

Title: PHI ACROSS MODULES

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Preamble: The following is a first draft. Comments on all aspects of it are very welcome. The main text is very drafty in many ways: please check with me before citing, including any data new here.

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Abstract: This monograph investigates phenomena involving "uninterpretable" phi-features to explore the character of syntax as a module both highly autonomous of the systems with which it interfaces, yet sensitive to the requirement of providing them with legible objects. Three findings are presented, developed in the perspective of the Minimalist Program of Chomsky (1995):

- Uninterpretable phi phenomena support the modular organization of the grammar, whereby syntax is autonomous of morphophonology (less strongly, of interpretation).
- Person-hierarchy interactions between arguments indicate that both morphophonology and syntax are responsible for some "uninterpretable" phi phenomena, creating two classes with distinct properties predicted by the autonomy of syntax.
- Certain syntactic uninterpretable phi phenomena, namely person hierarchy interactions and dependent Case, suggest that uninterpretable phi-features enter an autonomous syntax as a last-resort response to the need to converge at the interface with external systems. This makes for a potential source for uninterpretable features in general.

Chapter 1 presents the modular perspective on the organization of syntax and its adjacent systems, the scope of uninterpretable phi phenomena, and the options for analysing them.

Chapter 2 presents the evidence for uninterpretable phi phenomena in the morphophonology, as instances of allomorphy. The autonomy of syntax from morphophonology and the distinctive formal properties of the two modules account for the character of phenomena that belong here, such as their inertness to syntax and interpretation, and their restriction to word-like domains.

Chapter 3 examines the potential arguments for uninterpretable phi phenomena in the syntax from person hierarchy interactions in Algonquian, Mapudungun, Cavineña, and Tanoan. The key finding is that in contrast to allomorphy, these interactions do have syntactico-semantic correlates, putting them into the syntax. A variety of evidence of different strengths is considered, concluding on that which clearly speaks to a syntactic mechanism: syntactic structures dedicated to "repairing" person licensing failures in Arizona Tewa.

Chapter 4 develops the foregoing argument in detail through the in-depth study of person licensing failure and its repairs in French, the phenomenon known as the "Person Case" or *me-lui* constraint. Its syntactic character established, the chapter then turns to the nature of the "repairs": the licensing of a syntactic structure as last-resort in the event of the failure of person licensing in a regular structure. The inquiry indicates the need for a mechanism of the last-resort, "Minimize Structure" type, but highly restricted both by modularity and by the set of repairable problems.

Chapter 5 develops such a mechanism on the basis of the distinctive repairs of the person licensing French, Basque, Chinook, Georgian, Arizona Tewa, and Kashmiri, and links it to the phenomenon of "dependent" Case (accusative, ergative), which anomalously surfaces in these repairs. The point of departure is Chomsky's (1995, 2000, 2001) proposal that uninterpretable features can be added as required for "effect on output" (phi-licensing), but one that must be restricted by modularity to Full Interpretation failures such as Case/person-licensing failures. The mechanism has the potential to be the general source of uninterpretable features, making them into the response of an autonomous syntax to convergence requirements at its interfaces.

Chapter 6 addresses the nature of Full Interpretation failures involved in person and Case licensing of the previous chapters and their relationship to syntax-external systems. It finds syntax to operate on the grammaticalization of interpretive properties like [speaker] or [animate], indicating a system ultimately autonomous of interpretation as much as of morphophonology.

Keywords: modularity, phi-features, uninterpretable features, repair strategies, last-resort, interfaces, Case, licensing, person hierarchies, synthetic/analytic alternations

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1 Chapter I: Modularity and phi

1.1 Introduction

This work is about the modular organization of syntax and its adjacent modules from the perspective of "uninterpretable" phi-features. The subject can be described from the phenomenon found in paradigms like (1) and (2) and its limitations. In French (1), from chapter IV, unfocussed dative and accusative pronouns must be clitics (*italics*), but a clitic cluster containing both is only legitimate if the accusative is 3rd person. If it is 1st/2nd person, the dative must be realized as a strong pronoun rather than a clitic, escaping a ban on impossible clitic clusters. The pronoun is strong and not a clitic not just in its form, but also in its syntactic and semantic properties. This "repair" of an ill-formed clitic cluster is available in French just to this one clitic cluster problem – other problems, morphophonological, syntactic, or interpretive, cannot avail themselves of a strong pronoun without focus.

- (1) a. On *la* *leur* présentera **à elles* / *√à ELLES* [unfocussed pronoun = clitic]
 one her.ACC them.DAT will.introduce to them / to THEM
 One will introduce her to them / to THEM.
- b. *On *te* *leur* présentera [PCC if ACC = 1/2]
 one you.ACC them.DAT will.introduce
 One will introduce you to them.
- c. On *te* présentera *à elles* [clitic → strong pronoun repair]
 one you.ACC will.introduce to them
 One will introduce you to them, the girls.
- (French; italics = clitics)

The Basque (Tolosa) paradigm (2), from chapter V, is closely parallel, but the role of the weak-strong alternation is played by absolutive-ergative alternation. The subject of an unaccusative must ordinarily be absolutive in case and agreement, and this is normally so also for unaccusative psych-verbs with dative experiencer arguments. However, a dative + 1st/2nd person absolutive case/agreement combination is illegitimate, and just then, the subject of the psych-verb becomes ergative. This is an option wholly unavailable to an unaccusative subject outside this context, including elsewhere where the resulting agreement combination is morphologically illegitimate.¹

- (2) a. Itxaso-ri_i liburu-ak/*ek_j gustatzen zai-zki_j-o_i / *di-o_i-te_j [DAT+ABS verb]
 Itxaso-DAT books-the.ABS/ERG liking AUX-3PL.ABS-3SG.DAT /
 *AUX-3SG.DAT-3PL.ERG
 Itxaso likes the books.
- b. *Itxaso-ri_i zu_j gustatzen *Z_j-atzai-o_i [PCC if ABS=1/2]

¹ The convention ⟨x⟩...⟨y⟩ means that one and only one of x, y is to be considered on a particular reading of the example, so that *On la ⟨leur⟩ présentera ⟨*à elles⟩* abbreviates *On la leur présentera* and **On la présentera à elles*.

	Itxaso-DAT	you-(*ERG)	liking	2.ABS-AUX-3SG.DAT	
	Itxaso likes you. (NB: no agreement form at all available with <i>zu</i>)				
	[ABS→ERG repair]				
c.	Itxaso-ri _i	zu-k _j	gustatzen	di-o _i -zu _j	
	Itxaso-DAT	you-ERG	liking	AUX-3SG.DAT- 2.ERG	
	(Basque, Tolosa)				

These paradigms will be referred to below as the *repair* paradigms and the (c) member as the *repair*. If these descriptions are on the right track, they suggest three conclusions about narrow syntax, which are the subject of this work:

- Uninterpretable phi: Syntax is sensitive to uninterpretable phi-features.
- Transderivationality: There exists limited last-resort reference-set, transderivational computation in syntax.
- Modularity: Syntax is mostly autonomous of external systems, but there does exist a very narrow and weak form transmodularity.

The first conclusion establishes a property of narrow syntax and provides a tool for the investigation of the other two; contentwise, it covers chapters II, III, and most of IV, with pertinent examples like the Basque paradigm in chapter V. It starts out from the contemporary debate whether uninterpretable phi-features are in the syntax, or solely in component that realizes it on the way to PF, later on here called morphophonology (Marantz 1991, Chomsky 2000ab; chapter III). If the description of the repairs is right, some "uninterpretable" phi features play a role in narrow syntax itself. In French, the alternation of an unfocussed dative pronoun between a clitic and a strong pronoun depends on the phi-features of the accusative. These are not interpretable anywhere outside the accusative – on the dative itself, on on AGR, ν , or cliticization heads mediating the relationship of the two – in the same way that they are on the accusative, as its inherent person, number, and gender. So if the identity of the dative as clitic or strong constitutes *syntactic* difference in this context, with syntactic and semantic differences between them, rather than a difference of morphophonological realization familiar from analytic-synthetic alternations of the *quicker – more rapid* type, then narrow syntax itself must use uninterpretable phi-features.

This result is of considerable import for the nature of syntax in the faculty of language. With Chomsky (1995, 2000, 2001, 2005) and work in that framework, as well as theories such as Culicover and Jackendoff (2005), syntax at least partly operates over features that have no interpretation at a given syntactic terminal. It is therefore not to be reduced to or construed as a syntax of the interpretive component alone, insofar as its properties can be independently established, unlike some possibilities explored in the literature. Chapters V and VI discuss the architectural consequences of this conclusion on this and other grounds.

The two remaining conclusions are about how syntax uses them and where they come from, found in the last section of chapter IV and in chapter V. The transderivational character of some syntactic computation is one of them. A syntactic computation is transderivational when it makes direct reference to another syntactic structure or derivation, rather than appearing to do so through reusing the principles used by the alternative. Early work in the minimalist program made heavy use of transderivational computation through economy principles selecting the *most economical* or *least marked* structure or derivation out of a given *reference set* (Chomsky 1995):

the one the shortest or fewest chain links, fewest steps, or least structure, out of a set defined by a given numeration, a given LF, a given PF. Its key property is that the unavailability of the least marked member of the set frees up the next more marked member, making it grammatical in that and only in that situation. Subsequent inquiry revealed that much reference-set computation was unnecessary or empirically incorrect (Reinhart 1995, 2006, Chomsky 1995, 2000a, Collins 1997, Yang 1997, Johnson and Lappin 1999, Potts 2002), or outside narrow syntax, in its realization (Pesetsky 1998), its interpretation (Kim and Peters 1998, Fox 2000, Reinhart 2006), or in the parser/producer (Jacobson 1997). To these results there may be added a certain theoretical resistance to transderivational computation in syntax, albeit not universally shared. It comes out when considering for syntax a framework like Optimality Theory (OT) that is based on least-marked reference-set computation. By design, OT permits the suspension of any syntactic principle (a violations of markedness) and the enrichment or deletion of any syntactic content (a violations of faithfulness), if that happens to be the least marked output for a given input (a numeration). However – at first sight and across a variety of frameworks like GB, RG/APG, and HPSG – syntactic principles seem inviolable and the content of syntactic structures rigid, for the most part. There is no escaping the islandhood of coordinate structures or relative clauses, no deleting the need of a *wh*-word to move or adding a content to satisfy it when movement is impossible, no suspending or adding Case licensing as needed (3) (cf. also Pesetsky 1998: 42-5). This is the problem of "ineffable" inputs that have no output. There are devices, and elsewhere, to model the inviolability of principles and rigidity of content in economy/markedness approaches, such as ranking an "empty output" above inviolable constraints in Optimality Theory (Heck and Müller 2007), but the scope of the phenomenon in syntax seems surprising if the underlying mechanisms are of this type.

- (3) a. *She wondered [who [*t* and Kate] left].
 b. *She wondered [_Q [the inscription about whom] had been deciphered].
 c. The machine ran_{ACC} itself_{uACC} down / *The river froze*_{ACC} itself_{uACC} solid.
 d. They showed_{ACC} her_{uACC} that... / They showed_{ACC} (*her_{uACC}) [one_{uACC} to be a prime].
 e. We expected / *alleged [(for) the inscription to be indecipherable].
 (for the last three, see Rothstein 1992, Postal 1993, Boskovic 1997, chapters IV, V)

If there remains a persuasive residue of reference-set computation in within narrow syntax – like Krifka (1998), Fox (2000), Chomsky (2001), some reviewed in chapter V – then it seems to have a special character. The repair examples belong to this group, if they truly are, as described and argued later, last-resort repairs sensitive to the unavailability of other structures, and they are more clearly narrow-syntactic than most other cases. Nor are they rare, for we will see close kin of the French and Basque paradigms in Arizona Tewa, Chinook, Finnish, and Georgian. The analytical direction in which these repairs seem to point is closely related to and different from work on last-resort reference-set computation, including Cardinaletti and Starke's (1999) Minimize Structure for clitic-strong alternations, revealing stringent limitations on what constitutes a problem and what constitutes its repair, that is the definition of a reference-set (chapter IV). They lend themselves to an approach where both problems and repairs are solely localized in uninterpretable features. It can be articulated as the following proposal, recalling the transderivational mechanism of Chomsky (1995, 2000a, 2001) (chapter V):

- (4) (Some) uninterpretable features are the response of an autonomous syntax to the failure of a numeration to converge (be legible to an external system).

One distinguishing aspect of this proposal is that only uninterpretable features can be manipulated by reference-set computation in narrow syntax (as opposed to other domains where such computation may occur). There is no adding or deleting interpretable material, no changes permitted to structure, no effect on the principles of licensing or derivation. The Basque example suggests directly what other examples are argued to be like: the repair is the addition of a Case-licensing capacity. The distinguishing aspect of the proposal is the very narrow condition under which repairs may become available, the illegibility of a structure at the interface with other systems, that is, a failure of Full Interpretation, like a Case licensing failure. It brings us to the third conclusion drawn here from the repair paradigms, the modular autonomy of syntax and its one narrow exception.

In the repairs, something goes wrong with 1st/2nd person accusative clitic or absolutive agreement in the context of a dative, and the repairs structures are legitimized only to fill this gap. A priori, what goes wrong and is repaired could be localized in various domains of the grammar, such as in the morphophonological restrictions on clitic or agreement clusters. Nevertheless, it will turn out that time and time again time, problems in the morphophonology domain, even those closely similar to the repaired ones, are invisible to syntax (chapter II), and more weakly, problems of interpretation are too (chapters IV, V). Syntax constitutes a module autonomous of these external components and the repairs it makes available are not available for problems in them. This is a verification of a common assumption, including that of the Y model of GB. What goes wrong in the repair examples is a syntactic problem.

Within minimalism however, there is but one choice for what a "syntactic" problem is, and it makes itself reference to external modules: the failure to converge, to be interpretable, at the interface with external systems. So the illegibility of a syntactic structure to an external system licenses another syntactic structure or derivation, cutting across modules. However, investigation of the repairs suggests transmodularity is very weak. It constitutes precisely the failure to be legible at the input to an external system, and the problems that arise internal to or at the output of an external system like morphophonology are invisible to syntax. Moreover, if what follows is right (chapter V), the repair mechanism does not target the internal computation of syntax, but only the construction of its numeration. So we come to the conclusion that transmodularity is limited to the addition of uninterpretable features to the input to narrow syntax in function of its convergence at output. In this proposal lies a confirmation of the strong character of modular character of syntax and hints about the nature of the device that broaches it, uninterpretable features, in the repairs and perhaps in general.

