The misgivings can be illustrated with through the Agree/Case system. Syntactic dependencies often have plausible interpretive motivations, such as movement to scope a quantifier over a proposition. The Agree/Case system as well has been ascribed such motivation, including theta-role assignment (Chomsky 1981: 2.3, 1986b: 3.3.3.3.1, 3.4.3), and temporal interpretation (Pesetsky and Torrego forthcoming, Wiltschko 2003, Brandt 2003). Yet Agree/Case relations appear to be orthogonal to interpretation (Chapters 1 and 5). In (31), interpretation does not change according to whether the underlined DP participates in the nominative relationship with T/Fin or the accusative one with *v*/Asp. More tellingly in (31), among the DPs that obligatorily participate in the Agree/Case system and related A-movement are idiom chunks and expletives. They have no interpretive content presently detectable, including through pronominal anaphora, control, quantification, existential assertion.¹⁷

¹⁷For contentless expletives such as *there* or the *it* of *seem*, (i), see Abney (1987: 209 note 58), Chomsky (1986b: 92); cf. Kayne (1979, 2008: 202), Safir (1982: 2.4.2), Ruwet (1991: 3.6.2). The behaviour of idiom chunk DPs is complex, subtle, and varied (Ruwet 1991, Nunberg,

- (31) a. I believe [there to have been **tabs/agents-ACC** kept on you].
 b. There **are** believed [to have been **tabs/agents-ACC** kept on you].
 c. **Tabs/agents-NOM are** believed [to have been kept __ on you].

It is possible to posit suitably vacuous content to expletives and idiom chunks and then formulate interpretive requirements that include it (Chomsky 1981: 37, 1986b: 212 note 71). However, their behavior suggests rather that there is no interpretive motivation for their Agree/Case relations, outside the need to delete syntactic features illegible to LF (cf. Sections 5.4, 5.9).

The argument from idiom chunks is one of several that can be put forward to show a divorce between syntactic and interpretive notions for [+ person]. The clitic equivalent of idiom chunks is *inherent* clitics, like those in (32). They are fixed parts of locutions. Unlike argumental clitics, they cannot be replaced by another clitic or nonclitic, or doubled by a nondislocated focus or dislocated elements.

- (32) Examples of inherent (idiomatic) clitics in French:
 a. 3SGM.ACC *le*: *l' emporter* 'win', lit. 'take *it/him* away'
 b. 3SGF.ACC *la*: *la bailler belle* 'tell a tall tale', lit. 'give *her* beautiful'
 c. Reflexive *se*: *s'attaquer à* 'attack', lit. 'attack *oneself* to'
 d. LOC *y*: *y aller fort* 'overdo it', lit. 'go *there* strong'
 e. GEN *en*: *en vouloir à* 'be upset with', lit. 'want *of.it* to'
 f. SE *se* + GEN *en*: *s'en prendre à* 'take it out on', lit. 'take *oneself of.it* to'

Despite their idiomatic character, these clitics behave like others of their form for the PCC (Section 4.3). Inherent *le/la* 3SGM/F.ACC freely combine with dative clitics. By contrast, the inherent reflexive *se* falls under the PCC, like all reflexive *se* in French. In (33) and (34), the PCC prevents reflexive *se* from combining with a

Wasow and Sag 1994, Schenk 1995, Horn 2003). The pertinent class participates in Agree/Case, often in A-movement, but not even in relativization, pronominal anaphora, or control of PRO within the same idioms, as in (ii, iii). In English these include also *make short work of*, *take the rap*, *throw cold water on*; see e.g. Postal (1974: 34f., 2003: 52, 127–132), Lasnik and Fiengo (1974: 540–2), Fiengo (1974: 51–7), Chomsky (1981: 223f. n. 20, 309, 327, 345 n. 5), Bresnan (1982: 46–49), Davison (1984: 815f.), Sailer (2003: 6.2), Horn (2003: 261f.). This class of idioms belies attempts to link EPP/A-movement to 'referential autonomy' or other independently detectable notion of content on part of the idiom chunk. (The tag *hasn't it* in (i) illustrates that a pronoun may stand for the idiom chunk, but perhaps through repetition + ellipsis: cf. *There is a book on the table, isn't there?*).

- (i) It was likely/*seemed, without PRO being obvious, that Kate won.
 (ii) Much_i seems to have been made of the inscription, hasn't it_i, without *PRO_i/*it_i/much being made of the context.
 (iii) [The ice that was easy to break last week] will not be (easy to break) this week. (literal only)

dative clitic (*italics*). Instead, the dative appears as a strong pronoun (underlined), licensed by the PCC repair (see Bonet 1991: 193 note 16 for Catalan).

- (33) Elle vit dans un apart avec deux chats_i
 a. sans *se leur* *en* prendre.
 b. sans *s'* *en* prendre à eux_i.
 without SE them.DAT GEN take to them
 She lives in an apartment with two cats without taking it out on them.
 (French)
- (34) a. Jean_i *se lui* est attaqué à lui_i, pensant s'attaquer aux autres.
 b. Jean_i *s'* est attaqué à lui_i, pensant s'attaquer aux autres.
 Jean SE has attacked to him, thinking to attack others
 (French, Morin 1978: 357; see Section 4.4)

It seems then that inherent *se* bears the [+person] feature. Morphologically, this is unsurprising, since inherent *se* looks exactly like the true reflexive clitic *se*, which is [+person] for the PCC. It assumes the appropriate form according to the person of the subject in Table 6.2: 3SG *se* in (33), 1SG *me* in *Je m'en prends à* 'I take it out on', 2SG *te* in *Tu t'en prends à*, and so on. Interpretively however, it is hard to see what properties inherent *se* shares with 1st/2nd person to the exclusion of 3rd person. This is so even if inherent clitics do reflect contentful arguments (incorporated ones, Espinal 2007). Indeed, there are locutions with inherent *se* that is not [+person] and does not trigger the PCC, rarely in French, more commonly in Catalan and Spanish (Section 4.3; Bonet 1991: 193, Albizu 1997a). For the most part, the syntax of the PCC and its repair does see on inherent *se* a [+person] specification with no interpretive counterpart.

Crosslinguistic variation in the PCC indicates that syntactic and interpretive [+person] specifications may also be divorced when they are interpretable but unnecessary. In French (35), a 3rd person pronoun is used in a stylistically marked way to refer to the addressee, similar to 'impostors' like *Madame*. Such a 3rd person accusative clitic is not [+person] for the PCC, except when reflexive like all other reflexives. In (35) *la* freely combines with a dative clitic and does not license its replacement by a strong pronoun, unlike the reflexive *se*.

- (35) a. Alors, elle prend la tarte?
 So, will she_{addressee} (*elle*) take the cake?
 (cf. So, will Madam/the young lady take the cake?)
 b. Alors, je *la leur* présente?
 *Alors, je *la* présente à eux?
 So, shall I introduce her_{addressee} (*la*) to them (*leur* clitic / *à *eux* strong).
 c. *Alors, elle *se leur* présente?
 Alors, elle *se* présente à eux?
 So, will she_{addressee} introduce herself (*se*) to them (**leur* / *à *eux*)?
 (French)

exceptions, as the variation in (38) indicates, although on closer analysis they might turn out to reflect other parameters such as unmarked vs. animate. Whatever the correlation with morphology, it is clear that pronouns referring to 3rd person animates may but need not have the [+person] specification that triggers the PCC.