1.2 Modular architecture(s)

This is the place to pause to introduce the theoretical and empirical foundations of modular architecture of the language faculty, an aspect of human cognition viewed from the perspective of cognitive psychology. The *modularity hypothesis* as relevant here proposes that cognition is organized into modules that are differentiable in virtue of any or all of (a) (partly) unique information types, (b) (partly) unique mechanisms or principles (c) (partial) encapsulation from or inaccessibility to each other.

- (5) Modularity hypothesis: cognition (cognitive processes and information) is organized into modules that are characterized by:
- a. partly different **information types (domain specificity)**
[eg. *syntactic vs. phonological features*]
 - b. partly different **mechanisms/principles**
[eg. *unbounded hierarchical dependencies vs. linear adjacency*]
 - c. partial **encapsulation** from (inaccessibility to) other modules
[eg. *phonology does not look into syntax and change an intermediate computation or an intermediate representation*]

The hypothesis is stated broadly, admitting a vast range of modular architectures varying in the type and degree of uniqueness and autonomy of a module. It is stated functionally, with no commitments to neurological localisability or innate character. It is applicable to a variety of cognitive domains, without denying the possibility of nonmodular systems. Such is the shape of the hypothesis or parts of it in much recent inquiry, notably Chomsky 1980a, Marr 1983, Pinker 1994, Jackendoff 2002, Coltheart 1999, Sperber 2002, Barrett 2005, Barrett and Kurzban 2006, Carruthers et al. 2005 (ed.), building on but partially differentiating itself from Fodor's 1983 pioneering proposal for what are furthermore innately specified, fast-and-automatic, neurologically localisable input transducers. It's worth having a brief look at its instantiation in another cognitive domain before venturing into syntax.

"Low level" vision has been a paradigm case of a module, and Pylyshyn (1999) presents a recent overview highlighting its high degree of uniqueness and autonomy from the "central" cognitive system of goals, beliefs, and utilities (cf. also Raftopoulos 2001). Visual illusions such as those in Figure XX reflect this, arising from the algorithms that build percepts in low-level vision when operating outside their natural "ecological" niche of the usual human environment. In the Kanisza rectangle, interrupted contours are completed to build surface to create the percepts of a foreground rectangle and four occluded circles, despite these shapes missing in the image which can reflect a scene without them. In the Müller-Lyer illusion, a line terminating in a line going outward with respect to itself is perceived as longer than a line terminating in one going inward, although they are the same length. In the Penrose triangle, locally computed spatial relationships between any two bars are maintained in joining all three into a single physically impossible object. These algorithms appear to be dedicated mechanisms of the vision module, without necessary analogues outside it as in intuitive knowledge of geometry; they fast, true results on common real-world scenes that are thwarted in the context of the illusion.² Strikingly, they are blind to knowledge outside the vision module. Knowing that the two lines of the Müller-Lyer illusions are of the same length does not make the illusion disappear. The same for realizing that the Penrose triangle is impossible, or even better, when acquainted with the odd physical object that viewed in a certain perspective presents the 2D projection of the Penrose triangle: the perception of the impossible 3D object remains. Notably the perception of the

² For example, the algorithm underlying in the Müller-Lyer illusion works well in the perception of rectangular objects receding in 3D perspective, such as the bottom side of a box (the floor of a room). In the 2D projection on the retina, the near side parallel to the perceiver is longer than the remote side, despite having the same length in the object. Construction of the 3D percept must shorten the near and/or lengthen the remote edge. Correlatedly, a line joining the terminal points of the two edges, such as the left-hand edge of the rectangle (floor) perpendicular to the perceiver, is inward with respect to the apparently longer near edge but outward with respect to the apparently shorter farther edge. An interesting property of this algorithm is its parametrization: young children and adults whose environments are poor in rectangular objects are less susceptible to the illusion.

Penrose triangle is mandatory without being particularly fast, potentially giving external systems a lot of time to eliminate it, and this is still more palpable in more complex Escher drawings. They do not, either by supplying information that the vision module uses, or by diving in and affecting its computations through external control: low-level vision is cognitively impenetrable. In Pylyshyn's (1999) review, low-level vision is for the most part as these illusions suggest, encapsulated from the general cognitive systems that it feeds, though there are narrow channels of influence feeding back into it, chiefly priming attention to particular regions or features.

Figure XX.

Kanizsa Rectangle



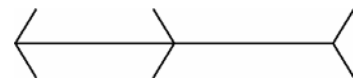
no rectangle drawn

Penrose Triangle



we see impossible, not the (weird!)
real object in a nonce perspective

Müller-Lyer



segments of equal length

So low-level vision is a good example of a highly distinctive and autonomous computational component with narrowly defined input and output pathways, fitting in this respect Fodor's (1983) model. Much work explores weaker versions of modularity for other cognitive domains, particularly recent work on the more flexible "central" systems (e.g. Sperber 1994, 2002, Barrett 2005, Barrett and Kurzban 2006, and the articles in Carruthers et al. 2005). Theories of linguistics too have explored various options, taking examples here from work that concentrates on the modularity of syntax with respect to morphophonology, an important theme below.

The Fodorian model envisages a module as a container whose envelope defines narrow input and output channels and otherwise totally encapsulates the interior from external processes and information. The Y-model of GB and other work conceptualizes the modularity of syntax in this manner. Syntax has its own mechanisms or principles (Move, c-command, ...) and a database (e.g. theta-roles, Case, and so on); its sole input is the lexicon, or the morphology module in lexicalist approaches; and the external systems of realization and interpretation are only fed by it and do not influence it. The external systems all have partly different principles and information, giving such differences as sensitivity to phonological information in phonology but not syntax, or the different principles of syntactic and morphological composition, transformation, and interpretation (Sproat 1985, Disciullo and Williams 1987, Williams 2007, Ackema and Neeleman 2007).

The modules of this modal may be enriched in different ways. In the parallel architectures proposal of Jackendoff (2002), the systems interfacing with syntax are recursively generative rather than interpretive, favouring a more complex mapping between the structures separately generated by syntax and its interfacing modules, and the interfaces are richer, with bidirectional information flow. The articulation of the system may gain in horizontal complexity, with interfaces between modules handled through dedicated interface modules; and in vertical complexity, allowing one layer of discrete modules to supervene on a substrate of computational resources shared by them all (Ackema and Neeleman 2005, 2007). These extensions need not give up the character of modules as encapsulated objects mediating access to their interiors through input-output corridors, though they may be implemented in other ways as well.

One such alternative is to give up the envelope around the container and make modularity emerge differently, for example through information typing. Suppose an ensemble of cognitive processes, such as phonology, syntax, and interpretation, access a shared pool or "blackboard" of information. The processes separate out to form modules as clusters that apply only to a given type of information, such as phonology. The information type defines the set of principles that are coherent in being limited to it and in thus being able to affect each other's input. Modularity in frameworks like HPSG belongs here, barring principles referring to SYNSEM from referring to PHON, in practice or through a metaconstraint (Tseng 2005). Evidently, complex hierarchies of processes may be defined in this way, with partial domain specificity and encapsulation.

Another way to make emerge a modular architecture is to have a single (system of) mechanism(s) apply to two distinct, mutually exclusive information types. The Distributed Morphology of Halle and Marantz (1993), Embick and Noyer (2001, 2007) proposes this view of the syntax-morphophonology divide. In the course of syntactic computation, syntactico-semantic information is replaced by morphophonological information. This has consequences for the way syntactic mechanisms operate, replacing hierarchy effects by adjacency effects. The partitioning of information is temporal: the information type switches at a certain point in the computation. The information switch effectively establishes two modules, with different information types, but a shared system of mechanisms/principles; some potentially and in practice inapplicable in each information domain. It is a different way of conceptualising the supervenience of different modules on a partly shared system than by adding vertical depth as above.

All these systems are encapsulated from external influences to the extent that there are not swimming out there in the cognitive domain "super-modules" that take other modules as input and output (Barrett 2005). All modules serving as interfaces between others belong to this class, but maintain the encapsulation of a given module if they operate only over their input modules' input-output channels, by funneling information from one to another. They violate encapsulation as soon as they are attribute the power to broach another module, modify, trigger, or suspend its internal mechanisms, change its internal database of information, or the intermediate stages of its computation. The last-resort reference-set computation envisaged in Reinhart (2006) seems to belong to this type, suspending certain syntactic principles as needed by context, for example.

This luxurious forest of approaches to modularity must not hide their common theoretical and empirical core and the profound and far-reaching reasons for it (in success as well as occasional failure): the hypothesis that syntax constitutes a partly unique and partly autonomous module within cognition. The hypothesis is clearest when it comes to syntax and all that touches phonological realization (PF), perhaps because PF is more easily inspected than meaning, perhaps because syntax is simply more of a module with respect to it than to certain aspects of meaning. Particularly striking is the contrast of syntax and morphophonology, because it is an aspect of PF that manipulates units partly isomorphic to those of syntax. In what concerns information, morphophonology is sensitive to notions that never affect syntax: the syllables and stress govern the placement of *fuckin* and the affixation of *er* in (6), and other examples abound such as the sensitivity of realizing a syntactic terminal as prefix or suffix to vowel height and to the arbitrary bundling of features by the lexicon. In the domain of principles, the placement of the exponents of morphemes can break syntactic islands as well as words or see information syntax cannot see by the c-command and relativized minimality conditions no target-goal relationships. We return to examples in chapter II.

morphological placement / movement not sensitive to islands but to syllabicity

- (6) a. fan(-fuckin-)t(*-fuckin-)A(*-fuckin-)stic, Du(-fuckin-)br(*-fuckin-)Ovnik

- (infix before stressed syllable: McCarthy 1982: 575)
- b. quick-er / *more quick -- *rapider / more rapid
(suffix to monosyllabic adjectives only, else > *more*: Embick 2007)

So syntax operates in terms of different principles and different information than (morpho)phonology does. Moreover, it is blind and impervious to the latter. "Gaps" in "regular" like **(has) teach-ed*, **(has) stride-d*, **am-n't* may or may not have morphophonological fixes (*taught*, --, *aren't*), but they never syntactic ones. The observation will be confirmed in the domain of morphophonological phenomena referring to uninterpretable phi very similar to those of the repair paradigms above but irreparable by syntax (chapter II). Prosodic furnishes an example of a different flavour. There is a prosodic constraint that prevents the second object of a double object construction from being an unstressed pronoun, (7), but this is not the kind of information that can influence the availability of the prepositional construction. This commonplace fact is in stark contrast to the use of the double object and prepositional constructions when both are available and where prosody plays a heavy role (Anttila 2008).

- (7) a. We gave/baked Kate a cake/*it.
b. We gave/*baked a cake/it to Kate.

A systematic and pervasive autonomy of syntax is widely accepted in the domain of (morpho)phonology, and modularity has a correspondingly key role to play.³ On the meaning side, the argument for the autonomy of syntax is harder and opinion more diverse. It's more difficult in the first place to see into how the meaning module(s) work. If in (8)a the surface syntax cannot be interpreted in the right way because *occasional* is inside a DP, because *every* is in-situ, and because the ellipsis constitutes infinite regression, one may posit syntactic movements, syntax-like movements in a different module, or a radically non-syntactic transformations like type-shifting. If (8)b has the interpretation of "Clive made the pot black by cooking" where the main verb of the syntax an adjunct at interpretation, one may posit covert syntactic structure (heads and movements), complex principles of interpretation, or an independently generated semantic structure linked by complex and arbitrary principles to the syntactic one. The problems and tools to solve them are in principle the same as on the PF side, but the practice harder. A close analogue of the debate in morphophonology are bracketing paradoxes like *uneasier*, explored both through an extension of syntactic operations (Pesetsky 1985) and through autonomous components (Sproat 1985, Sadock 1985, Stump 1991).

- (8) a. An occasional linguist tried to decipher every inscription Kate did, to no success.
b. Clive cooked the pot black. (Jackendoff 2002)

Those mechanisms and types of information that seem securely to belong to interpretation do seem to be in part different from syntax – where *interpretation* at a minimum does such thing as puts together predicates and quantifiers with their arguments to give observable properties like theta theory and nonvacuity of quantification, matches *the tables* with *them* in *The books are*

³ One may contrast the sharp grammaticality judgments on these matters with the *use* of syntax in production. An important discovery here has been that while lexical and sound exchange errors (*She is the very pineapple* [*< pinnacle*] of politeness vs. *You've hissed all my mystery lectures*) tend to have largely disjoint properties, paying attention to e.g. category vs. phonological similarity, there is some overlap (Dell and Reich 1981, Dell 1995).

interesting; read them, or shifts *local* but not *you* in *She said you go to the local bar*. Interpretation does this whether itself viewed a nontrivial "syntax" or a purely interpretive "putting to use" of narrow-syntactic output, and however it relates to truth and reference (see Chomsky 1977, 2000b, Higginbotham 1985, 1991, McGilvray 1998, Fox 2000, Jackendoff 1990, 2002, Pietroski 2003, 2005, Hinzen 2006). On the side of information, while much of what happens in syntax can be given some interpretation and so proposed to be motivated by it, like *wh*-movement for scope, some resolutely cannot, like the A-movement of idiom chunks in (10) or the syntactic regularity of idiom chunk structure in (12). On the side of mechanisms, there are clear differences between syntax and semantics as well as similarities: variable binding is immune to all islands for syntactic movement in (9), but the bindee must c-command the binder as in syntactic movement (including the uninterpretable one of idiom chunks). There is also evidence for encapsulation where interpretive gaps (ban on overlapping reference in local domains) fail to influence syntax although it could repair them; we return to this in chapters PCC, INT. Overall, it seems about as common theoretically to hold syntax distinct and autonomous of interpretation (Chomsky 1977, 1995, Jackendoff 2002, Culicover and Jackendoff 2005) as to deny at least one of these two properties to it (e.g. Johnson and Lappin 1999: chapter 3 for various frameworks, and chapter V for minimalist alternatives like Brody 1995).

- (9) a. every reply_i supposed that [Mary would criticize [(both) it_i and its_i authors]]
 b. *every reply_i that [Mary criticized [(both) t_i / the reply and its_i authors]]
 c. every reply_i that [Mary criticized t_i [along with its_i authors]]
[LF variable binding not subject to islands]
- (10) (Too) much is expected to be made ___ of the inscription, isn't it, without (too) much/*it/*it's/*PRO being made ___ of the surrounding design.
[uninterpretable" syntactic movement]
- (11) a. put X in X's (damned) place b. the cat's got X's tongue

The inquiry that follows unfolds against the background of modularity. It provides some new evidence for the autonomy of syntax from morphophonology and interpretation, and in contrast to the invisibility of these domains, it argues for the syntactic status of the alternations seen in the repair paradigms and the uninterpretable phi-features that condition them. This has implications for a variety of frameworks. It also interprets these paradigms as reference-set computation whereby the licensing of one structure refers to the nonconvergence of another, and this holds only in a framework with suitably poor syntactic devices like the various current minimalist proposals and not, for example, Arc Pair Grammar. Within the minimalist program of Chomsky (1995 et seq.), reference to the nonconvergence of a "neighbouring" syntactic structure or derivation turns out to be transmodular, but only in the very weak sense indicated above whereby the uninterpretable features in the input to syntax is sensitive to the convergence of its output.

The keystone proposal of the minimalist program rests on modular architecture. It shifts those syntactic phenomena of GB arguably belonging to external system to them – the theta-criterion and the ban on vacuous quantification to interpretation, linear order to realization – and then sees how far the remaining bare computational system is just a bare recursive structure generator necessary to satisfy interface requirements. Yet the computational system is held to establish syntactic dependencies, like movement with its special properties of cyclicity, ban on lowering, and island constraints. To do so, there needs to be some information in base-generated

structures over which dependencies can be created and interfered with: the formal features of syntax. Four choices are available and have been explored:

- Formal features are *uninterpretable*: a given occurrence of a formal feature has no role in the interfacing systems, such as a Case assigner / phi-probe.
- Formal features are duplicates of features properly belonging to the external systems, like the interpretable content of a *wh*-word, within narrow syntax.
- Formal features are features of external systems, as above, but available for syntactic look-up via transmodular inspection rather than by duplication.
- Syntactic dependencies are not formed in narrow syntax, i.e. the free structure-generation system, but in external systems (LF, PF).

The mainstream development of the minimalist program advocates the first option; we return to the reasons in chapter V. It posits thereby the existence of an "imperfection", of features within narrow syntax whose occurrence on a given lexical item has no motivation in interpretation or realization. It will be proposed that the repair paradigms indicate that some, and to hint that perhaps all, uninterpretable features are motivated by the failure of a narrow-syntactic output to be legible to the interfaces. They are thereby grounded in the properties of external systems and constitute a narrow transmodular feedback from the external systems into syntax, even though a given occurrence of them is not actually interpreted or interpretable.

1.3 Uninterpretable phi

"Uninterpretable" phi-features are the empirical focus of investigation: the person, number, gender of a nominal when referred to *elsewhere* than at that nominal, and the structural Case of a nominal on it. These features are "uninterpretable" simply in the obvious sense: the reference by the agreement morphology of a verb or the form of an unstressed pronoun to the person, number, and gender of a distinct nominal does not have the same interpretation as those phi-features do on that nominal, for example as presuppositions about it; the reference by the case morphology of a nominal to whether it is under the active or a passive of an ECM verb (at an unbounded distance above it) does not encode any semantic correlate of active or passive.⁴ It is an important question whether these features truly have no role in the interpretive component, but that is a different matter (chapter VI returns to it briefly). In the meanwhile, uninterpretable phi seems well-defined in the preceding way and "uninterpretable" is a useful standard term.

Uninterpretable phi extends far beyond the best-studied cases of subject-predicate accord and DP-internal concord. A simple example of accord is (12), where the phi-features of *several books*, but not of *me*, are duplicated on the verb. More complex is (13), where the absolutive subject 'bread' controls class III agreement not just on the verb but on every other constituent of the sentence, including the dative pronoun 'to me'.⁵

- (12) a. Several books are/*am beside me.
 b. There are/*am several books beside me.

⁴ This position is questioned particularly in the face of mismatches (Barlow 1988), but the alternative ultimately seems to require devices to get interpretable agreement features on (the interpretation of) the corresponding nominal for interpretation, leaving them uninterpreted on the agreement target.

⁵ For overview of agreement, see Moravcik 1978, Barlow 1988, Wechsler and Zlatic 2000, Corbett 2003.

c. Beside me are/*am several books.

- (13) buwa-mu **b**-ez diŋa-**b**-u **ṁ**₀alli a-**b**-u
 [mother(II)-?ERG **III**-me.DAT quickly-III-?SG bread(III).ABS baked-III-?SG]
 A(II),sg,erg Ad,III,sg,dat Adv,III,sg Fa(III),sg,nom V,III,sg
 Mother (A) baked me (Ad) the bread (Fa) early (Archi, Kibrik 1979: 68)

Intuitively, the duplication of the phi-features of the agreement controller in these examples is interpretively spurious, a property of formal marking only. Perhaps even more telling are examples like (14): the subject *on*, interpreted as 1PL 'we' and controlling a 1PL remote anaphor *nos* and PL agreement on a secondary predicate *loyaux*, behaves (due to its history) as if it were 3SG for the agreement of the verb – and curiously enough, for the reflexive *se* anaphor as well. The duplication of 1PL on *nos* is interpretable in the same way 1PL on *on* is and so a matter of interpretable phi-feature matching; duplication on *loyaux* is not interpretable in the same way, but at least coherent; 3SG on *est* and *se* is interpretively ignored nonsense.

- (14) On_{i=3SG,j=1PL} si' est_i cru loyaux_j à nos_j présumés.
 we/one SE.3SG is.3SG believed loyal.PL to our(1PL) presupp's
 We (1PL) believed ourselves (3SG) loyal (PL) to our (1PL) presuppositions. (French)

DP-internal concord too has these properties, and example (15) picks a particularly complex and intuitively interpretively irrelevant duplication. The postnominal adjectives modifying *gens* 'people' are masculine, corresponding to the gender of the noun as revealed by anaphora. However, prenominal ones are feminine – *if and only if* not separated from *gens* by an adjective that does not make the masculine-feminine distinction in its morphophonology, like *honnête*, in which case they are masculine again. Even more clearly interpretively irrelevant is concord that involves genuine phonological CV copying, though how far that is related to phi-features is another matter (see Aronoff et al. 2005; cf. Harris and Halle 2005 for a mechanism).

- (15) a. tous/*toutes les gens fous/*folles de scrabble
 all.M/*F the folks crazy/M/*F about scrabble
 b. toutes/*tous les vieilles gens fous/*folles de scrabble.
 all.PL.F/*M the old.PL.F folks crazy.PL.M/*F about scrabble
 c. les bons/*bonnes et honnêtes gens
 the good.M/*F and honest folks
 d. les vieilles et bonnes gens
 the old.F and good.F folks
 e. de bonnes/*bons et honnêtes vieilles gens.
 some good.F/*M and honest old.F folks
 (French; NB: F, M glosses present only for adjectives that distinguish the two forms)
- (16) a. kata:ma-ŋɔin-ka b. kata:ma-ã ka-nak-ã

river-DEF this-CV	river-PL	CV-two-PL	
this river	two rivers		(Bainouk, Aronoff et al. 2005: 320)

Structural Case is illustrated in (17): *villa* 'error' is accusative under an active ECM verb and nominative under a passive one, at a potentially unbouded distance between the two. The interpretation of *villa* with respect to its theta-selector *vera* 'be' or anything else does not change in any way according to as it bears nominative or accusative, and so the case morphology appears to be uninterpretable. In contrast, the dative of *þessu handriti* due to the preposition *í* is fixed once and for all by selection or because it has interpretative content (irrelevant here which).

- (17) a. Ég tel vera villu í þessu handriti
 I believe to.be error.ACC in this manuscript
 I believe there to be an error in this manuscript.
- b. Það er talin vera villa í þessu handriti
 there is believed to.be error.NOM in this manuscript
 There is believed to be an error in this manuscript.

(Icelandic, Jonas 1996: 74-5)

A very different example that also nicely demonstrates uninterpretable phi is the Spanish "suprious *se*" phenomenon in (18), to which we come back several times. First, the 3rd person dative clitics 3SG *le* and 3PL *les* become the invariable reflexive clitic *se* if in the same clitic cluster with a 3rd person accusative clitic 3SG.M *lo*, 3PL.M *los*, 3SG.F *la*, 3PL.F *las*. So the phi features of the accusative clitic, namely 3rd vs. non-3rd person, are playing a role in the form of the dative clitic, *se* rather than *le(s)*, but they are not playing the same role as they are playing on the accusative: they are not interpreted as 3rd person on the dative but as a condition on its allomorphy. Second, in some Spanish varieties the number (and gender) of the dative clitic may turn up on the accusative clitic, so that 3PLM.DAT *les* + 3SGM.ACC *lo* appears as *se los* (vs 3SGM.DAT *le* + *lo* as *se lo*). So the number features of the dative are playing a role in the form of the accusative, but again not the same role as they are playing on the dative: the interpretation is that of 3rd person singular, but its form is that of 3rd person plural. Both phenomena involve reference by a clitic α to the phi-features of the neighbouring clitic β but the phi-features are not affecting the interpretation of α , but rather its realization. This is uninterpretable phi.

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

Spurious *se* is clearly similar to what occurs in the French repair example (1) that we started out with, where the form of a dative unfocussed pronoun alternates between clitic and strong in function of the person of the accusative. The difference that will be find between these two scenarios later on however is great: spurious *se* belongs to the morphophonology and syntax and interpretation are blind to, while the French dative alternation belongs to syntax. This distinction bears on a contemporary debate about where to put uninterpretable phi.

The virtual identity of the conditions on A-movement and structural Case and verb agreement in English is the impetus of the traditional view of uninterpretable phi in syntax, since

Chomsky (1980b, 1981), Rouveret and Vergnaud (1980), Vergnaud (1982) (but see note NOTE-20). The conditions that govern A-movement, potentially visible for interpretation, and agreement and structural Case morphology, are the same in (19) and (20).⁶

- (19) a. There were several students awarded a scholarship.
 b. *There was/were a scholarship awarded several students.
 c. Several students were/*was awarded a scholarship.
 d. *A scholarship was/were awarded several students.
- (20) a. I believe [there to be **fish.ACC** living in this lake].
 b. I believe [**fish.ACC** to be living in this lake]
 c. **Fish-NOM are-AGR** believed [to be __ living in this lake].
 d. There **are-AGR** believed [to be **fish-NOM** living in this lake].
 (for Icelandic exx with overt case, see above)

However, from this view has had to pit itself against a mystery: it's not just that Case and agreement are not interpreted, to a first approximation they are not visible to syntax, the thesis in (21). Empirical grounds for it are the utter invisibility of phi-agreement without A-movement in English to condition after conditions from NPI licensing to anaphora binding (22) demonstrated in Den Dikken (1995) and Lasnik (1999), and the replications of this conclusion from Icelandic (Jónsson 1996) to Tsez (Potsam and Polinsky 2001). Why uninterpretable phi plays no role in interpretation is easily explained by the theory – it is uninterpretable and deleted at the interface, and the switch from agreement as the displacement of syntactic terminals to agreement as the valuation of a deleted phi-probe in Chomsky (1995) can be seen in this light – but why syntax would not see it is harder.⁷

- (21) Invisibility of uninterpretable phi: the syntax or interpretation of a DP is never contingent solely on the uninterpretable phi phenomena in which it participates.
- (22) 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)

This said, it's a matter of continuing debate just how absolute the inertness of plain English-type agreement to syntax is. Most of the diagnostics it has been pitted against arguably dependent on interpretive content that phi-features lack anyway, like NPI licensing and quantifier-variable binding, and the binding of reciprocals and *self*-anaphora might well belong here. Matters are less clear when we move down the scale to more purely formal licensing. The licensing of *se/sig* anaphora has been argued to be sensitive to phi-agreement with the verb or

⁶ ECM and ditransitives can be combined for *show* in (i), a nice paradigm (cf. Postal 1993).

- (i) a. The article showed (the reader / to the reader) [that several changes had occurred during the experiment]
 b. Readers were shown __ [that several changes had occurred during the experiment]
 c. Several changes were shown (*the reader / √to the reader) __ [to have occurred during the experiment]
 e. There were shown (*the reader / √to the reader) [to have occurred several changes during the experiment]
 e. *The reader was shown __ [(several changes) to have occurred (several changes) ...]

⁷ Irrelevantly here, the agreement *morphology* (say a *pro*-drop or nonconfigurational language) can also be analysed as the A-movement of a head (pronoun argument or clitic double), giving a distinct type of behavior (Rezac 2008f).

nominative Case assignment in the absence of A-movement (esp. Reuland 2005a, cf. Lavine and Freidin 2002: 280 note 33, Bailyn 2004: 18-22 esp. note 22).⁸ Such paradigms are only as convincing as the conditions on the relevant anaphora, also limited to the domain of A-movement, must be in the syntax. Chapter III looks at a set of distinct situations, person hierarchy interactions, where uninterpretable phi is relevant to syntax and interpretation, though for most of them also in a way that could be shunted aside with further assumptions.

Assuming for the sake of argument that uninterpretable phi is invisible to syntax and interpretation, we might take cue from its inertness shift it all entirely into a post-syntactic component, genuinely deriving the inertness as a matter of architecture. For this reasons, and others discussed in chapter V, Marantz (1991) and subsequent work proposes such a shift, with the potential to eliminate uninterpretable phi from the vocabulary of narrow syntax.⁹ The commitment of such a move is that the relevant component must duplicate certain core properties of the syntactic computation to interpretation, particularly A-movement, that do not obviously appear in other components like (morpho)phonology.¹⁰ Among these are the ability to span unbounded chunks of structure, sensitivity to c-command-like hierarchical relationships among phrases to give a metric of distance independent of linear order, differentiation between structural and inherent Case, and obedience to syntactic islands. Morphophonological transformations, for example, do not at first sight seem to be like that: in (23) the syntactic terminal AND is lowered in realization as *que* to within the PP provided the prepositional head is not monosyllabic, an impossible syntactic movement on several accounts.¹¹

⁸ Note also Richards' (2001: 147ff.) observation that anti-agreement is suspended for anaphora binding, though at first sight this could be reformulated in such terms as whether the subject passes through SpecTP (+ post-syntactic agreement) or not. Similarly for the sensitivity of some agreement to old-new information (Adger 1994, Déprez 1998 on French participle agreement) and semantic rather than morphological feature specification when the two differ (Wechsler and Zlatić 2000, cf. also Durie 1986). We might expect the various semantic sensitivities to go together, as they seem to in e.g. French participle agreement or Kutchi Gujarati object agreement (Patel 2008).