Similar variation occurs for the reflexive clitic *se* across Romance. In French, the 3rd person reflexive *se* counts as [+person] for the PCC and its repair. In Spanish, Catalan, and Italian it does not, as in (39). 1st/2nd person reflexives are more prone to participate in the PCC even in these languages, with variation (García 2002: 92, Rivero 2004: 498 note 13, Albizu 1997a: note 12, Bonet 1991: 192f., Wanner 1977: 109, Bianchi 2006: 2028 note 10, Cardinaletti 2008). In other matters than the PCC, the reflexive clitic systems seem relevantly identical syntactically and interpretively across all these languages.¹⁹

- (39) Ella *se le* entregó cuerpo y alma.
 she SE him.DAT gave body and soul
 (Spanish, Rivero 2004: 498 note 2)

It seems that [+person] is interpretatively facultative on 3rd persons referring to addressees, to animates/humans, or to subject-oriented reflexives: compatible with these interpretations, but not needed for them. Its actual presence is a matter of diachrony and grammaticalization, as with *on* and *a gente*. Inherent clitics are lexicalizations of true objects, some plain 3rd persons, some [+person] reflexives. 3rd person pronouns for the addressee are presumably related to ‘impostors’ like *Madame* in French, originally not [+person]. This is so in Spanish, where they originate as *pro*-drop agreement or clitics referring to the impostor *vuestra merced(es)* ‘your grace(s)’, which still survives in the dedicated 3rd person strong pronoun *usted(es)* ‘you (polite)’ (Lehmann 2002: 3.2). Yet in Spanish, the full grammaticalization of 3rd person for the addressee use has added [+person] to it on this use. *Leísmo* is the extension to direct objects of dative clitics, sometimes retaining their syntactic properties (Ormazabal and Romero 2009, 2010a). [+person] may be among them, if datives always are [+person] (Section 5.2). Finally, for reflexive *se*, the presence or absence of [+person] may be arbitrary from a diachronic as well as synchronic point of view. In all these cases, differences in syntactic [+person] specification do not appear to have an interpretive correlate.

6.5 Person in Interpretation

While syntactic phi-specifications may be autonomous of interpretive ones, the inverse autonomy of interpretive phi from syntax is uncertain. No clear cases have been seen where interpretation imposes [+person] absent in syntax. It

¹⁹There are differences, for instance in the use of *se* for or in combination with 1st/2nd person reflexives (Bonet 1991: 119f., 138f. on Catalan varieties). They do not appear to correlate with variation for the PCC which segregates systems superficially similar to French.

might be, for instance, that reflexives and animates must end up being [+ person] in interpretation, and it is supplied to them there when absent in syntax. That however depends on what [+ person] is, interpretively. This section brings together three independent phenomena that bear on this question. They have great potential for better understanding [+ person], but they remain to be studied. No conclusions are drawn from them, only patterns and hints displayed whose exploration may prove fruitful. They are fake indexicals, [+ person] omission due to the PCC, and [+ person] omission by interpretive coercion to inanimate speaker/addressee.

Fake indexicals are 1st/2nd person pronouns whose phi-features seem to be ignored by interpretation. (40) has two readings, one of which entails that nobody else lost their own locket, rather than the speaker's. To arrive at it on Rooth's (1992) semantics for *only*, *only* needs the property x_i lost x_i 's locket rather than x_i lost my_i locket. The presupposition that *my* refers to the speaker must be absent or obviated. It is a 'fake' 1st person. French clitics have the same fake readings in (41). The strong pronoun *que moi* 'only me' may antecede either 1SG *me* or 3SG *se* in the relative clause. The 1SG *me* has both the true and fake 1SG readings, I_i complain about me_i/x_i . The 3SG *se* only has the latter reading.

- (40) Only I lost my locket. (Therefore Ronja didn't lose hers.)

$\forall P[P \in [[x \text{ lost } x\text{'s locket}]] \wedge P \rightarrow P = [[I \text{ lost my locket}]]]$

- (41) Il n'y a que moi pour PRO *me/se* plaindre.

There is only me for me/SE.A complain

a. *me/*se*: I am the only person who complains about me.

b. *me/se*: I am the only person who complains about himself.

(French, Morin 1978: 342f.)

Interpretatively the simplest solution might be for fake indexicals to get their 1st/2nd persons features outside the syntax-interpretation computation, at PF, but it requires long-distance phi-features transmission at PF (Kratzer 2009, Heim 2008). The PCC demonstrates that fake indexicals are in fact [+ person] in syntax, not only at PF, because they license PCC repairs in French (42) (cf. Section 4.4).

- (42) Il n'y a que moi qui trouve personne

a. pour *me* leur présenter/vendre.

b. pour *me* présenter/vendre à eux.

to me.A them.D introduce/sell to them

I am the only one who finds no one to introduce/sell *me.A *them.D* /
to them. (Others_i do find someone to introduce/sell *me_i/them_i* to them.)

(French)

The [+ person] specification of fake indexicals in (42) only suggests PF phi-transmission is not the right solution. The literature develops ways to interpret bound 1st/2nd person pronouns appropriately, as well as proposals for them to be eliminated by a syntactic relationship (Schlenker 2005, Maier 2006, Heim 2008).

The fake 3rd person reading of 1st/2nd person pronouns is not available in examples like (11), repeated below (cf. Heim 2008). In their place, 3rd person pronouns assume the speaker/addressee among their values, although ordinarily only 1st/2nd person pronouns can do so. Sauerland (2008) proposes that 3rd person pronouns do not have any person restriction, and derives the distribution of their uses from the principle of Maximize Presuppositions in (43). The principle requires the use of 1st/2nd person pronouns whenever their value meets their lexical presupposition in (7) of referring to the speaker/addressee. Since in (11), the bound pronouns take on both speaker and non-speaker values, this presupposition cannot be met. Then Maximize Presuppositions allows 3rd person.

(11) Each_i of us_j evaluates herself_i/themselves_i/*ourselves_{i/j}.

(43) *Maximize Presuppositions* (consequence of): The features that appear on a pronoun are chosen so as to maximize the presupposition they express, as long as no presupposition failure is triggered.
(Schlenker 2005; cf. Heim 1991, 2008, Sauerland 2008)

Maximize Presuppositions might be expected to interact in an interesting way with the Person Case Constraint. It governs the choice between LFs with more or less specified pronouns according to their presupposition failure. We might expect the Person Case Constraint to matter for it. It prohibits [+person] pronouns in certain configurations like (30), barring all LFs with [+person] pronouns. Maximize Presuppositions should then permit 3rd person pronouns without [+person].²⁰

Empirically, such an effect appears to occur in (37). In Basque Country Spanish, animate 3SG/PLM.ACC clitics must be [+person] *le/les*, save in a PCC context where the otherwise non-animate *lo/los* may take over. Ormazabal and Romero (2009, 2010a) demonstrate that the two sets of pronouns have different conditions on clitic doubling, and so involve different syntactic structures. Applying the logic behind Maximize Presuppositions, syntax generates structures with and without [animate]/[+person] on the 3rd person pronoun in question, with their different syntactic behaviours. The structure without [animate]/[+person] is ordinarily ruled out by Maximize Presuppositions, because one with more fully specified pronouns is available. In PCC contexts, the former emerges.

However, it is far more systematically the case that PCC contexts do not permit a less fully specified pronoun to emerge. In (11) Maximize Presuppositions permits a 3rd person pronoun to refer to the speaker, because the presupposition of a 1st person pronoun is incompatible with the range of values it assumes. Yet 3rd person is never used for 1st/2nd person to repair the PCC.