⁹ NOTE-20: The proposal of Marantz (1991) is not to be identified with work that proposes to treat certain aspects of X^0 or phrasal arrangement by regular syntactic mechanisms operating after the spell-out to LF and partly after vocabulary insertion (Embick and Noyer 2001, 2007, Sauerland and Elbourne 2002), for it is made in part to allow mechanisms for phenomena that regular syntactic mechanisms cannot handle, notably dependent Case. Beside predicting the invisibility of uninterpretable phi, the proposal is also founded on evidence that uninterpretable phi does not underlie the A-movement system, the licensing of specified subject, and the distribution of PRO, phenomena where GB held Case prominent. Much research demonstrates that the notion of the positional licensing of a DP must be divorced from what agreement it controls or absence of inherent Case, very clearly so on the surface in Icelandic where there is no correlation between DPs undergoing A-movement and those controlling agreement and vacillating between nominative and accusative. It follows that either A-movement must be divorced from Case/phi-agreement and attributed to a separate system of positional licensing such as the "EPP" (Zaenen et al. 1985, Marantz 1991, Sigurðsson 1991, 2002, Schütze 1993, 1997, Harley 1995, Bobaljik 2008), or the Case and/or phi-agreement systems operate in more subtle ways than observable on the surface (Cowper 1987, Freidin and Sprouse 1991, Maling and Sprouse 1995, Frampton and Gutmann 1999, Chomsky 2000a, Boskovic 2002, Béjar and Rezac 2003, Anagnostopoulou 2003, Rezac 2008b). Equally, the system regulating nominative vs. accusative seems to play small role in the distribution of PRO (Marantz 1991, Landau 2000), and the distribution of overt subjects of finite and non-finite clauses (Schütze 1997).

¹⁰ This commitment of course does not exist on proposals that accept Agree for uninterpretable phi to establish a featural dependency between a Case assigner and a DP in narrow syntax, and have PF assign case by reading off the resulting featural configuration, as in Landau (2007a). These approaches separate NP-licensing from case and put the latter into PF, but keep phi-Agree and its role in case assignment in the syntax.

¹¹ Copy spell-out, which also occurs in the post-syntactic realization component and takes into account such aspects as phonological identity (Boskovic and Nunez 2007), is not unbounded. Successive-cyclic movement heavily restricts the distance between copies to each VP at most (Fox 2000, Sauerland 2003). More pertinently, the only non-local information that a copy needs to know is whether another copy already has already been spelled out

The first lesson drawn from the repair examples will be that syntax is not insensitive to all uninterpretable phi -- chapter III, chapter IV -- in direct contrast to some instances of it, which belong to the interior of morphophonology by both their inertness and their properties, as discussed in chapter II that comes next. Uninterpretable phi spans different modules of language. Uninterpretable phi that is in the syntax indicates that there is no reason to categorically banish it to other domains and so perhaps less reason to increase the scope of the realization component beyond its traditional domains like the morphophonology of the extended word, linear order among adjacent words, and prosodic grouping.¹² At the same time the way uninterpretable phi gets to be visible to syntax is decidedly odd, if it is as proposed through convergence-based reference-set computation, a system that ends up in a sense as an interface component distinct from the internal syntactic recursive structure and dependency generation of Merge and Agree.

¹² Conceivable and henceforth ignored are also extra-grammatical mechanisms, for uninterpretable phi as for other things, the "viruses" of Sobin (1997) and Lasnik and Sobin (2000); and these need not have the properties of any (properly) linguistic system.

1 Chapter II: Morphophonology and phi

1.1 Morphophonology and modularity

Some uninterpretable phi phenomena seem by their properties to occur in the extra-syntactic module responsible for the phonological form of morphemes and their form-dependent arrangement: the *morphophonology*. To it belong phenomena like phonologically-sensitive placement (perhaps linear order generally), contextual allomorphy (including accidental and systematic syncretisms), and arbitrary gaps. It is a theoretically widely accepted and empirically robust property of morphophonology that syntax is autonomous of it as part of the architecture of the language faculty. Consequently, whatever uninterpretable phi is here is architecturally invisible to syntax and interpretation. This chapter develops on this point. The first section lays out the modular status and encapsulation of morphophonology and takes a brief look at the theoretical modelling and empirical mileage of the autonomy of syntax from it. The next section goes into detail in particular domain, phi-sensitive contextual allomorphy and gaps in Romance clitic clusters. This focus provides depth from a domain where uninterpretable phi is by all counts in the morphophonology, and sets up a contrast with a superficially similar but syntactically visible clitic cluster gap conditioned by uninterpretable phi, for chapter IV.

By calling morphophonology a separate module I mean only to place it outside narrow syntax, taken as a mapping from the lexicon to interpretation. Morphophonology can be established as separate from syntax by the character of the information to which it refers and the nature of the mechanisms that manipulate it, beside the autonomy of syntax from it to which we turn later. The mechanisms are not wholly distinct, and the commonalities have inspired Distributed Morphology, where the underlying computational system is shared with syntax (Embick and Noyer 2007). However, partial sharing of mechanisms is far from conflating the syntax and morphophonology modules, and there is abundant work making this point on the basis of the distinct information and mechanisms of morphophonology, e.g. Sproat (1985, 1998), Carstairs-McCarthy (1987, 1992), Anderson (1992), Marantz (1991), Halle and Marantz (1993), Noyer (1997, 2001), Bobaljik (2000), Embick (2000), Embick and Noyer (2001), Ackema and Neeleman (2003), Harbour (2003).

A clear example is placement of the Latin conjunction *que* "and" in (1) (Anderson 1992: 201-2, Embick and Noyer 2001: 575-6). *Que* is an enclitic to some element within the second conjunct. It does not respect the syntactic integrity of the conjunct, attaching *que* for example within a prepositional phrase. No independently syntactic movement, identified by such for example by interpretive consequences, can target such a position. Morphophonological mechanisms can even break up monomorphemic roots, such as English expletive infixation of the type *fan-fuckin-tastic*, *Du-fuckin-brovnik* (McCarthy 1982), or Udi endoclitisis that can place a clitic before the final consonant of a verb root (Harris 2000). There are other differences in mechanisms between syntax and morphophonology, such as sensitivity of allomorphy to both c-commanded and c-commanding information and absence of relativised minimality (Bobaljik 2000, e.g. note 44 discussing McCarthy 1987: 157-61). Returning to the placement of *que*, it is partly governed by phonological factors, attaching to bisyllabic but not a monosyllabic prepositions. Such phonological information too does not condition syntactic movement. However, it is are pervasive in affix or clitic attachment, such as prefix-suffix realization of of Afar 2nd person affix *t*, which is prefixal when the verb begins with a non-low vowel and suffixal

otherwise (*t-okm-è* [2-eat-PERF] 'you ate', *ab-t-é* [do-2-PERF] 'you did'; Noyer 1992: 228-9), in enclisis vs. circumclisis in Franco-Provençal dialects (Morin 1979a: 304-5 note 5), or in analytic-synthetic alternations such as the English comparative (discussed at the end of this chapter). There are other types of information to which morphophonology but not syntax is sensitive. One is features like conjugation classes: as put by Baerman and Corbett (2006), there are no syntactic principles like "verbs which conjugate according to inflectional class II take a preceding direct object; others take a following direct object". Another of a different character is the arbitrary bundling of features into prefix vs. suffix exponents, studied by Noyer (1997: chapter 1) for Arabic verb inflection. So *que* placement and its ilk refer to information and use mechanisms distinct from those of syntax.

- (1) & [_{PP} contra/ad rem publicam] → contraque rem / ad remque publicam
 and against/to thing public
 and against/to the commonwealth

These examples illustrate the phenomena that have been ascribed to the separate morphophonology module. They share along with phonological phenomena the foundational property of PF-Autonomy. The thesis may be stated as in (2), which keeps agnostic about the character and unity of the systems grouped under morphophonology, and includes distinct systems like the parser/producer that put to use morphophonological knowledge. It speaks of the autonomy of syntax and "its" interpretation, intending to include here aspects of meaning "close" to syntax across various frameworks like theta-theory, binding, focus, and scope.

- (2) **Autonomy of syntax/interpretation from morphophonology** [PF-Autonomy]: Syntax and its interpretation are autonomous of (morpho)phonological properties and mechanisms.

(Zwicky 1969, 1992, 1996, Zwicky and Pullum 1983, 1986, Pullum and Zwicky 1986, 1988, Miller, Pullum, and Zwicky 1998, Halle and Marantz 1993, Embick 2000)

By PF-Autonomy, syntactic phenomena like verb/preposition-argument selection or *wh*-movement do not paying attention to phonological properties or declension classes. This is not a truism, and yet it is so strikingly correct that it constitutes a basic element of several theoretical architectures. Some explicitly isolate syntax from morphophonology by making the latter a separate component with different mechanisms and information and input-output gateways. Here belong theories where morphophonology is a realization of phrasal syntax and/or an autonomous word syntax, whether piece or rule-based, whether separate or of a part with the rest of PF or not, and whatever the relationship between phrasal and word syntax assumed (Carstairs 1987, Stump 1991, Anderson 1992; Sadock 1985; Sproat 1985, 1998; Ackema and Neeleman 2005; Trommer 2001, 2002). Less strongly modular but still fully and necessarily espousing PF-autonomy are models that encapsulate syntax by the timing of the insertion of morphophonological information, notably Distributed Morphology (Halle and Marantz 1993, Embick 2000, Embick and Noyer 2001), by information typing (as is available in HPSG, cf. Tseng 2005, and early-insertion minimalism), or constraint ordering (Golston 1995). By contrast, PF-Autonomy is explicitly absent in some models where syntax and morphophonology interact (Bresnan 1998, 2001); it can easily be weakened or removed in models where information typing ensures modularity (Bird

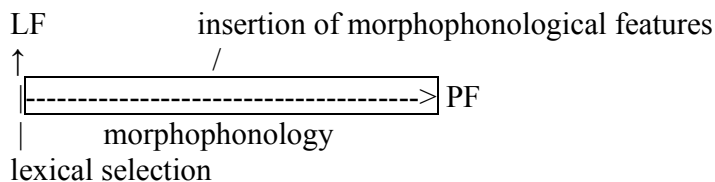
and Klein 1994 on focus and HNPS in HPSG, Uriagereka 1999ab and Chomsky 2001 for minimalism where aspects of syntactic movement accesses the consequences of PF-spellout); and through the assumption of more powerful interface relationships between modules (Jackendoff 2002; Reinhart 2006, Szendrői 2005, Chomsky 2001 on focus interpretation; and Andrews 1990b, Poser 1992, Disciullo and Williams 1987, Williams 1997 for the blocking of syntactic structures by words, on which also cf. the end of this chapter).

An example of a theory that derives PF-Autonomy is Distributed Morphology (Halle and Marantz 1993, Halle 1997, Noyer 1997, Embick 2000, Embick and Noyer 2001). PF-Autonomy follows in it from two assumptions. First, it assumes a version of the Separation Hypothesis, whereby the features that syntax and morphophonology operate on are partly disjoint (Beard 1995). In Distributed Morphology, syntax operates on objects with only syntactic features like categorical and *wh* features, and morphophonological features like declension class and phonological features are inserted at a certain point during the computation that branches off from syntax and proceeds to PF. The idiosyncratic bundling of features into listed vocabulary items is also made accessible to the computation only here, through this insertion process. Therefore neither of these types of information is available for the mapping from syntax to interpretation or to interpretation alone.¹

- (3) *Separation Hypothesis* (a version of): morphophonological features and the arbitrary arrangements of features in vocabulary items are not present in the syntax

(cf. Embick 2000: 188).

- (4) Distributed Morphology



Second, Distributed Morphology assumes that the post-spell-out component going to PF does not have any mechanisms that can themselves manipulate syntax or properties: take the syntactic computation as an input and change its mechanisms, insert information, transform representations, and so on. The assumption is not trivial. It is perfectly conceivable for a module to manipulate another module in this way, essentially as data, as discussed in the preceding chapter; the proposals of Jackendoff (2002: 121) or Reinhart (2006: 1.3) might be read as "invasive" interface modules of this sort. Morphophonology does not seem to have such powers, even when conceived of as an interface module pooling information from others (the insertion component of Ackema and Neeleman 2007).

These properties of Distributed Morphology ensure PF-Autonomy no matter in what manner morphophonology pays attention to syntax, nor how many times syntax spells out to the mapping that proceeds to PF, whether once, at designated "phases", or every time it does something (Chomsky 1995, 2000, Epstein and Seely 2002 resp.). It matters only that at each spell-out point, information flow only in one direction, from the syntax out. There must be no mechanism by

¹ The same holds on the interpretive side for "encyclopaedic" features; see among others Marantz (1997, 2006), Fox (1995, 2000: 67).

which the post-syntactic component can manipulate syntax or by which syntax can access the result of this computation.

In order to get a handle on the empirical scope of PF-Autonomy, let us look at the facts it captures. They are impressive in depth and breath, and what follows is only indicative – examples from syncretisms and morphological gaps in this section, and a closer look at the specific domain of Romance clitic clusters in the next for the depth. A preliminary example that shows the tenor of the argument for PF-Autonomy but also its potential shallowness comes from accidental syncretisms (cf. Zwicky 1992: 355). Various syntactic or interpretive phenomena care whether a noun is singular or plural, whether a verb is past or present, whether a noun is abstract or concrete. None are sensitive to the realization of these features. Consider (5). It does not matter for local and cross-clausal anaphora that plural *sheep* unlike plural *members* is syncretic with its singular: if we want to get the plural interpretation, the anaphor must track the syntactic or semantic plurality of the antecedent, not the syncretism. Exactly the same can be said of noun-adjective concord in (6), where the singular and plural of French *chacal* 'jackal' but not *cheval* 'horse' are homophonous. Returning to (5), it also does not matter for the sequence of tenses that the past and present tense of *let* are syncretic; the verb below it must be the past *were* if it is to have the present-in-the-past reading with respect to *let*. Finally, the definite article does not care about how whether abstractness is realized by the suffix *ness*, *ty*, or by no suffix at all; it treats all abstracts equally.

- (5) a. The sheep looked at themselves/*itself and then they/*it let it be known that they were/*are full of (*the) *happiness/joy/gaiety*.
- b. The member-S of the sheep-herd looked at themselves and then they announc-ED that they were full of (*the) *happiness/joy/gaiety*.
- (6) a. Un groupe de loyaux/*loyal chevaux pl. chevaux [šəvo] ≠ sg. cheval [šəval]
a group of loyal.PL/*SG horses
- b. Un groupe de loyaux/*loyal chacals pl. chacals [šəkal] = sg. chacal [šəkal]
a group of loyal.PL/*SG jackals
- (French)

These examples are a commonplace, yet not trivial; things could easily be otherwise. However, all that they show is that syntax and interpretation do not pay attention to *accidental* syncretisms, and so, in many models, simply to the phonological form of an affix. The plural of *sheep* is analyzable as *sheep* with a \emptyset allomorph of the plural affix that elsewhere surfaces as *s*, or perhaps with no expression of its plurality, and not as being non-plural in any way deeper than phonology. So syntax and interpretation fail to see that the \emptyset realization of plurality happens to leave the noun it is attached to identical to the suffixless singular. That is as far as this argument goes. It is still an interesting observation about natural language, for syntax and interpretation do pay attention to some properties of words that seem at first sight as arbitrary as phonology in terms of their relationship to the real world objects they signify. *Scissors* shares plurality with *dogs* and French *lampe* 'the lamp' shares feminine gender with *fille* 'the girl', and this is surely as arbitrary a fact about these *words* with respect to their meaning as what consonant they begin

with. Nevertheless cross-clausal anaphora see this in both languages, (7) (cf. Wechsler and Zlatic 1998). So the fact phonology is irrelevant to syntax and interpretation is an important one.