²⁰Strictly, we should like to examine contexts with a PCC repair, such as those in Section 4.5.

Moreover even in (37), the phenomenon is not permitted to the 3rd person pronoun *usted* that is dedicated to polite addressee reference (Section 6.4). The clitic that doubles *usted* must remain animate in this *leísmo* variety, even if it incurs the PCC.

There is a technical way out. In the PCC context Maximize Presuppositions should permit the omission of [+person], but not of other specifications like [masculine]. The resulting phi-sets might have no spell-out. For Basque Country *leísmo* (37)b, the inanimate masculine pronoun has the spell-out *lo*. In a hypothetical variant dialect, there might be no realization for a 3rd person masculine inanimate pronoun, only for a 3rd person masculine animate one and a 3rd person inanimate one. In the same way, [1st person] without [+person] might not have a spell-out.

The appeal of this suggestion depends on what [+person] is, and thus what 1st/2nd person without [+person] might be. There is intriguing evidence about these matters. It suggests that there are 1st/2nd person pronouns that are not [+person], and that there are interpretive consequences by which the nature of [+person] might be known. This curious effect is a fitting end to the section, for though it does not bring us far, it reveals new horizons.

It is useful to start with the Person Case Constraint in mediopassives, although they are not a core context where it has been discussed. In the Romance mediopassive (44), a transitive verb occurs with the clitic *se* (in italics), a silent external argument *pro*_{arb} interpreted as an arbitrary agent 'one', and an agreeing, nominative object (underlined). The meaning resembles passives. The surface is identical to anticausatives and reflexives (Zribi-Hertz 1982, 2009).²¹

- (44) a. **La tour/ça/Fañch/il** *se* voit facilement / de loin.
 the tower/it/Fañch/he SE see.3SG easily from afar
 med.: **The tower/that/Fañch/(?)he** can be seen easily / from afar.
 refl.: #The tower/#that/Fañch/he sees *him/it-self* easily / from afar.
 b. **Je me** vois facilement / de loin.
 I me see.1SG easily from afar
 med.: ***I** can be seen easily / from afar.
 reflexive: **I** see *myself* easily / from afar.

(French)

Among the constraints on the mediopassive is the restriction of the nominative to 3rd person. It is seen in (44)b and again in (45), loaded to favourize the mediopassive reading in ways discussed below. D'Alessandro (2004) analyses a

²¹For the present discussion, it seems immaterial whether there are to be distinguished middle and impersonal passive constructions. In both prototypical middle and impersonal passive uses (*They always sell easily*, *One sold them yesterday*), the French mediopassive appears to have an impersonal arbitrary human agent (Zribi-Hertz 2009), and in both the person restriction holds and is obviated as described below. It only disappears once one moves to the purely intransitive (anticausative) or transitive reflexive readings of *se*-constructions.

similar restriction in Italian mediopassives as the PCC, and Mendikoetxea (2008) in Spanish; the proposal has been resumed in Section 5.6.²²

- (45) a. On est tes amis. **Un ami** ne s'invite pas [en PRO lui hurlant dessus]!
We are your friends. One (*se*) doesn't invite **a friend** [by PRO shouting at him].
b. *On est tes amis. **On** ne s'invite pas [en PRO nous hurlant dessus]!
We are your friends. One (*se*) doesn't invite **us** [by PRO shouting at us]!
c. *Je suis ton ami. **Je** ne m'invite pas [en PRO me hurlant dessus]!
I am your friend. One (*se*) doesn't invite **me** [by PRO shouting at me]!
- (46) a. (?)Tu verras bien, les Postec, **ils** s'invitent facilement.
(?)You'll see, the Postec family, one (*se*) invites **them** easily.
b. *Tu verras bien, nous, **on** s'invite facilement.
*You'll see, we, one (*se*) invites **us** easily.

(French)

However, Sandfeld (1970), Zribi-Hertz (1982) and Postal (1989: Chapter 5) show that the 1st/2nd restriction can be obviated. One way is through an inanimate speaker/addressee: in counterfactual and dream contexts, (47)a, in imaginative contexts, (47)b, or simply as the object of *transport* in (47)c. Another is the use of 1st/2nd person pronouns for 3rd persons through metonymy (48). Inversely, 3rd person 'impostors' for the speaker/addressee are also immune to the restriction, (49). Much speaker variation exists, save perhaps for metonymy.²³

- (47) a. Si tu étais une chemise, **tu** te vendrais mal.
If you were a shirt, **you** se would.sell badly.
(French, Postal 1989: 105, citing Y.-C. Morin p.c.; %)
- b. **Je me** range n'importe où, **je me** transporte facilement, je vous suis indispensable.
I can be stowed anywhere, **I** transport easily, I am indispensable to you. (Suitcase speaking in an advertisement.)
(French, Zribi-Hertz 1982: 363; %)
- c. Vous allez voir, **je me** transporte facilement, je suis la perle de paralytiques.
You will see, **I** transport easily, I am the pearl of paralytics. (A wounded person to her rescuers.)
(French, Zribi-Hertz 1982: 365; %)

²²However, D'Alessandro and Mendikoetxea are discussing impersonal passives where *se/si* remains invariable regardless of the person of the subject, unlike reflexive *se/si* that varies according to the person of the subject, e.g. 3rd *se/si* but 1st *me/mi* (R. D'Alessandro p.c.). The obviation of the person restriction in French below must use the agreeing reflexive form. For similar mediopassive restrictions and exceptions, see Fried (2004: 634), Medová (2009: 7.5, 9.3) on Czech, Hualde and Ortiz de Urbina (2003: 4.7.4) on Basque, and Section 5.6 on Finnish.

²³Postal (1989: 104) reports (47)c to be "extremely strained" beside the counterfactual and dream contexts, but some find the former easy, and some find the latter quite difficult.

- (48) **Nous** ne *nous* vendrons jamais.
 We will never sell. (i.e. Our writings will never sell.)
 (French, Sandfelt 1928: 133)
- (49) a. Nous, **on** ne *se* trahis pas.
 med.: *One (*se*) does not betray **us**.
 refl.: **We** do not betray *ourselves*.
 b. **Votre serviteur** ne *se* trahit pas.
 med.: One does not betray **your servant** (i.e. yours truly).
 refl.: **Your servant** (i.e. yours truly) does not betray *himself*.
 c. **Bibi** ne *se* trahit pas.
 med.: One does not betray **Bibi** (i.e. ‘number one’).
 refl.: **Bibi** (‘number one’) does not betray *himself*.
 (French, mediopassives from Postal 1989: 140f. note 1)

These exceptions to the 1st/2nd person restriction do not reduce to the general factors that govern the goodness of mediopassives. Zribi-Hertz (2009) argues that mediopassives are often blocked because of a preference for reflexive and anticausative readings on the one hand, and on the other for interpreting a DP in [Spec, TP] as the agent of a transitive. These preferences may be overridden by forcing the DP in [Spec, TP] to be interpreted as the object, for instances by selectional restrictions, and by indicating the presence of a distinct silent agent, for instance by agent-oriented adjuncts and instruments. These play a role in all the foregoing good sentences. However, they are of no help with in (45) or (46), and so do not explain the contrast between (45)–(46) and (47)–(49).

The explanation is also not to be found in the cessation of the “centre of consciousness” by the speaker/addressee to the impersonal agent in (47)c (Zribi-Hertz 1982: 364f.). The elements that depend on the “centre of consciousness” continue to access the speaker/addressee in (50), including evaluative terms, perspective or orientation sensitive terms, and evidential adverbs (Speas and Tenny 2003). No manipulation of perspectives helps with (46).²⁴

²⁴Ruwet (1990: 52) proposes that French impostors may cede control of the centre of consciousness, explaining why in (i) the impostor *votre serviteur* but not the 1st pronoun can be picked up by a genitive clitics. However, *apparently, idiot, left/right* are controllable by the impostor in mediopassives (49)c and in (i) (cf. Collins and Postal (2008) for impostors anteceding the *self*-type pronouns that Zribi-Hertz 1989 shows to depend on the centre of consciousness in English). I am grateful to A. Zribi-Hertz for making available to me the draft of Ruwet’s article which contains the footnotes removed in the published version, and for discussion.

- (i) {Le précepteur de votre serviteur;_i} / {*Mon_i précepteur} croit que Sophie *en*_i est amoureuse.
 {The tutor of yours truly_i} / {*My_i tutor} believes that Sophie is enamoured *of.him*_i.
 (Ruwet 1990: 52 note 31; “moderately acceptable”, unclear for *Bibi* ‘number one’)

- (50) a. %N'importe quel idiot peut voir que **je**_i *me* transporte facilement (dans mon_i/*son_i fauteuil).
 %Any idiot can see that **I**_i am easily transported (in my_i/*his_i wheelchair).
 b. %Apparemment **je** *me* transporte plus facilement vers la gauche que vers la droite.
 %Apparently, **I** am transported more easily towards the left than to the right. (i.e. the speaker's left/right)
 (French, judgments on mediopassive reading)

Postal (1989: Chapter 5) proposes that the 1st/2nd person restriction is obviated in (47)a by the use of 3rd person expressions, relating it to the impostors in (49). In contrast, the 1PL *on* discussed in Section 6.3 is not immune to the restriction in (49), despite its 3SG agreement and *se*-reflexive. There appears to be a natural difference. Impostors like *votre serviteur* 'your servant' are syntactically and interpretively 3rd person DPs that refer to the speaker, much as *my person*. They can and usually do antecede 3rd rather than 1st person anaphora, as in (51) (Collins and Postal 2008). 1PL *on* on the other hand antecede 1PL pronouns save for *se* and control. Apparently, the 1st/2nd person restriction in mediopassives sees *on* but not impostors as 1st/2nd person. If the restriction is the PCC, *on* but not impostors are [+person] for it (cf. (36)).

- (51) a. Nous, on_i est/*somm_i fiers de nous_i/*eux_i-mêmes.
 We_i, on_i is.3SG proud of our_i/*them_i-selves
 b. Les auteurs_s sont/*somm_s fiers d'eux_i/*nous_s-mêmes.
 The authors_s are.3PL/*1PL proud of them_i/*our_i-selves.
 (French, (b) Collins and Postal 2008)

The trick is to understand how the various 1st/2nd persons in (47)/(48) pattern with 3rd person impostors in (49). A hint is given by the contrast of verbs like *transport*, which allow (to some extent) 1st/2nd person in mediopassives, and others like *invite*, which do not. The former operate on the physical aspect or 'qualium' of their object, in the sense of Pustejovsky (1995); the latter, on humans with mental states. Thus the former perhaps avoid the 1st/2nd person restriction by coercion or metonymy of 1st/2nd person from the speaker/addressee as such to their physical aspect. For *betray* but not *invite*, coercion is made possible by the 3rd person impostor in (49).

If this is on the right track, the next question is where the coercion occurs. Postal (1989) proposes that 1st/2nd person used for 3rd person is 3rd person in syntax, so that *If I were an integer, you could factor me into primes* is (also) *If I were an integer, you could factor this integer into primes*. That would work if the 1st/2nd person object of *transport* but not *invite* could realize a syntactic structure like *my/your person/body*, despite its form as *I/you* (cf. the structure

of impostors in Collins and Postal 2008). However, for all syntactic purposes save the person restriction, the 1st/2nd persons immune to it are ordinary 1st/2nd person pronouns.

Instead, qualia and their coercions might reside outside syntax, along the lines of Pustejovsky (1991, 1995) and Jackendoff (1992, 2002) for such cases as (52)a, (52)b and (48). The Person Case Constraint would be affected if 1st/2nd person pronouns coerced to, say, their physical qualium, were capable of inserting or projecting in syntax without [+person]. The features that ensure reference to speaker and addressee must remain, and so are independent of [+person]. Thanks to them, the coerced pronouns otherwise behave and surface ordinarily. Perhaps pertinent is Chomsky's (2000b) observation that the same expression can be simultaneously interpreted under different qualia, as in (52)c, (52)d.

- (52) a. Elanor enjoyed the book. (the event of reading the book; its content)
 b. Elanor weighed the book. (the physical object)
 c. Elanor cannot enjoy a book with a red cover.
 d. They took every book to weigh it and say if they enjoyed it.

On either approach to coercion, tools exist to model the considerable speaker variation for (47), including the lexical availability of non-[+person] 1st/2nd person pronouns or of their spell-out (cf. variation in the cross-linguistic availability and properties of impostors, Collins and Postal 2008, and metonymy, Nunberg 1995).

The suspension of [+person] in (47)–(49) is surely revealing about its nature. It seems compatible with the views of [+person] of Ormazabal and Romero (2007) where it is animacy, or Laenzlinger (1993), Burston (1983), and Blanche-Benveniste (1978), which focus on individuation. It goes rather against Boeckx's (2000) point-of-view, given (50), or Béjar and Rezac's (2003, 2009) discourse-participant, given that 1st/2nd person morphology and syntax and speaker/addressee reference all remain, and that 3rd person animates can be [+person] in (37).

The ways to avoid person restrictions in the mediopassive can also be found in more canonical PCC contexts in French. The effect of impostors like *Madame* has already been discussed for (35), (36), with its parametric variation. Postal (1989: Chapter 5) extends the effects of inanimate interpretation in counterfactual and dream contexts to the PCC in French causatives in (53) (on which see Section 5.5). Other speakers find the same contrast between *transport* and *invite* as with mediopassives, (54). Variation on this matter is considerable.²⁵

²⁵All participants in the questionnaire of Chapter 4 found (54)b sharply ungrammatical, while the status of (54)a ranges from the same scores (most speakers) to perfect.

- (53) a. *Hervé *me* fera repasser à Louise.
Herve will have Louise iron *me*.
b. Si j'étais une chemise, Hervé *me* ferait repasser à Louise.
If I were a shirt, Herve would have Louise iron *me*.
(French, Postal 1989: 104; %)
- (54) a. ?/*Mon siège est léger, vous pouvez *me* faire transporter à n'importe qui.
My chair is light, you can make/let anyone carry *me*.
b. *Je sais *me* tenir, vous pouvez *me* faire inviter à n'importe qui.
I know how to behave myself, you can make/let anyone invite *me*.
(French)

It is considerably harder to eliminate the PCC when the dative is also a clitic. Most speakers find (55) irredeemably bad. Others find a striking amelioration with an inanimate 1st person, although difficulty remains.²⁶

- (55) a. */?(?)Ces malheureux_i ont rêvé que j'étais un médicament, et qu'on *me leur_i* distribuait gratuitement.
These unfortunate people dreamt that I was a drug, and that one distributed *me* to *them* freely.
b. [Context: There is an exposition of statues of famous singers in Québec. A singer arrives and says, about his heavy statue: How come I'm not going to Québec?]
On ne peut pas *vous leur* envoyer, parce que vous êtes trop lourds.
We cannot send *you* to *them*, because you are too heavy.
(French, Rezac and Jouitteau in prep.)