- (7) The scissors_i were in the box. Kate picked them_i/*it_i up.

However, it is easy to go farther. Syncretisms can cut across paradigms that use distinct phonological exponents to express a given morphosyntactic feature combinations. In French, strong and nominative pronouns distinguish masculine and feminine gender, but the remaining pronouns neutralize the gender distinction in the plural, as in Table 1.²

- (8) Table 1: Syncretisms in French pronouns

	Strong	Nominative	Accusative	Dative	Genitive
3SG.M	lui	il	le	lui	s-
3SG.F	elle	elle	la	lui	s-
3PL.M	eux	ils	les	leur	leur-
3PL.F	elles	elles	les	leur	leur-

NB: Orthography indicates syncretisms as pronounced adequately save *elle=elles*, *il=ils*

The neutralization cannot be captured through the properties of phonological exponents, for it would have to do it separately for all three cases that show the syncretism: the underspecification for gender of *les*, *leur*, and *leur-* would be unrelated facts. Such "metaparadigmatic" syncretisms have to be coded at a more abstract level (Stump 1993, Williams 1994, Bobaljik 2002). One means is impoverishment: delete the *feature* of gender in the context of the *features* plural and accusative/dative/genitive (Bobaljik 2002). So the syncretism comes about in some component that manipulates formal features. Such syncretisms prove to be as invisible for syntax and interpretation as the syncretism discussed above. In (9), the pronoun *leur* is syncretic for gender. A pronoun anaphoric to it must match it in phi-features, and this matching cannot take syncretism into account: the subject of the most embedded clause must be feminine *elles*, not masculine *ils*, if it is coreferential with *leur*.³

- (9) Elles_i demandent qu'on **leur**_i dise quand **elles**_i/*ils_i présentent.
 they(F) ask that we **them**.M/F tell when **they**.F/*M present

Metaparadigmatic syncretism is one example of a featural manipulation in morphophonology. Its inertness for syntax and interpretation is emblematic, and holds for other morphophonological operations, some examined in the next section.

Quite a different manifestation of PF-Autonomy is in the inertness of morphophonological gaps. Morphological paradigms often show gaps that are arbitrary from the perspective of a synchronic grammar, although often motivated in a diachronic or acquisition perspective

² The syncretism is rather simplistic, but more complex and robust cross-paradigmatic syncretisms can be used to make the same point, which seems universal.

³ It is worth noting that Rule H/I ensures that the most embedded *elles* must be λ -bound by *leur*, rather than be coreferential with it or bound by or coreferential with the highest *elles*; see Reinhart (2006: chapter 4), Fox (2000: chapter 4), and chapter V for discussion.

(Baerman 2008, Albright 2006). Embick and Marantz (2008), discussing the impossibility of *am* + contracted negation *n't* → **amn't* in English, emphasize a pervasive property of these gaps that is of the greatest theoretical importance as support for the inertness of morphophonology (cf. also Trommer 2002):

- (10) Lemma of PF-Autonomy: Morphophonological gaps do not license otherwise impossible syntactic structures or interpretations.

By the lemma, a gap like *amn't* will not have a dedicated syntactic repair. Although the structure *am I not* can express the meaning of the gap, it is not as a dedicated repair, but as a generally available structure independently of the gap. In contrast, *amn't* has a morphological repair which substitutes the morphological default *are* for *am* in *aren't (I)*. The paradigm of *be* indicates that *are* is a default because it occurs across feature combinations that share no common feature, 2SG, 1PL, 2PL, 3PL. The default is automatically inserted if a more specified form cannot be by Distributed Morphology's Vocabulary Insertion Algorithm's Subset Principle.

- (11) a. *Amn't I // aren't you / we / they // isn't she leaving?
 b. Am I not // are you / we / they not // is she not leaving?
 c. Aren't I leaving?

The Lemma of PF-Autonomy is theoretically very clear: if syntax is encapsulated from morphophonology, it cannot see a morphophonological gap, and so no syntactic structure can be sensitive to one. Empirically, it is of as broad correctness as a lemma deriving from a fundamental architectural aspect of language is expected to be. Morphophonology presents gap after gap that are sensitive to phonology, to morphophonological features like inflection classes, or to lexical identity that picks out a particular morpheme among others with the same syntax and comparable meaning. None seem to trigger a dedicated syntax to repair it. The examples discussed here in depth will come from Romance clitic cluster gaps, but it holds across many empirical domains. The missing past participle of *stride* is a good example (q.v. Albright 2006). Many English speakers are missing past participle of *stride* (Albright 2006), but in (5) this does not license any repairs dedicated to the gap: nonce *do*-support for the participial suffix, a nonce syntactic construction, a nonce extension of the meaning of, say, the simple past to take over that of the missing perfect. The point is independent of how one would conceive such repairs to occur, by directly referring to the gap, or by restating its conditions: because the gap and its conditions like sensitivity to the lexeme *strid-* belong to the morphophonology, neither can be visible to syntax.

- (12) a. *He has stridden/*strode/*strid/*strided across the desert
 b. *He has been/had/done stride across the desert
 c. *He is after striding across the desert
 d. *By now, #she strode / *has stridden / √has walked striding across the desert for many years, ever since she left us.

Below are some morphophonological gaps with the same property of being invisible to syntactic repair, indicating the empirically breadth of the generalization:

- (13) a. *forgo*, no past **forgoed* / **forwent*. (Embick and Marantz 2008: 35)
 b. *prime* (example), no comparative **primer*, **more prime*. (Embick 2007: 13 note 12)
 c. Doubl-*ing* filter: *It continued* / **is continuing raining*. (Neeleman and Koot 2005)
 d. French *frîre* 'fry', no present 1/2PL forms. (Stump 1998: 16)
 e. French verb-subject inversion blocked with subject *je* 'I' for most verbs: *dois*/**bois-je* 'must/**drink*.1SG-I', cf. *dois/bois-tu* 'must/drink.2SG-you'. (Miller 1992: 176)
 f. French imperative *aie* 'have!' as auxiliary cannot take clitic objects; no problem arises when used as main verb or with non-clitic object. (Miller 1992: 175-6)
 g. German nouns like *Paris* where genitive *-es* ending is phonologically blocked cannot occur in genitive-assigning contexts. (Bayer et al. 2001)
 h. German free relative case-matching: the relative pronoun gets case both at the gap and externally and can surface only if syncretic for both.
 (McCreight 1988, Marantz 1999 cited in Trommer)

The syntactic inertness of morphophonological gaps has its parallel in that of the better known inertness of phonologically caused gaps. English verbs like *give* can take both the double object and the prepositional construction, *give GOAL THEME* and *give THEME to GOAL*, but benefactives can only in the *bake GOAL THEME* construction and verbs like *donate* only in the *donate THEME to GOAL* one. For verbs like *give* when both constructions are available, the alternation between them is partly governed by prosodic factors, such as preference to place focus and long phrases finally (Brandt 1999, Anttila 2008). The preference has no effect when one of the constructions is unavailable, (14), so it does not aid with licensing the missing construction (Costa 2003: 266). More poignantly though, even ungrammaticality rather than preference due to prosody does not do so. There is a prosodic ban on weak pronouns as the second of the two objects in the *GOAL THEME* structure, (12) (Zwicky 1986). This impossibility is operative both when the alternative *THEME to GOAL* construction is available, and when it is not, ruling out all such structures in the latter case. The prosodic gap does not license them as a possibility where otherwise they would not be. Whatever in the syntax or semantics makes the prepositional construction impossible for benefactives, is not over-ridden by the impossibility of a phonologically well-formed output of the double object construction.⁴

- (14) a. We gave the book to MARY.
 c. We donated the books to the LIBRARY.
- (15) a. We gave/baked Kate a cake/*it
 b. We gave/*baked a cake/it to Kate.

Syncretisms and gaps are two illustrations of PF-Autonomy. The examples given above are a rather heterogeneous set, suggesting the wide validity of the thesis. The next section demonstrates the scope of PF-Autonomy in a much more restricted empirical domain, the gaps and transformations in Romance clitic clusters, particularly those that make crucial reference to uninterpretable phi-features.

⁴ The independently available *cook THEME* for *GOAL* can be used, but with a different meaning, as can be observed for example in the difference in Condition B domains between *I bought tickets for us* vs. **I gave us tickets* and *??I gave tickets to us* (Rhodes 1993).

It bears noting that the character of morphophonology as a separate module is logically distinct from an issue often discussed in the same context: to what extent is *word syntax* a separate module from syntax. Into the latter discussion enter issues such as the opacity of words for external phrases (**how_i [complete_i-ness]*) or the impossibility of movement into a complex word from a phrase (stranding: *the city_i center of a prosperous medieval t_i in Northern Italy*); extensive recent overviews and debates are in Williams (2007), Ackema and Neeleman (2007), Borer (1998), Marantz (1997, 2007). It is not necessary to put morphophonology and "word syntax" together: Sproat's (1985) model puts the former into PF and the latter into the syntax, Halle and Marantz's (1993) Distributed Morphology similarly puts the former into the mapping from syntax to PF but the latter into syntax, Ackema and Neeleman's (2005) parallel architecture puts the former into an interface component between syntax and phonology and the latter into a separate word syntax (and word semantics) module.

1.2 Clitic eccentricities do not affect syntax-to-LF

Romance clitic clusters are a rich resource for understanding morphophonological phenomena, abounding both in gaps and in transformations -- sensitive to uninterpretable phi -- whose character puts them outside syntax, interpretation, and phonetically motivated phonology. This section corroborates that impression by highlighting their inertness to syntax and interpretation and its theoretical consequence: they belong to a morphophonology opaque to the syntax, as in Bonet's (1991, 1995) extensive work and in contrast to syntactic alternatives. Thus Romance clitic cluster phenomena serve as a case study for the PF-Autonomy hypothesis. They form also a minimal counterpoint to the Person Case Constraint of chapter IV, a gap on the surface like other clitic cluster gaps that refers to phi-features, but that syntax and interpretation do see.

Some arbitrary gaps in French clitic clusters are indicated in (16), along with some minimally different legitimate clitic clusters. They have no repairs at all: there is no syntactic structure that exists just to fill the gap, and there is no morphological repair like deletion of one of the clitics retaining the same meaning. There is typically a great deal of inter-speaker and inter-dialectal variation on these gaps.⁵

- (16) Some clitic gaps in French varieties
- | | |
|---|--|
| a. 1SG/%3SG.ACC + LOC/GEN | (<i>m'/*l' y/en</i> , but some <i>m'y</i> also) |
| b. 1SG/3PL/%3SG + LOC | (<i>m'/leur/*lui y</i>) |
| c. *3/%1/%2.DAT + 3.DAT | (<i>*lui leur - %me lui</i>) |
| d. <i>aie(*-le) participe</i> 'have it (eaten &c.)!' vs. <i>aie-le</i> 'have it!' | |
- (Morin 1979a, 1981, de Kok 1985: 194ff., 366ff., Miller 1992: 175-6, Rezac 2008d)

Other gaps do have repairs, but they are systematically morphophonological rather than syntactic or interpretive. A common gap across Romance is (17), perhaps avoidance of partial

⁵ The first three gaps are discussed at length in Rezac (2008d), along with their possible underlying causes like morphological garden paths for (16)a-(16)b and the repeated morph constraint (16)c. For example, for **lui y*, repetition in phonology, namely the hiatus [(l)ɥi], and in morphology, namely the feature sequence [3SG OBL]_{DAT} [OBL]_{LOC}, play key roles. The constraint is resolved by subject clitic doubling (i-a), which resolves the phonological repetition *i lui y* [iji], by clitic reversal or intervening clitics, and by unclear factors like (i-b).

(i) (a) L'oiseau *(i) lui y a donné à manger. (b) L'oiseau (i) le lui y a donné à manger.
the bird *(he) him.DAT LOC has given to eat the bird (he) it.ACC him.DAT LOC has given to eat
{MJ}

phonological or featural repetition (Bonet 1991, 1995, Grimshaw 1997, Pescarini 2007, Nevins 2007).⁶ In this case the banned clitic combinations can always surface, but they are transformed. One or both of the clitics are replaced by a zero or by another clitic that elsewhere has a different meaning and syntax, like a reflexive or a locative clitic for the dative clitic: an *opaque clitic* in its use as a substitute.

- (17) Opaque clitic: 3.DAT + 3.ACC clitic clusters in Romance (esp. Bonet 1991, 1995)
- a. retained (standard French, Valencian)
 - b. 3.ACC → ∅ (French varieties)
 - c. 3.DAT → *se* reflexive (Spanish)
 - d. 3SG/%PL.DAT → *hi* locative (Catalan, various Italian dialects)
 - e. 3SG.DAT → *ni* ablative (Castrovalvi, South Italy)
 - f. features of both conflated and redistributed across two positions (Barceloní Catalan)

These replacements are not a matter of plain phonology because of Bonet's generalization in (18), which holds of these and other clitic cluster transformations in Romance: they traffic in clitics (and ∅'s), substituting one for another, not in phonology to substitute *pa* for the dative clitic, for example. Bonet's interpretation is that clitic cluster transformations involve a mechanism and information distinct from both syntax and phonology. They occur in a post-syntactic morphological component, which operates over the feature content of clitics submitted to it component by the syntax, and prior to linearization and spell-out to phonology (cf. Bonet 1995: 619).

- (18) Bonet's generalization: opaque output forms in clitic combinations always result in another clitic form, indicating a closed system. (Bonet 1995: 612)⁷

Putting clitic gaps and allomorphy into a post-syntactic morphophonology meshes well with the apparent properties of these phenomena. The relationship between the banned or transformed features and the context that bans them is arbitrary from a syntactic and interpretive standpoint, as can be seen by contrasting the good and banned or transformed combinations in (16) and (17) and the great deal of variation in both. The gaps and transformation are often not nontrivial generalizations over feature classes, involving arbitrary feature combinations or vocabulary items.⁸ Furthermore, the gaps and transformations seem to systematically pay attention only to information available in some word-like local context, like the clitic cluster and its host. A dative clitic behaves the same for all the gaps in (16) and the transformations in (17) whether it is a lexical (subcategorised), benefactive, possessive, or causee dative, each with a different syntax

⁶ However, repetition avoidance becomes less plausible to the extent that the same transformation occurs when one of the clitics is genitive, as in the Arce dialect of Italian where 3.DAT + 3.ACC/GEN alike replace the dative by locative: *glie glie / ne* → *ce ne* (Pescarini 2007).