The degradation in comparison with (54)a is explicable through the properties of clitic clusters. The PCC eliminates most possible 1/2.ACC DAT clitic clusters in French and all the frequent (monoclausal) ones. Such absences are sometimes grammaticalized as purely morphological gaps in clitic and agreement morpheme combinations (Rezac 2010a). In French, such gaps might explain the variable absence of 1/2.ACC DAT in ECM, and if they cover syncretic clusters, 1/2.DAT DAT as well (Chapter 4: Appendix 1 and Section 6 respectively). Analogous erosions and eliminations of a morphological paradigm through the PCC occur in the Basque varieties discussed in Rezac (2008c, forthcoming).²⁷

²⁶Rezac and Jouitteau (in prep.) find that 7/15 speakers find amelioration from 0 to 5–8 on a 10-point scale in (55)a by adding the dream context, others (virtually) none. Further inquiries suggest that speakers who find improvement in (53)a also find good (53)b and have easier access to 1/2.ACC 3.DAT clitic clusters in the ECM constructions discussed Chapter 4, Appendix 1.

²⁷An example not mentioned in the references is overlapping reference. *We elected me* is relatively acceptable in English under the group reading of *we*, but not to most French speakers when *we* and *me* are replaced by subject and object clitics (Section 4.4), and not at

There are only hints of paths to explore to be gleaned from this section, no robust conclusions about the syntax-interpretation relationship among phi-features or the nature of [+person]. Most promising appear to be interpretive manipulations where 1st/2nd person pronouns lack [+person] under an inanimate interpretation or *qualium*, but only future work can bring their evidence to bear on the questions here.

6.6 Conclusion

A tentative conclusion has been reached about the syntax-interpretation relationship for phi-features: the phi-specifications of arguments in syntax can be autonomous from those of their interpretation. Among the sources of such purely syntactic phi-features are morphological patterns at PF, for instance the morphology of verbal agreement. Sometimes, these are the synchronic residues of an earlier interpretable features. 3SG was interpretable on Latin *homo* ‘man’, Portuguese *a gente* ‘the people’. It is not so on their descendants grammaticalized as 1PL pronouns, French *on*, Brazilian Portuguese *a gente*, but remains part of their syntactic specification for Agree, reflected in verb agreement, reflexive clitics, and control. Further evolution of the system tends to eliminate the uninterpretable phi-set, as in varieties where *a gente* is fully 1PL. The [+person] of 3rd person polite addressee pronouns gives witness to the same evolution. This diachronic, PF source of the uninterpretable syntactic phi-features of arguments is also one of the sources of the classical uninterpretable features of agreement targets, for instance incorporated pronouns, become agreement morphology, become a phi-probe in the lexical entry of T/V (cf. Bresnan and Mchombo 1987, Fuß 2005).²⁸

These syntactic phi-features are legible to PF, since they have values that receive unproblematic realization. They are deleted or replaced in interpretation, in a manner perhaps analogous to the 3SG of expletives like French 3SG *il* ‘it, there’. Thus the syntactic (Agree) relationships in which such phi-features engage are not motivated by their requirements internal to PF or LF. In turn, the phi-features that serve as probes in these relations are not to be viewed as necessary for PF-/LF-internal requirements. This conclusion has been reached of the Agree/Case system generally, which need have no overt effects at PF and interpretable effects at LF, and no motivation in them when it affects contentless items like idiom chunks. It is strengthened by the participation in this system of DPs like *on*, whose phi-features are themselves uninterpretable. The Agree/Case system operates over purely syntactic phi-features. If there is more

all to Basque speakers when *we* and *me* are replaced by agreement morphemes (cf. Rhodes 1993).

²⁸Other PF channels of phi-reanalysis exist, e.g. French *laideron* ‘ugly woman’, originally feminine but apparently turned masculine by the pressure nouns ending in *-(er)on*.

to be said, it is about the interface of syntax and PF/LF. One might speculate, for instance, that Agree/Case relations permit the 3SG phi-features of IPL *on* to be deleted, or *on* to be linked to IPL phi-features in the clause, as suggested at the end of Section 6.3.

No light has been shed on the potential autonomy of interpretive from syntactic phi-features. The IPL of *on* might be absent from syntax, but it might be needed there, and its invisibility to certain mechanisms can be straightforwardly modelled by making its 3SG structurally more prominent. Similar devices can ensure that the masculine of French *laideron* ‘ugly woman’ is visible only for concord.

There is no overstating the tentativeness of these conclusions. The inertness of the 3SG of IPL *on* or the masculine of *laideron* for interpretive dependencies is striking. Yet no more so than Chomsky’s (1975) argument from (56)a that syntactic plural marking can be autonomous of interpretive entailments. Such ‘dependent’ plurals nevertheless now admit of a different treatment, unspecified for number, and the inferences in (56) depend on world knowledge, not plural semantics (Zweig 2008, Seuren 2005). It has also been seen in the last section that there may be interpretive coercions that affect syntactic phi-specifications, in perhaps only apparent contrast to autonomy. Whatever future inquiry brings, phi-mismatches are likely to prove fruitful in exploring this central ground of the relationship of syntax and interpretation (cf. Chomsky 1975, 1977, 2000b, Higginbotham 1985, 1991, McGilvray 1998, Fox 2000, Jackendoff 2002, Pietroski 2005, Hinzen 2006).

- (56) a. Unicycles have wheels. (→only one wheel per unicycle)
 b. Hotel rooms have bathrooms. (→at least one bathroom per room)
 c. Students have supervisors. (→need not be one supervisor per student)
 ((a) Chomsky 1975, (b, c) Seuren 2005)

The autonomy of syntactic phi-features from interpretation corresponds to the more robust conclusions drawn in Chapter 3 for syntax and realization. Syntax and realizational morphology both access and manipulate phi-features, but as separate modules distinct in information and computation, and limited in interaction. Theories of modularity should derive this as a matter of principle. The classical Y/T model fits well, as do proposals that only partially weaken it and those that strengthen it. Modularity does not bar all sharing of information or mechanism and rich interactions between modules, nor limit the influence that realization might have on syntax in the choice of primitives and the content of lexical items during acquisition (Aronoff et al. 2005). On the interpretive side, all is murkier, but the same principles hold.

A partial sharing of information types between modules is instantiated by phi-features themselves, as a common alphabet across syntax, interpretation, and realization. A modular architecture requires a way to share information, and so it must relate alphabets across modules. However, it is surprising to find a common alphabet, and atypical of other primitives that map across the modules quite indirectly. Through phi-features, syntax, interpretation and realization operate

and interact in commensurable ways. Here perhaps is a key to the central role of phi-featural relationships in syntax, from Agree/Case to A'-movement and concord. It is the natural alphabet for syntactic dependencies that affect both PF and LF, and that are in turn acquired from PF and LF evidence.

References

- Abney, Steven Paul. 1987. The English noun phrase in its sentential aspect. Doctoral dissertation, Cambridge, MA: MIT Press.
- Aissen, Judith. 1997. On the syntax of obviation. *Language* 73: 705–750.
- Albizu, Pablo. 1997a. Generalized Person-Case Constraint: A case for a syntax-driven inflectional morphology. In *Theoretical issues on the morphology-syntax interface*, ed. Myriam Uribe-Etxebarria and Amaya Mendikoetxea, 1–33. Donostia: UPV/EHU.
- Albizu, Pablo. 1997b. The syntax of person agreement. Los Angeles, CA: Ms., University of Southern California.
- Aronoff, Mark, Irit Meir, and Wendy Sandler. 2005. The paradox of Sign Language morphology. *Language* 81: 301–44.
- Baker, Mark. 2008. *The syntax of agreement and concord*. Cambridge: Cambridge University Press.
- Béjar, Susana, and Milan Rezac. 2003. Person licensing and the derivation of PCC effects. In *Romance linguistics: Theory and acquisition*, ed. Anna-Teresa Pérez-Leroux and Yves Roberge, 49–62. Amsterdam: Benjamins.
- Béjar, Susana, and Milan Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40: 35–73.
- Belletti, Adriana. 2005. (Past) participle agreement. In *The Blackwell companion to syntax*, ed. Martin Everaert and Henk van Riemsdijk, vol. 3, case 48. Oxford: Blackwell.
- Bever, Thomas G. 2009. Remarks on the individual basis for linguistic structures. In *Of minds and language*, ed. Massimo Piattelli-Palmarini, Juan Uriagereka, and Pello Salaburu, 278–298. Oxford: Oxford University Press.
- Blanche-Benveniste, Claire. 1978. A propos des traits sémantiques utilisés en syntaxe: Critique du trait '+/–humain'. *Cahier de linguistique* 8: 1–15.
- Boeckx, Cedric. 2000. Quirky Agreement. *Studia Linguistica* 54: 354–380.
- Bonami, Olivier, Danièle Godard and Jean-Marie Marandin. 1999. Constituency and word order in French subject inversion. In *Constraints and resources in natural language syntax and semantics*, ed. Gosse Bouma, Erhard Hinrichs, Geert-Jan M. Kruijff and Richard Oehrle, 21–40. Stanford, CA: CSLI.
- Bonami, Olivier, and Danièle Godard. 2001. Inversion du sujet, constituance et ordre des mots. In *Cahier Jean-Claude Milner*, ed. Jean-Marie Marandin, 117–174. Paris: Verdier.
- Bonet, Eulàlia. 1991. Morphology after syntax: Pronominal clitics in Romance. Doctoral dissertation, Cambridge, MA: MIT Press.
- Bonet, Eulàlia. 1995a. Feature structure of Romance clitics. *Natural Language and Linguistic Theory* 13: 607–647.
- Boroditsky, Lera, Lauren A. Schmidt, and Webb Phillips. 2003. Sex, syntax, and semantics. In *Language in mind*, ed. Gentner, Dedre, and Susan Goldin Meadow, 61–80. Cambridge, MA: MIT Press.
- Bošković, Željko. 2009. Unifying first and last conjunct agreement. *Natural Language and Linguistic Theory* 27: 455–496.
- Brandt, Patrick. 2003. Constructing cipient predication. Doctoral dissertation, Utrecht: LOT.
- Bresnan, Joan. 1982. The passive in lexical theory. In *The mental representation of grammatical relations*, ed. Joan Bresnan, 3–86. Cambridge, MA: MIT Press.
- Bresnan, Joan and Sam A. Mchombo. 1987. Topic, pronoun, and agreement in Chichewa. *Language* 63: 741–782.

- Burston, Jack L. 1983. Clitic object sequences and cooccurrence restrictions in French. *Linguistic Analysis* 11: 247–75.
- Cabredo Hofherr, Patricia. 2003. Arbitrary readings of third person plural pronominals. In *Proceedings of the conference "sub7 - Sinn und Bedeutung*, ed. Matthias Weisgerber, 81–94. Konstanz: Konstanz University.
- Cabredo Hofherr, Patricia. 2008. Les pronoms impersonnels humains - syntaxe et interprétation. *Modèles Linguistiques* XXIX–1, 57: 35–56.
- Cardinaletti, Anna. 2008. On different types of clitic clusters. In *The Bantu-Romance connection*, ed. Cécile De Cat and Katherine Demuth, 41–82. Amsterdam: Benjamins.
- Chierchia, Gennaro. 1998. Reference to kinds across languages. In *Natural Language and Semantics* 6: 339–405.
- Chierchia, Gennaro. forthcoming. Mass nouns, vagueness, and semantic variation. *Synthese*.
- Chomsky, Noam. 1975. Questions of form and interpretation. In *Scope of American linguistics*, 159–196. Lisse: The Peter De Ridder Press.
- Chomsky, Noam. 1977. *Essays on form and interpretation*. New York: North Holland.
- Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- Chomsky, Noam. 1986b. *Knowledge of language*. New York: Praeger.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000a. Minimalist inquiries: The framework. In *Step by step*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89–156. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000b. *New horizons in the study of language and mind*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory*, ed. Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133–166. Cambridge, MA: MIT Press.
- Cinque, Guglielmo. 1988. On *si* constructions and the theory of *Arb*. *Linguistic Inquiry* 19: 521–581.
- Collins, Christopher, and Paul Postal. 2008. *Imposters*. Ms., New York University.
- Corbett, Greville. 2000. *Number*. Cambridge: Cambridge University Press.
- Creissels, Denis. 2008a. Impersonal and related constructions: a typological approach. New York: Ms., Université de Lyon.
- Creissels, Denis. 2008b. Impersonal pronouns and coreference: The case of French *on*. Lyon: Ms., Université de Lyon.
- Cysouw, Michael. 2005. Honorific uses of clusivity. In *Clusivity*, ed. Elena Filimonova. Amsterdam: Benjamins.
- D'Alessandro, Roberta. 2004. Impersonal *si* constructions. Doctoral dissertation, Stuttgart: University of Stuttgart.
- D'Alessandro, Roberta, and Artemis Alexiadou. 2006. The syntax of the indefinite pronoun *nome*. *Probus* 18: 189–218.
- Davison, Alice. 1984. Syntactic markedness and the definition of sentence topic. *Language* 60: 797–846.
- Egerland, Verner. 2003. Impersonal pronouns in Scandinavian and Romance. *Working Papers in Scandinavian Syntax* 71: 75–102.
- Espinal, M. Teresa. 2007. Clitic incorporation and abstract semantic objects in idiomatic constructions. Spain: Ms., Universitat Autònoma de Barcelona.
- Fauconnier, Gilles. 1974. *La coréférence: Syntaxe ou sémantique?* Paris: Seuil.
- Fiengo, Robert. 1974. Semantic conditions on Surface Structure. Doctoral dissertation, Cambridge, MA: MIT.
- Fiengo, Robert, and Robert May. 1994. *Indices and identity*. Cambridge, MA: MIT Press.
- Fox, Danny. 2000. *Economy and semantic interpretation*. Cambridge, MA: MIT Press.