⁷ The generalization does not prevent phonology from affecting clitic clusters, but as phonology it should be insensitive to clitics as such, preventing e.g. phonological transformations only of or in the context of 3rd person accusative clitics. This seems true (see Cardinaletti 2008: 5.3 for discussion of one such operation).

⁸ The limited inventory of clitics has as consequence that all gaps and transformations can be defined over features that are potentially visible to narrow syntax, if phi-features are included among them, and do not need to resort to reference to the morphophonological identity of exponents, as does the past participle gap of *stride* vs. *glide* where the two verbs of each pair have the same syntactic and thematic properties. This is one fact that renders possible a syntactic approach discussed and rejected below.

and interpretation. In contrast, we will see in chapter IV that there are gaps and transformations similar on the surface to (17), but differentiating dative clitics according to such information; these will turn out to belong solidly to the syntax and the similarity only superficial.⁹

The greatest coup of a morphophonological approach to Romance clitic cluster gaps and transformations lies elsewhere, however. It is the following prediction that is not made by any approach that would place either phenomenon in the syntax-to-LF mapping: post-spell-out clitic cluster transformations should be invisible to syntax and interpretation by PF-Autonomy. It seems to hold: in a pervasive and systematic fashion, Romance clitic cluster transformations do not affect syntax or interpretation, and often it is clear what the effect would be.

(19) Syntax and its interpretation are not affected by Romance clitic gaps or transformations.

For irreparable gaps, (19) will be established at greater length in chapter IV, when we see what a syntactic repair of a clitic cluster gap looks like. The gaps in (16) could be repairable by a strong pronoun instead of the clitic without the focus otherwise associated with strong pronoun – and this is not available.

For clitic cluster transformations, the Spanish "spurious *se*" (20) is a good example of their inertness to syntax and interpretation. Across Spanish, a 3rd person dative clitic, independently 3SG *le*, 3PL *les*, is replaced by *se* in the context of a 3rd person accusative clitic and not elsewhere. *Se* is elsewhere a dative/accusative reflexive clitic for all persons and an impersonal subject clitic. Additionally, in American Spanish varieties, the number and, in some, gender of the dative clitic is realized on the accusative clitic. Thus, the 3PL dative clitic *les* in the context of a 3SG.MASC accusative clitic is realized as *se*, and the accusative as 3PL accusative *los*, (21). This transference of features does not seem to be a case of phonological migration of affixes in the manner of Harris and Halle (2005): if the dative clitic is feminine, a 3SG.MASC accusative clitics *lo* surfaces as feminine *la*, while both the dative clitic 3SG *le* and its replacing spurious *se* are syncretic for masculine and feminine. The transference of phi-features is very clearly not impacting syntax or interpretation, since the affected accusative clitic is interpreted as 3SG.MASC. It is also clear that the substitution of the dative clitic 3SG/PL *le/les* by *se* is not affecting syntax and interpretation, since the *se* from a dative is disjoint and not reflexive or impersonal.

(20) Spurious SE in Spanish varieties (Bonet 1991, 1995)

- a. 3.DAT → SE // __ 3.ACC [American, Iberian Spanish]
- b. number, %gender of 3.DAT realized on 3.ACC [American Spanish only]

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

Bonet (1995) proposes to handle Spurious *se* in the mapping from syntax to PF, the morphophonology component responsible for allomorphy in general. The rule (22) prunes the featural specification of 3rd person dative clitics in the context of a 3rd person accusative one to

⁹ There are some exceptions like the gap in Heggie and Ordóñez (2005: 12-3), arguably only apparent (deriving from morphological garden-paths and effects that suspend them), discussed in Rezac (2008d).

the featural specification of the more impoverished *se*. Occurring outside syntax and interpretation, the transformation is properly invisible to them and instantiates PF-Autonomy.

(22) Bonet 1995: 3.DAT = [CL [ARG [(pl)]]] {3RD ~~[OBL]]~~} → [CL [ARG [(pl)]]] = *se*

There are many other examples from which the argument like that of Spurious *se* can and has been made, including others affecting 3.DAT+3.ACC clitic clusters like the replacement of a dative by a locative (Bonet 1991: 211), or the transformation in (23).¹⁰ In some varieties of French, a 3rd person dative + 3rd person accusative cluster, like the standard (23)a, is transformed by deletion of the 3rd person accusative clitic before a 3rd person dative (cf. Miller 1992: 172, citing also Morin 1979b, Auger 1994: 82-3, Bonami and Boyé 2006: 296), and by the insertion of a spurious 3SGM clitic *le* at a more formal level (Rezac 2008d).¹¹ The deletion and insertion of a 3SGM clitic does not have the obvious consequences of adding a theta-role or presuppositions about a 3SGM entity in the sentence. Chapter IV shows the absence of subtler syntactic and/or interpretive consequences, like the invisibility of the deletion for the binding theory.

- (23) a. Elle la lui a envoyé. (* for MJ at FR-C/M)
 she her.ACC him.DAT has sent
 She has sent it (e.g. the letter) to him.
 b. Elle ~~la~~ lui a envoyé.
 c. Elle la le lui a envoyé.

{MJ}

A cluster transformation outside the 3.DAT+3.ACC group is deletion (haplology) of one of two identical genitive or locative clitics, discussed for French in Perlmutter (1969: 115-6) and Miller (1992: 143-5), who emphasizes its syntactic / interpretive inertness. Consider (24). In French a bare quantifier like *deux* 'two' can be used only if its restrictor is indicated by the genitive clitic *en*, and left dislocation of the PP argument *de ce vin* 'of this wine' requires *en* as well. Combining the two processes would yield two *en* clitics, an outcome that is banned by a cross-linguistically common although violable "repeated morph constraint" (Menn and MacWhinney 1984, Neeleman and van der Koot 2005). In French, the *en en* sequence can instead be realized as a single *en*, but for the syntactic and interpretive requirements of quantifiers and left dislocated phrases there clearly are two *en* clitics in the syntax. In particular, the independence of the two interpreted *en*'s in the result can be contrasted with the independently possible linking of a single *en* to two gaps, as in (25). In short, syntax and interpretation do not see the deletion of one of the *en*'s.¹²

¹⁰ This is so for those grammars where the dative/*y* substitution truly does not affect any syntactico-semantic properties, like usability with extended datives or the Person Case Constraint of chapter IV; thus the locative for 3SG.DAT in Québec French (Auger 1994) or Catalan (chapter IV). Other *y* substitutions do involve a different syntax (Couquaux 1975, Postal 1990, Rezac 2008e).

¹¹ Auger (1994: 83) and Bonami and Boyé (2006: 296) point out that the deletion cannot be object drop (of which it lacks at any rate the characteristic non-specific reading), since it is available with verbs that subcategorize for a direct object, and the latter along with Miller (1992: 172) note that it is not a plausible phonological process.

¹² For another apparent instance of haplology in French, involving a dative and accusative reflexive *se* to a single one, see Kayne (1975: 372), Postal (1989: 132 note 15, 1990: 195 note 62). Not all doubling can be saved like this. Perlmutter (1971: 33) and Bonet (1991: 169) discuss Spanish impersonal and spurious *se* sequences that cannot be rescued by deletion, and Miller (1992: 264-5) contrasts *en en* reduction in French with impossible deletions in clitic

- (24) a. il remplit deux verres de ce vin.
 he fills two glasses of this wine.
 b. il *(en_i) remplit [deux t_i] de ce vin.
 c. Ce vin, il ??(en_j) remplit deux verres t_j.
 d. *Ce vin, il en_i en_j remplit deux.
 e. Ce vin, il en ~~en~~ remplit deux.
 "This wine, he fills two of them_i with it_k", not "He fills two wines with wine" or "He fills two glasses with glass"
- (25) Marie en_i a présenté [le frère e_i] à [la sœur e_i]
 Marie of.him has introduced the brother to the sister
 Marie introduced his_i brother to his_i sister. (Sportiche 1996: 255)

With these as examples to ground the discussion, we can see the gain of putting opaque cliticization into the morphosyntax. It correctly predicts its inertness to syntax and interpretation, just as putting it into the phonology would, yet it is compatible with Bonet's generalization because the mechanisms involve manipulate morphophonological features.

The morphophonological approach to Romance clitic cluster transformations need not actually assume a morphophonological (syntax→PF mapping) component with the power attributed to it by Bonet (1991, 1995) to sever features from their syntactic terminals and attach them to others.¹³ If the features involved are themselves viewed as syntactic terminals, as proposed and developed in Manzini and Savoia (2002 et seq.), then clitic cluster transformations can be defined as simple clusterings of syntactic terminals in function of the insertion of phonological exponents. Suppose a 3PL dative clitic consists of two elements, α and PL. Ordinarily, these are spelled out together as *les*, (26)a, perhaps specifically $le_{\alpha} + s_{PL}$. In the context of an accusative clitic like *lo* however, spell-out targets α and PL separately, realizing α as *se* and PL as an affix on *lo* if at all. One possibility is that the accusative clitic undergoes movement to separate α and PL making it impossible for them to be spelled-out together, (26)b. Pursuing this to its limit could limit the scope of the spell-out component to realizing multiple syntactic terminals separately or together (Cardinaletti and Starke 1999: 214, Julien 2002: 91, 298-313), given a suitable principle that prefers to realize multiple terminals by a single exponent if there is a lexical item that groups them, that is a version of word-phrase blocking (specifically Caha 2005; cf. Andrews 1990b, Poser 1992, Börjars et al. 1996, Caha 2005, and contrast Embick and Marantz 2008). All post-syntactic manipulation is restricted to the independent phonological component, on par with processes like assimilation. Only if phonology is attributed the power to

climbing in French. Taking the domain of haplology reduction to be clitics deriving from a single predicate might draw the proper distinction for French, although not for Spanish (thanks to Gilles Boyé for discussion). Elsewhere, cf. for Italian *ci* 1PL + *ci* locative haplology Pescarini (2005: 245, 2007 ex. 24), for Rocca Imperiale *nə* 1PL + *nə* GEN, Pescarini (2007 ex. 42). Repetition of two identical clitics is otherwise sometimes rescued by opaque cliticization, e.g. *n* GEN *n* GEN > *n i* LOC in Barceloní (Bonet 1991, 1995); *en en* > *se REFL ne* in Italian (Cardinaletti and Giusti 2005: ex. 197), or > *ce* LOC *ne* (Pescarini 2005); *si REFL* + *si IMPERS* in Italian > *ci* LOC/1PL *si* (Bonet 1995, Grimshaw 1997, Cardinaletti 2008); beside e.g. *u* NEUT *n* GEN > *l* 3SGM *i* LOC (Bonet 1991, 1995).

¹³ The content of this paragraph describes a proposal made by Michal Starke, p.c.; I am also grateful to Gillian Ramchand and Tarald Taraldsen p.c. for discussion clarifying the perspective.

linearize an element to the left or right of another, for example, would further manipulation be possible, as in (26)c.¹⁴

- (26) a. $\alpha \text{ PL} \rightarrow_{\text{Spell-out}} \alpha + \text{PL} = \text{les}$
 b. $\alpha \text{ lo PL } t_{\text{lo}} \rightarrow_{\text{Spell-out}} \alpha \text{ lo} + \text{PL} = \text{se los}$
 c. $\alpha \text{ PL lo} \rightarrow_{\text{Spell-out}} \alpha \text{ PL} + \text{lo} = \text{se los}$

On this view, the component of morphophonology relevant to clitic cluster transformations and gaps is just lexical insertion: the realization of syntactic structure by phonology through lexical items as the pairings of syntactic structure and phonological information. Opaque clitics are simply the best realization of the same ingredients of syntactic structure as regular clitics when the structure that the latter spell-out has been transformed so it no longer meets their insertion conditions. PF-Autonomy follows trivially since the syntax does not see its realization by exponents, exactly as in a richer morphophonology component of which lexical insertion is a part. The burden of the proposal is in justifying the syntactic and semantic inertness of the syntactic movements necessary to disturb it, like that of *lo* which separates α and PL and prevents them from being spelled-out as *les*, so $[\text{lo } [\text{PL } [t_{\text{lo}}]$ is interpreted as $[\text{PL } [\text{lo}]$ and not as in-situ $[\text{lo } [\text{PL}]$, i.e. the 3PL accusative *los*.¹⁵ The proposal derives a particularly strong version of Bonet's generalization that may be correct: opaque cliticization is only sensitive to information that can be analysed as syntactic, because it is just the spell-out of a given syntactic structure. For example, the transformations of 3.DAT+3.ACC clitic clusters should not be sensitive to the class of the verb that hosts the clitic cluster or to its phonological properties, but rather to such information as whether the neighbouring clitic is accusative or 3rd person.¹⁶ How far the proposal should be extended to account for morphophonology in general depends precisely on the extent to which morphophonological phenomena can be attributed either to the lexical insertion of exponents for syntactic structures or to purely phonological transformations. Classical morphophonology predicts the possibility of mixing of the two types of information, for example an opaque cliticization that depends on phonological or class information (for potentially pertinent examples, cf. Carstairs 1987: 157-161, Bobaljik 2000, esp. discussion in notes 17, 44).

Contrasting radically with either a robust or trivial morphophonological theory for Romance clitic cluster gaps and transformations is Manzini and Savoia's (2002) proposal, also starting from Bonet's generalization. Opaque clitics are the use of the substituting clitic with its normal lexical and syntactic properties: not a locative clitic in a dative interpretation, say, but really a locative clitic in a locative interpretation. It can therefore be thought of as "projectionist" about

¹⁴ One can see that further decomposition might head towards reducing even plain allomorphy of α as *le* vs. *se* under a decomposition of *les* as $l + se_{\alpha} + s_{\text{PL}}$, if there is no spell-out for plain $l + \alpha$ without number and gender.

¹⁵ Plausible candidates is ordering variation of 3.DAT + 3.ACC clitics in Romance (Michal Starke p.c.; cf. Lambrecht 1981: 32 for French, and for related phenomena e.g. Heap 2003, 2005, Ordóñez 2002); yet it is not clear that this is always semantically and syntactically inert (cf. Bouvier 2001, Rezac and Joutteau in prep.).

¹⁶ In practice, it is often indeterminate what information opaque cliticization is sensitive to: the 3+3 transformations or haplology reductions can be viewed as responses to phonological haplology within the cluster (but see Bonami and Boyé 2006, Miller 1992 resp.), and a context defined by a locative clitic can be equally analyzed as occurring in the context of the syntactic information that defines the locative or the locative exponent per se because the number of clitics is sufficiently limited. Still, there are no examples, to my knowledge, that would have to be analyzed as opaque cliticization involving clearly solely morphophonological properties. For gaps such examples exist: (16)d.

allomorphs.¹⁷ Since the syntax and interpretation of the opaque clitic are clearly not those it has independently, as shown above, a mechanism is required to ensure the inertness of the latter.