- Frampton, John, and Sam Gutmann. 2000. Agreement is feature sharing. Ms. Northeastern University. Boston. On-line: <http://www.math.neu.edu/ling/pdf/files/agrisfs.pdf>. Accessed September 9, 2010.
- Franck, Julie, Gabriela Soare, Ulrich H. Frauenfelder, and Luigi Rizzi. 2010. Object interference in subject-verb agreement. *Journal of Memory and Language* 62: 166–182.
- Fried, Myriam. 2004. Czech reflexivization and the invariance principle revisited. *The Slavic and East European Journal* 48: 627–653.
- Fuß, Eric. 2005. *The rise of agreement*. Amsterdam: Benjamins.
- García, Erica C. 2002. Deconstructed morphology vs. con-structive syntax. *Neuphilologische Mitteilungen* 103: 73–101.
- Gentner, Dedre, and Susan Goldin Meadow. 2003. *Language in mind*. Cambridge, MA: MIT Press.
- Grevisse, Maurice, and André Goosse. 2008. *Le bon usage*. 14th edition. Bruxelles: De Boeck & Larcier.
- Harbour, Daniel. 2008. *Morphosemantic number*. Dordrecht: Springer.
- Harris, James, and Moris Halle. 2005. Unexpected plural inflection in Spanish: Reduplication and metathesis. *Linguistic Inquiry* 36: 195–222.
- Heim, Irene. 1991. Artikel und Definitheit. In *Semantik: Ein internationales Handbuch der zeitgenössischen Forschung*, ed. Arnim von Stechow and Dieter Wunderlich, 487–535. Berlin: de Gruyter.
- Heim, Irene. 2008. Features on bound pronouns. In *Phi theory*, ed. Daniel , David Adger, and Susana Béjar, 35–56. Oxford: Oxford University Press.
- Heim, Irine, and Angelika Kratzer. 1998. *Semantics in generative grammar*. Oxford: Blackwell.
- Higginbotham, James. 1985. On semantics. *Linguistic Inquiry* 16: 547–593.
- Higginbotham, James. 1991. The autonomy of syntax and semantics. In *Modularity in knowledge representation and natural-language*, ed. Jay L. Garfield, 119–131. Cambridge, MA: MIT Press.
- Hinzen, Wolfram. 2006. *Mind design and minimal syntax*. Oxford: Oxford University Press.
- Holmberg, Anders. forthcoming. The null generic subject pronoun in Finnish. In *Passives and impersonals in European languages*, ed. Elsi Kaiser, Satu Manninen, Katri Hietamä, and Virve Vihman. Oxford: Oxford University Press.
- Horn, George M. 2003. Idioms, metaphors, and syntactic mobility. *Journal of Linguistics* 39: 245–273.
- Hualde, José Ignacio, and Jon Ortiz de Urbina. 2003. *A grammar of Basque*. Berlin: Mouton de Gruyter.
- Jackendoff, Ray. 1992. Mme. Tussaud meets the Binding Theory. *Natural Language and Linguistic Theory* 10: 1–31.
- Jackendoff, Ray. 2002. *Foundations of language*. Cambridge, MA: MIT Press.
- Kayne, Richard. 1975. *French syntax*. Cambridge, MA: MIT Press.
- Kayne, Richard. 1979. Rightward NP movement in French and English. *Linguistic Inquiry* 10: 710–719.
- Kayne, Richard. 2000. *Parameters and universals*. Oxford: Oxford University Press.
- Kayne, Richard S. 2007. Some silent first person plurals. MS., New York University.
- Kayne, Richard S. 2008. Expletives, datives, and the tension between morphology and syntax. In *The limits of syntactic variation*, ed. Teresa Biberauer. Amsterdam: Benjamins.
- Kayne, Richard, and Jean-Yves Pollock. 2008. Toward an analysis of French hyper-complex inversion. In *Functional heads*, ed. Laura Brugè, Anna Cardinaletti, Giuliana Giusti, Nicola Munaro and Cecilia Poletto. Oxford: Oxford University Press.
- Kratzer, Angelika. 2009. Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40: 187–237.
- Laenzlinger, Christopher. 1993. A syntactic view of Romance pronominal sequences. *Probus* 5: 241–270.

- Lambrecht, Knud. 1981. *Topic, antitopic, and verb agreement in non-standard French*. Amsterdam: Benjamins.
- Landau, Idan. 2000. *Elements of control*. Dordrecht: Kluwer.
- Landau, Idan. 2008. Two routes of control: Evidence from case transmission in Russian. *Natural Language and Linguistic Theory* 26: 877–924.
- Larrivée, Pierre. 1994. Quelques hypothèses sur les structures syntaxique et sémantique de Ce fripon de valet. *Revue québécoise de linguistique* 23: 101–113.
- Lasnik, Howard, and Robert Fiengo. 1974. Complement Object Deletion. *Linguistic Inquiry* 5: 535–572.
- Lehmann, Christian. 2002. *Thoughts on grammaticalization*. Erfurt: Seminar für Sprachwissenschaft, University of Erfurt.
- Lewis, David. 1972. General semantics. In *Semantics of natural language*, ed. Gilbert Harman and Donald Davidson, 169–218. Dordrecht: Reidel.
- Maier, Emar. 2006. Belief in context. Doctoral dissertation, Nijmegen: University of Nijmegen.
- McGilvray, James. 1998. Meanings are syntactically individuated and found in the head. *Mind and Language* 13: 225–80.
- Medová, Lucie. 2009. Reflexive clitics in the Slavic and Romance languages. Doctoral dissertation, Princeton, NJ: Princeton University.
- Mendikoetxea, Amaya. 2008. Clitic impersonal constructions in Romance. *Transactions of the Philological Society* 106: 290–336.
- Moltmann, Friederike. 2006. Generic *one*, arbitrary PRO, and the first person. *Natural Language Semantics* 14: 257–281.
- Morin, Yves-Charles. 1978. Interprétation des pronoms et des réfléchis en français. In *Cahier de linguistique* 8: 337–76.
- Morin, Yves-Charles. 1982. De quelques [l] non étymologiques dans le français du Québec: notes sur les clitiques et la liaison. *Revue québécoise de linguistique* 11: 9–47.
- Muxí, Isabel. 1996. Optional participial agreement with direct object clitics in Catalan. *Catalan Working Papers in Linguistics* 5: 127–145.
- Nichols, Lynn. 2001. The syntactic basis of referential hierarchy phenomena. *Lingua* 111: 515–537.
- Noyer, Rolf R. 1992. Features, positions, and affixes in autonomous morphological structure. Doctoral dissertation, Cambridge, MA: MIT Press.
- Nunberg, Geoffrey. 1995. Transfers of meaning. *Journal of Semantics* 12: 109–113.
- Nunberg, Geoffrey. 2004a. Descriptive indexicals and indexical descriptions. In *Descriptions and beyond*, ed. Marga Reimer and Anne Bezuidenhout, 261–279. Oxford: Clarendon Press.
- Nunberg, Geoffrey. 2004b. The pragmatics of deferred interpretation. In *The handbook of pragmatics*, ed. Laurence R. Horn and Gregory Ward, 343–364. Oxford: Blackwell.
- Nunberg, Geoffrey, Ivan A. Sag, Thomas Wasow. 1994. Idioms. *Language* 70: 491–538.
- Ormazabal, Javier, and Juan Romero. 2007. Object agreement restrictions. *Natural Language and Linguistic Theory* 25: 315–347.
- Ormazabal, Javier, and Juan Romero. 2009. Problems in microvariation in the clitic system. Handout from *European Research Nets in Linguistics - 3rd workshop*, Basque: University of the Basque Country, Oct. 29–30 2009.
- Ormazabal, Javier, and Juan Romero. 2010a. Object clitics and agreement. Ms., University of the Basque Country and Universidad de Extremadura. On-line: ling.auf.net/lingBuzz/001013. Accessed on September 9, 2010.
- Oukada, Larbi. 1982. On *on*. *The French Review* 56: 93–105.
- Pesetsky, David, and Esther Torrego. 2006. Probes, goals and syntactic categories. Boston: Ms., MIT and the University of Massachusetts.
- Pesetsky, David, and Esther Torrego. forthcoming. Case. In *The Oxford handbook of linguistic Minimalism*, ed. Cedric Boeckx. Oxford: Oxford University Press.