Manzini and Savoia make two proposals. For some substituting clitics, the meaning is sufficiently similar to the meaning of the substituted clitic that one can be used for the other. The use of a locative for a dative clitic is really that and the speaker is conceptualising a goal as a location, a phenomena with independent plausibility in natural language. This won't work for the use of a reflexive clitic for a dative one, and for such cases they propose the semantic version of allomorphy. It is a lexical, parametrizable fact about the syntax and interpretation of a clitic like *se* that it is reflexive / impersonal everywhere except in the context of a 3rd person accusative clitic, where it can additionally be a disjoint pronoun. The idea is the semantic version of allomorphy and a more general version of the mechanism independently necessary to interpret idiom chunks. Like *pay* is interpreted a way different from its ordinary meaning in the contexts of *homage*, *lip service*, *attention*, so is *se* interpreted as a dative in the context of a 3rd person accusative clitic in Spanish. A better analogy still is the French genitive clitic *en* which is a pro-PP indicating the source of motion; it has lost this interpretation and become an idiomatic part of several collocations such as *en vouloir à X* 'be mad at X' lit. 'en want to X', *en dire long (de X)* 'go far in explaining X' lit. 'en say long', *s'en prendre à X* 'attack X' lit. 'take oneself to X', *s'en aller (de X)* 'go away (from X)' lit. 'go oneself en'. However, the analogy is missing a crucial aspect of clitic cluster transformations: the interpretation of *se* as a reflexive rather than as a dative is systematic in a given set of contexts, those of 3rd person accusative clitics, and is that of elements that is missing in this context, the set of dative clitics. The interpretations of *en* lack this property that indicates a transformation of form not affecting meaning and syntax. So one could use semantic allomorphy to account for clitic cluster opacity – but only by stipulating one's way through the data cluster by cluster to miss this obvious property.¹⁸

There are a couple of other reasons for not taking the semantic allomorphy route or various variants that would effectuate clitic cluster transformations in syntax or interpretation; they are more slippery but if on the right track quite categorical. On most construals morphophonology is restricted to paying attention to local word-like contexts only. That limitation predicts a probable constraint on clitic gaps and transformations noted above: they are only sensitive to what information there is about a clitic in the clitic cluster, not its larger syntactic context, like a benefactive vs. a subcategorized dative. Special interpretations like those of idiom chunks are not, even for clitics, where entirely collocations involving the verb and its subcategorized preposition are relevant. Further, it derives a curious observation about the interpretation of phi-features in natural language, if true: interpretive opacity of phi-features as morphologically signalled, like that seen in some of the clitic cluster transformations (*se* REFL *los* 3PL.ACC = 3PL.DAT + 3SG.ACC), seems restricted to contexts where the phi-feature bearer is roughly in the same word with to the context needed to state the opacity (the "morphological idioms" of Rhodes 1993). There never seems to occur a suspension of the reflexive meaning of a word like *himself* in the context of other distinct phrases, to parallel the suspension of the meaning of *se* in the context of other clitics. If this is true, the opacity of phi-features belongs to the module that cares about

¹⁷ A characterisation I owe to Edwin Williams p.c.; cf. Borer (2005) on projectionist vs. constructionist.

¹⁸ Thinking of this as semantic allomorphy was suggested by Justin Fitzpatrick and David Adger, p.c. Reflexive, locative, and genitive clitics may be parts of idioms: *y aller* 'go ahead (and do), proceed (with), start' lit. LOC go', Some but not all of these may involve a non-idiomatic if bleached adverbial meaning of the clitic. That analysis is tenable for the few examples with accusative clitics like *l'emporter* 'win, lit. carry it away' which as in English *take it away* 'now it's your turn' may be a real object.

whether they are in the same "word" with another element, and that would be morphophonology, not interpretation.

To sum up, the gaps and opaque forms in Romance clitic clusters indicate by their formal description operations of the morphophonology rather than syntax component, and their systematic inertness to syntax and interpretation confirms the autonomy the opacity of morphophonology to them, as posited by PF-Autonomy. These phenomena behave as a tight encapsulation of syntax from morphophonology would predict, and furnish ample data where the empirical scope of PF-Autonomy can be gauged. A model that either puts clitic cluster gaps and opaque forms into the syntax, or does not adopt PF-Autonomy, is systematically making the wrong predictions that then have to be taken care of.

1.3 Overview

We have now seen the grounds for and the scope of the thesis of PF autonomy, repeated below. Morphophonological phenomena, identifiable by the formal character of their context and transformations, are systematically invisible to syntax and interpretation. Their invisibility supports a tightly modular construal of the syntactico-interpretive and morphophonological aspects of language, like but by no means only the Y-model.

- (2) **Autonomy of syntax/interpretation from morphophonology** [PF-Autonomy]: Syntax and its interpretation are autonomous of (morpho)phonological properties and mechanisms.

Naturally, there remain cases of doubt, where it is not clear that a morphophonological factor does not affect syntax and interpretation. Some may be genuine. Given the robustness of PF-Autonomy, they likely to shed light on the precise shape of rather than cast doubt on its overarching correctness. In this light will be explored in chapter V apparently transmodular syntactic repairs of requirements imposed by interfacing systems. Among other phenomena, focus has consistently attracted attention as a possible instance of an LF-PF mapping whose implementation in syntax has the air of a coding trick (Reinhart 2006, Szendroi 2005, Holmberg 1999, Chomsky 2001; but see e.g. Rooth 1985, Williams 2003, Irurtzun 2005). If indeed it is so, it seems much more like progress in understanding the boundaries of the Y-model than a challenge to it, given the limited and consistent empirical domain that the phenomenon carves out – curiously akin, perhaps, to the sensitivity of low level vision to attention alone among external cognitive mechanisms (Pylyshyn 1999).

Problematic for PF-Autonomy would be syntactic access to some instantiations of those morphophonological phenomena that exemplify it in the first place, like syncretism, allomorphy, or arbitrary gaps. Many such have been raised and in general, turned out not to be such: Pullum and Zwicky (1984, 1988) and Miller, Pullum, and Zwicky (1998), are two in-depth, extensive, foundational rebuttals, along with many on specific issues (Embick and Marantz 2008 on Bresnan 2001, Bonami and Boyé 2003 on Perlmutter 1998).

For a different example, consider an important paradigm in recent discussion: analytic-synthetic alternations like those of the English comparative in (27). These belong to the morphophonology, for they invoke the primitives and mechanisms of that domain, here the attachment restriction of the comparative to monosyllabic adjectives. To a very good approximation, they do also not change syntax or meaning. The meaning of the comparative and

its syntactico-semantic consequences like the licensing of the NPI *ever* do not vary according to its expression as a synthetic *smarter* or analytic *more smart*. The grouping of properties suggests not handling them directly within the syntax, through syntactic head-movement, since both that would both import morphophonological conditions and not explain its inertness.

- (27) a. Mary is quicker/more rapid than John ever was. (*more quick, *rapider)
 b. Mary is more quick/rapid than careful. (*quicker, rapider)

Another example, relevant in view of the material discussed in chapter IV, is the agreement – strong prong pronoun alternation in the Celtic languages like Irish (McCloskey and Hale 1983, Andrews 1990, Pranka 1983, Ackema and Neeleman 2003).¹⁹ Here the choice between an agreeing verb with a null pronoun or 3SG verb + strong pronoun depends arbitrary properties of inflectional morphology, say 1SG, 2SG, 3PL vs. the rest, and there are no syntactico-semantic differences between the synthetic and analytic expressions. The agreement inflection of a verb can serve as a focussed pronominal subject or the left member of a coordinate structure just like a strong pronoun. In stark contrast, Romance *pro*-drop agreement cannot, and so it has been construed as syntactically poorer than a strong pronoun (Cardinaletti and Starke 1999), and not in an analytic-synthetic alternation with it unlike the Irish paradigm.

Further theoretical details of these alternations depend on the implementation. In one class of approaches, the realization of a structure as synthetic or analytic is determined entirely post-syntactically, by such devices as morphophonological head movement which must then exist in the relevant domain (Embick and Noyer 2001, Embick 2007, Embick and Marantz 2008; Ackema and Neeleman 2003). Here syntax and semantics cannot be affected by definition, assuming modularity. What can be affected are syntagmatic properties that depend on the existence of morphophonological head-movement, such as further morphophonological head-movement. The unavailability of one member of the pair and the use of the other in a given syntactic context, as in (27)b, is the result of the morphological interpretation of syntactic structures. This kind of approach is not transmodular at all.

In another class of approaches, the synthetic member of the pair blocks the analytic because the analytic structure refers to and is render illegitimate by the possibility of using a single word to spell-out its features, whether this is done in syntax or in a separate domain where paradigms live (Andrews 1990, Poser 1992, Börjars et al. 1996, Kiparsky 2005). In these approaches there may be transmodularity here, if a morphophonological realization of one syntactic structure blocks another (Poser 1992), and/or transderivationality if the analytic structure is rather or additionally defined by its syntax as in the remaining approaches, but any challenge to PF-Autonomy is very limited. The mechanisms are defined in such a way that the candidate syntactic structures for the synthetic and analytic members must have the same syntactico-semantic feature content. Consequently, the only potential effect on the syntax of the alternation is if the synthetic member contains syntactic nodes (not features) that the analytic member does not, and there are phenomena that depend on this distinction, like syntactic movement of a subset of these nodes.²⁰

¹⁹ Cf. Adger 2000 on Scottish Gaelic, Jouitteau and Rezac 2006 on Breton, the latter missing the potentially interfering factor of emphatic particles signalling *pro*-dropped relative clause heads and left conjuncts.

²⁰ See Kiparsky (2005) for the Sanskrit periphrastic perfect as an example of this: the participle of the analytic expression undergoes apparently phrasal displacement only if the synthetic expression with the auxiliary is impossible, forcing a purely morphophonological approach to treat the participle displacement as "stylistic"

Here concludes the case for modularity morphophonology. In chapter IV, we will return to a clitic cluster gap in Romance that unlike those considered above, and indeed unlike all others that I am aware of, is not inert for syntax and interpretation: it is repaired by syntactic structures that do not exist otherwise. This gap is the Person Case or *me lui* constraint. It will constitute a prime case of where syntax must refer to uninterpretable phi-features for the licensing of certain structures or derivations. It would also constitute an apparent counter-example to PF-Autonomy if the gap were truly indistinguishable from other clitic cluster gaps. However, this is not so; for unlike clitic cluster gaps that it resembles, the Person Case constraint is within French a phenomenon independent of clitic clusters and definable only over syntactic primitives, as PF-autonomy predicts. However, before proceeding there, the next chapter looks at what evidence for phi-visibility in narrow syntax looks like in the first place.

movement at PF after the analytic form is made available by vocabulary insertion, for otherwise the movement would bleed the context of the synthetic formation even where otherwise available and thus always deblock the analytic form. Embick (2000: 203) finds the same problem for a syntactic treatment of the Latin periphrastic perfect, but also presents alternatives that seem independently preferable. The example is the Latin perfect, where the active is synthetic (*laudavi* 'I.have.praised') and the passive is periphrastic (*laudatus sum* 'praised am.I' = 'I have been praised'). The alternation cannot be linked with any syntactic or semantic property because deponent transitives have a full active syntax and meaning but by arbitrarily missing the analytic perfect make use of the periphrastic one (*secutus sum* 'followed am.I' = 'I have followed'), and so requires reference to some arbitrary and arguably morphophonological property P that deponent roots have, along with passive *v* (Börjars et al. 1996, Embick 2000, Kiparsky 2005). P does something like block $V(+v+Asp)$ to T raising that occurs in the synthetic forms, and results in analytic expression of the two in the periphrastic form. Embick (2000) considers a syntactic and a morphological approach to this required head movement. On the syntactic approach, V raises to T in the syntax and P blocks this, so P must be visible to syntax although morphophonological. On the morphophonological approach, V and T are separate throughout syntax and joined in the morphophonology by morphological merger, which is blocked by P. His reasons for finally preferring the syntactic approach is that the morphophonological approach would let V moved be away from T in the syntax by independently available scrambling, since V and T are separate throughout syntax, and bleed the conditions on V-T merger for any verb whether there is has P or not (p. 202-4). Thus beside active *lauda-v + vi-T* for 'I.have.praised' with V to T raising, we should get active *lauda-v ... sum-T* if V is scrambled away from T, and this is incorrect. However, this presupposes that the moved $V(+Asp+v)$ *lauda-* can actually be spelled out in some way; Embick assumes as the passive participle *laudatus*. But there is no reason to suppose so. If there were a spellout of the moved active $V+Asp+v$, it should be an *active* past participle, and these are famously missing in Latin (p. 209). So we may assume that presence of P not only blocks $V+Asp+v$ from raising to T but also provides a spell-out for it (presumably as a reflex of the same property that makes $V+Asp+v$ an independent, non-affixal unit); if there is no P, there is no spell-out. There is now no obstacle to putting V to T raising into the morphology and its blocker P along with it, along with Distributed Morphology's treatment of other analytic-synthetic alternations and with no issues for modularity.

1 Chapter III: Syntactic correlates of Person Hierarchy interactions

1.1 Person Hierarchies

This and the following chapters draw evidence about the nature of uninterpretable phi from the mutual interactions of two DPs according to their specification for person: *person hierarchy* or *PH interactions*.¹ The domain of this chapter is interactions between the external argument and the direct object of transitives, EA and O respectively, on a hierarchy differentiating at least 1st and 2nd person from 3rd.² Typically, the higher of the two DPs on the hierarchy, the winner, is the more canonical agreement controller and the unmarked case bearer. The PH interactions of interest here are those where winning also correlates with distinctive syntactic and interpretive properties, so that the PH interaction revealed by case/agreement morphology has syntactic correlates. In consequence, the syntactic behavior of a given DP depends both on its interpretable phi-specification, and on that of another DP which is uninterpretable on it.

Two quite different patterns of PH interactions of this kind are discussed, exemplified by Algonquian and Tanoan. The pattern of syntactic correlates to PH interaction found in Algonquian is theoretically only suggestive, and it can be handled by modeling PH interactions outside syntax if the module that implements them filters syntactic structures that it cannot interpret. However, the pattern found in Tanoan ought to be handled within syntax itself, and so provides the first indication that uninterpretable phi is syntactic. The evidence is not as robust as one would like. Its gaps are filled in the next chapter, which explores the same abstract pattern of PH interaction as is found in Tanoan, but between the direct and indirect object in French.