- Pietroski, Paul. 2005. Meaning before truth. In *Contextualism in philosophy*, ed. Gerhard Preyer and Georg Peters, 253–300. Oxford: Oxford University Press.
- Pollard, Carl, and Ivan A. Sag. 1994. *Head-Driven Phrase Structure Grammar*. Chicago: University of Chicago Press.
- Postal, Paul M. 1974. *On raising*. Cambridge, MA: MIT Press.
- Postal, Paul M. 1989. *Masked inversion in French*. University of Chicago Press: Chicago.
- Postal, Paul M. 2003. *Skeptical linguistic essays*. Oxford: Oxford University Press.
- Pustejovsky, James. 1991. The generative lexicon. *Computational Linguistics* 17: 409–441.
- Pustejovsky, James. 1995. *The generative lexicon*. Cambridge, MA: MIT Press.
- Reuland, Eric. 2006. Agreeing to bind. In *Organizing grammar*, ed. Hans Broekhuis, Norbert Corver, Riny Huybregts, and Ursula Kleinhenz, 505–513. Berlin: Mouton de Gruyter.
- Rezac, Milan. 2004a. Elements of cyclic syntax. Doctoral dissertation, Toronto, ON: University of Toronto.
- Rezac, Milan. 2006. Agreement displacement in Basque. Ms., University of the Basque Country. On-line: www.umar7023.cnrs.fr/spip.php?article675. Accessed on September 9, 2010.
- Rezac, Milan. 2008c. The syntax of eccentric agreement: The Person Case Constraint and Absolutive Displacement in Basque. *Natural Language and Linguistic Theory* 26: 61–106.
- Rezac, Milan. 2010a. Ineffability through modularity: Gaps in French clitic clusters. In *Defective paradigms*, ed. Matthew Baerman, Greville G. Corbett and Dunstan Brown, 151–180. Oxford: Oxford University Press.
- Rezac, Milan. 2010b. Phi-Agree vs. movement: Evidence from floating quantifiers. *Linguistic Inquiry* 41: 496–508.
- Rezac, Milan. forthcoming. Person restrictions in Basque intransitives. *Lapurdum*.
- Rezac, Milan, and Mélanie Jouitteau. in prep. Animacy and the Person Case Constraint. Ms., UMR 7023 CNRS/Université de Paris 8 and UMR 7110 CNRS/Université de Paris 8.
- Rhodes, Richard. 1993. Syntax vs. morphology: A chicken and egg problem. *Proceedings of BLS 19, Special session on syntactic issues in Native American languages*, 139–147. Berkeley, CA: Berkeley Linguistics Society.
- Rivero, María Luisa. 2004. Spanish quirky subjects, person restrictions, and the Person-Case Constraint. *Linguistic Inquiry* 35: 494–502.
- Rivero, María Luisa. 2008. Oblique subjects and person restrictions in Spanish: A morphological approach. In *Agreement restrictions*, ed. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 215–250. Berlin: Mouton de Gruyter.
- Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics* 1: 75–116.
- Rooryck, Johan. 2006. Binding into pronouns. *Lingua* 116: 1561–1579.
- Rullman, Hotze. 2004. First and second pronouns as bound variables. *Linguistic Inquiry* 35: 159–68.
- Ruwet, Nicolas. 1990. *En et y: deux clitiques pronominaux anti-logophoriques*. *Langages* 97: 51–81.
- Ruwet, Nicolas. 1991. *Syntax and human experience*. Chicago: University of Chicago Press.
- Safir, Kenneth. 1982. Syntactic chains and the Definiteness Effect. Doctoral dissertation, Cambridge, MA: MIT.
- Sailer, Manfred. 2003. Combinatorial semantics and idiomatic expressions in Head-Drive Phrase Structure Grammar. Doctoral dissertation, Tübingen: Universität Tübingen.
- Sandfeld, Kristian. 1970 [1928]. *Syntaxe du français contemporain I: les pronoms*. Paris: Librairie Honoré Champion.
- Sauerland, Uli. 2004. The interpretation of traces. *Natural Language Semantics* 12: 63–127.
- Sauerland, Uli. 2007. Flat binding. In *Interfaces + Recursion = Language?*, ed. Uli Sauerland and Hans-Martin Gärtner, 197–253. Berlin, Germany: Mouton de Gruyter.
- Sauerland, Uli. 2008. On the semantic markedness of phi-features. In *Phi Theory*, ed. Daniel Harbour, David Adger and Susana Béjar, 57–82. Oxford: Oxford University Press.

- Sauerland, Uli, and Paul Elbourne. 2002. Total reconstruction, PF movement, and derivational order. *Linguistic Inquiry* 33: 283–319.
- Schenk, André. 1995. The syntactic behavior of idioms. In *Idioms: Structural and psychological perspectives*, ed. Martin Everaert et al., 253–71. Hillsdale, NJ: Lawrence Erlbaum.
- Schlenker, Philippe. 2005. Person and binding (A partial survey). Los Angeles, CA/Paris: Ms., University of California and Institut Jean-Nicod.
- Seuren, Pieter. 2005. Meaning: Cognitive dependency of lexical meaning. In *Encyclopedia of language and linguistics*, ed. Keith Brown, 575–577. Oxford: Elsevier.
- Sigurðsson, Halldór Ármann. 2004. The syntax of Person, Tense, and speech features. *Italian Journal of Linguistics* 16: 219–251.
- Speas, Margaret, and Carol Tenny. 2003. Configurational properties of point of view roles. In: *Asymmetry in grammar*, vol 1: *Syntax and Semantics*, ed. Anna-Maria Disciullo, 315–343. Amsterdam: Benjamins.
- Taylor, Michael. 2009. On the pronominal status of Brazilian Portuguese *a gente*. *NYU Working Papers in Linguistics* 2. On-line: linguistics.as.nyu.edu/object/linguistics.grad.nyuwpl.
- Wanner, Dieter. 1977. On the order of clitics in Italian. *Lingua* 43: 101–128.
- Ward, Gregory. 2004. Equatives and deferred reference. *Language* 80: 262–289.
- Wechsler, Stephen. 2004. Number as person. In *Empirical issues in syntax and semantics* 5, ed. Olivier Bonami and Patricia Cabredo Hofherr, 255–274. On-line: www.cssp.cnrs.fr/eiss5/ Accessed on September 9, 2010.
- Wechsler, Stephen, and Larisa Zlatić. 1998. Agreement in discourse. *Proceedings of the Conference on the Structure of Non-narrative Texts*. Austin: University of Texas.
- Wechsler, Stephen, and Larisa Zlatić. 2000. A theory of agreement and its application to Serbo-Croatian. *Language* 76: 799–832.
- Wechsler, Stephen, and Larisa Zlatić. 2003. *The many faces of agreement*. Stanford, CA: CSLI.
- Wiltschko, Martina. 2003. On the interpretability of Tense on D and its consequences for Case theory. *Lingua* 113: 659–696.
- Winter, Yoad. 2002. Atoms and sets: A characterization of semantic number. *Linguistic Inquiry* 33: 493–505.
- Zribi-Hertz, Anne. 1982. La construction ‘se moyen’ du français et son statut dans le triangle: Moyen-passif-réfléchi. *Lingvisticae Investigationes* 6: 345–401.
- Zribi-Hertz, Anne. 1989. Anaphor binding and narrative point of view. *Language* 65: 695–727.
- Zribi-Hertz, Anne. 2009. Syntax at the interfaces: On the restricted productivity of the French mediopassive within the Romance family. Ms., Université de Paris 8 / UMR 7023.
- Zweig, Eytan. 2008. Dependent plurals and plural meaning. Doctoral dissertation, New York: New York University.

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