Ojibwa and Southern Tiwa show what typical PH interactions look like. In Ojibwa, there is an agreement prefix on the verb that is controlled by whichever among the external argument and the object of a transitive is higher on the hierarchy 2nd person > 1st person > 3rd person: the external argument in 2_{EA} → 1_O/3_O, 1_{EA} → 3_O combinations, the object in 1_{EA} → 2_O, 3_{EA} → 1/2_O combinations (subscripts henceforth omitted). In Southern Tiwa, the higher DP on the hierarchy 1/2 > 3 controls verbal agreement, and if it is the object, that is in 3 → 1/2 combinations, the external argument appears with an oblique suffix and the verb with an extra morpheme. The latter outcome looks like a passive. It is a common pattern in PH-interactions, and underlies the nomenclature of the two basic scenarios: when the EA outranks O the configuration is said to be *direct* and it often resembles the canonical transitive of languages without PH interactions, while when the O outranks EA it is said to be *inverse* and it often resembles the canonical passive or another detransitivization. Table XX resumes the behavior of Ojibwa and Southern Tiwa, as well

¹ NOTE-5: Overviews are in DeLancey 1981: 641ff., Jelinek and Demers 1983, Silverstein 1985, Klaiman 1992, Jelinek 1993, Arnold 1997, Aissen 1997, Nichols 2001, Trommer 2001: chapter 7, Zuñiga 2002, Béjar 2003, Béjar and Rezac 2009.

² I intend EA and O to be defined not thematically but over Case/agreement domains so that restructuring and One consequence is that in the languages discussed in this chapter, the indirect object of the double object construction rather than the direct one is O, because behaves like the O of transitives. Another is that Exceptional Case Marking structures are included; cf. Bittner and Hale (1996). This is important in PH interactions: in Algonquian cross-clausal agreement discussed below, a DP in an embedded clause that controls agreement on an upstairs verb behaves as its object for PH interactions (Rhodes 1976, 1994, Dahlstrom 1986, Branigan and MacKenzie 2001, Bruening 2001), while for the Tanoan PH interactions, Nichol's (2001: 523, 531) points out that in Picuris the subject of a lower verb in a restructuring / ECM construction is treated as matrix O for PH-interaction.

as of other languages mentioned below, and of Kashmiri and Mohawk from Béjar and Rezac (2009) to complete the picture.³

(1) Table: Person Hierarchy phenomena (excluding 3 > 3 combinations)

	Ojibwa	Mapudungun	Cavineña	Arizona Tewa	Southern Tiwa	Kashmiri
	2 > 1 > 3	1/2 > 3	1 > 2 > 3	1/2 > 3	1/2 > 3	1 > 2 > 3
Direct	2 > 1/3 1 > 3	1/2 > 3	1 > 2 1/2 > 3	1/2 > 3 1/2 > 1/2	1/2 > 1/2/3	1 > 2 1/2 > 3
Inverse	3 > 1/2 1 > 2	3 > 1/2 1/2 > 1/2	3 > 1/2 2 > 1	3 > 1/2	3 > 1/2 1/2 > 3	3 > 1/2 2 > 1
EA in dir	AGR; bare	AGR; bare	--; bare	AGR; bare	AGR; bare	AGR; bare
EA in inv	(AGR); bare	(AGR); bare	--; ergative	AGR; oblique	--; oblique	AGR; bare
O in dir	(AGR); bare	(AGR); bare	--; bare	AGR; bare	AGR; bare	--; bare
O in inv	AGR; bare	AGR; bare	--; bare	AGR; bare	AGR; bare	--; oblique
Extra afx	(complex)	inverse	--	--	inverse	--

Note: (AGR) refers to different type of or to impoverished agreement

The inverse, as has been said, sometimes looks passive while the direct looks active. From another perspective, the inverse looks like an ergative structure with a marked oblique-like case for the EA and an unmarked case for the O, while the direct looks like a nominative structure. These comparisons bring to the fore the essential character of PH interactions, which rests in their reference to uninterpretable phi-features. PH interactions are *relational*, ineliminably referring to the features of both EA and O in their relationship to each other. If the EA outranks O the active-like direct must be used, and if O outranks the EA, the passive-like inverse must be. So the behavior of each of the EA and O in PH interactions refers to two sets of phi-features: its own interpretable phi-features, and the phi-features of the other, which are, from its perspective, *uninterpretable*. PH-interactions belong to those phenomena using uninterpretable phi.

By contrast, the English passive is available or in (2) and (3) according to the properties of each argument independently (Delancey 1981), although the ensuing backgrounding of the EA and foregrounding of the O may end up creating a relational effect on both (reflected statistically, Bresnan et al. 2001). In the same manner, PH interactions differ from a phenomenon often discussed in relation to them, *differential case marking* (Delancey 1981, Silverstein 1985, Dixon 1994: 85ff, Woolford 1997, Bossong 1985, 1998, Aissen 1997, Carnie and Jelinek 2005, Harbour 2007). Table XX illustrates it from Yidin^y: only EAs low on the person hierarchy are

³ This work is not about PH interactions per se, but about extracting from them an argument for the syntactic status of uninterpretable phi, and so their other properties are left aside here: see the references of note NOTE-5. Notable in the table is not just the variability in the expression of direct and inverse contexts, but also in the hierarchy itself, and in whether combinations of equally ranked arguments (1↔2) are direct or inverse. Such variation does not straightforwardly correlate with other factors: Mohawk has a 1>2>3 hierarchy but resemble much more Algonquian than Kashmiri in syntax, including in the expression of PH interactions (Béjar and Rezac 2009), while Arizona Tiwa and Southern Tiwa closely resemble each other but treat 1↔2 as inverse vs. direct respectively. A very frequent feature of 1↔2 interactions is using an opaque form, a "morphological idiom" in the sense of Rhodes (1993), such as 1st person dual inclusive: see esp. Heath (1991, 1998). PH interactions often also involve number, as in Kiowa (Zuñiga 2002) or Dumi (Trommer 2006), but I am not aware of any syntactic or interpretive correlates. The number-dependent interactions familiar to me affect agreement control alone and never oblique marking of the Tanoan type. Perhaps this indicates a principled difference whereby only person hierarchies in the syntax.

marked ergative, and only IAs high on it the marked accusative. Differential case marking depends on a DP's phi-features alone, not on its relationship to the phi-features of another DP. Differential case marking in turn resembles *split intransitivity* (Dixon 1994: 71ff.) whereby the ergative or absolutive case marking of the subject of an intransitive depends on its meaning, again independently of the features of another D.

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

(Delancey 1981: 638)

- (3) a. The ship / you approached / neared the iceberg / me.
b. The iceberg / I was approached / *neared by the ship / you.

(modeled on Postal 2007: 2.6)

- (4) Table XX: Differential subject/object marking in Yidin^y (Dixon 1994: 87)

		Case			
		ERG	ERG	ERG	ERG
EA	∅	ERG	ERG	ERG	ERG
S	∅	∅	∅	∅	∅
O	ACC	ACC	(ACC)	∅	∅
Hierarchy	1 st , 2 nd	humans, deictics, interrog.	inan. deictics, proper names, kin terms	inan. interrog.	common nouns and adjectives

PH interactions then make use of uninterpretable phi, and as for other uninterpretable phi the question arises whether they are best handled in the syntax or in the morphophonology. Their most obvious reflexes appear in the case and agreement system. Approaches that handle this system entirely in the morphophonology put PH-interactions there: Noyer 1992 for a variety of languages, Halle and Marantz 1993 for Potawatomi, Marantz 1991 for Georgian. The consequence is that syntax and interpretation are blind to PH-interactions. This is the strong entailment of the hypothesis that uninterpretable phi is in the morphophonology in general, or to narrow it down as much as possible, of any hypothesis that makes invisible to syntax the relevant distinctions among uninterpretable person features involved in PH-interactions such as 1st/2nd vs. 3rd person. Being visible only in morphophonology makes these distinctions parallel to that among the plural exponents in *ox-en* and *bull-s*, inert for syntax and interpretation.

This and the following chapters examine syntactic and interpretive correlates of PH interactions in two different patterns, which indicate that it is ultimately untenable. However, the results are limitative: *some* PH interactions will have to be put into the syntax, and so *some* uninterpretable phi is visible there, minimally the 1st/2nd – 3rd person distinction as it will turn out. By contrast, there are very good reasons to put at least some PH interactions into the morphophonology, motivating the conclusion of the works cited above. The point of departure for this is the observation that not all PH-interactions can be stated by referring to the classes of DPs defined by a single phi-set, like the classes of 1st, 2nd, and 3rd person DPs defined by the person geometry 2nd > 1st > 3rd person. Algoquian prefix agreement is like that, so whichever DP of EA and O is the highest on that scale controls the prefix. That kind of a system can be easily handled by a syntactic dependency singling out a particular DP among EA and O according to its features – dependencies for 1st (speaker) vs. 2nd (addressee) vs. 3rd person. Algonquian suffix

agreement competition is governed by a much more complex hierarchy involving clearly partly arbitrary groupings of person and number, in (5)a for Plains Cree with variation and even disintegration into separate EA/O tracking in other dialects, and the same complex and cross-linguistically unstable confluences of different phi-features govern EA-O competition for agreement control elsewhere as in Kiowa (5)b. Worse however are instances of EA-O phi-interaction that do not refer to a hierarchy over one phi-set but over ultimately arbitrary combinations of EA and O, as in (6). Many of these have been noted particularly for 1↔2 combinations cross-linguistically, whereby the expected combination is missing or opaque for some of the expected phi-features, in a way that is not expected from the rest of the paradigm. Sometimes the result is unique, sometimes independently and expectedly expressing a different meaning, as in Basque and Mapudungun: see esp. Heath (1991, 1998) and Rhodes (1993: 145), who calls such combinations "morphological idioms".

- (5) a. Plains Cree suffix hierarchy: 1PL > 1PL inclusive / 2PL > 3 animate > 1SG/2SG > 3 inanimate. (Zuñiga 2002: chapter 3)
- b. Kiowa phi- hierarchy: non-singular indirect / extended object (IO) > 2SG dative / 1SG EA > non-singular EA > 1SG/3SG IO > 2SG/3SG EA (Zuñiga's 2002: 211-2)
- (6) a. Chukchi spurious antipassive: apparent detransitivization deletes O's phi-features from agreement and inserts extra morphology in the contexts of 3SG→1SG, 2→1 in the non-participial tenses and additionally 1→2, 1/2→3, 3SG→3 in the non-participial tenses. (Bobaljik and Branigan 2006)
- b. Basque dialects: in Bizkaian varieties agreement combination 2SG→1PL is replaced by 2SG→3SG, 1PL→2SG by intransitive 2SG, etc., with the set of gaps and form of repair varying across dialects. (Hualde 2000: 22f., 2001, Rezac 2006, Arregi and Nevins 2006, 2008)
- c. Mapudungun: 1→2 forms unexpectedly fails to mark the object's phi-features (as it did historically). 1→2 forms (total number of participants > 3) uses an independently expected and used for "We see ourselves/each other", *pe-w-iiñ* [see-REFL-1PL(EA)]. 1SG→2 (total number = 2) uses unique *pe-e-yu* glossable as [see-INV-1DU(subject)] but distinct from "We two see", "He/they see(s) us two", "We two are seen". (Arnold 1994: 33, 1997)
- d. Thompson River Salish: 1PL→3 and 2SG→1PL are impossible, while all other combinations are fine. (Wiltschko forthcoming).

The morphophonological component has the tools to handle such idiosyncratic EA-O phi-interactions along with other arbitrary interactions of features on morphemes in contextual allomorphy, as the synchronic repository of syntactically arbitrary patterns (Wiltschko forthcoming, Bobaljik and Branigan 2006, Arregi and Nevins 2006, 2008). Modularity then predicts that these phenomena have no effects on syntax and interpretation, and that seems correct. Consider the Basque dialect of Ondarru (Arregi and Nevins 2006). It changes the older 2SG/PL→1PL agreeing auxiliary *gaitxusu(e)*, with 1PL prefix *g-* and 2SG(PL) suffix *-su(e)*, to 2SG→3SG form *dosu(e)*. The change affects phi-features, not their exponents, since the outcome is not the deletion of the prefix *g*, but wholesale readjustment of the form of the root and the insertion of the default prefix to give the very distinct form proper to 3SG/default objects. But change is also syntactically arbitrary in occurring only in this combination (and not in 3→1,

1→2, etc.), and so Arregi and Nevins put it into the morphophonology. Now, iff morphophonology is restricted to roughly word-like domains as on a classical conception of it, and if syntax is encapsulated from it, then we have the following correct prediction: the phi-deletion affects only the auxiliary, not the (realization of the) phi-features of the arguments themselves, as in (7). This is an intuitively trivial observation, but it is one that does not follow without these assumptions about morphophonology and without putting this phi-deletion there.

- (7) Su-k gu ikusi g-aitxu-su > d-o-su
 you-ERG us.ABS seen 1PL-AUX-2SG DFLT-AUX-2SG
 (Arregi and Nevins 2008, ex. 32)

In contrast, allowing syntactic mechanisms like A-movement or oblique selection to be sensitive to arbitrary EA-O phi-combinations amounts to letting it see the language-particular, arbitrary grouping of formal features on lexical items, abandoning the particularly powerful way that the Separation Hypothesis is implemented in Distributed Morphology and other frameworks.⁴ This move would only be motivated if such phi-interactions could be shown to be in the syntax along the lines discussed for the $1/2 > 3$ PH interactions of Tanoan at the end of this chapter, for which there is presently no evidence (see also note NOTE-10 for how strong the evidence would have to be). It would be an interesting conclusion and call for finding a way to differentiate the inert phi-interactions of clitics seen in chapter II from such phi-interactions of agreement, but there is no evidence indicating it is likely to prove correct and weaken modularity.

For PH-interactions that fall into the scope of the mechanisms of syntactic dependencies like those of the Algonquian prefix, matters are different.

1.2 Φ interactions in Ojibwa (and Mapudungun and Cavineña)

The seminal discussion of syntactic correlates of morphologically visible PH interactions is Rhodes (1994) for Ojibwa (Algoquian). The bulk of this section indicates what the evidence looks like, bolstered by additional work on Algonquian as well as notes on abstractly related patterns evidence in Mapudungun and Cavineña. The next section analyses the theoretical implications for uninterpretable phi, which are somewhat weaker than necessarily placing it in the syntax.

In Ojibwe the morphological reflex of PH-interaction is the agreement prefix of the verb. It is controlled by the highest DP on the hierarchy 2 (prefix *g-*) > 1 (*n-*) > 3 (*w-* in 3→3 / ∅ in intransitives with 3 subject). The PH interaction partitions the set of EA-O combinations into direct contexts, where EA controls the prefix (e.g. 2→1), and inverse ones, where O does (e.g. 1→2). Examples are in (8) under the column "independent".

(8)	Independent		Conjunct	Meaning
a.	n[i]- 1	giiwe go.home	giiwe- go.home	yaanh 1SG.SUBJ
				<i>I go home</i>

⁴ Whether it is going as far as letting the syntax see the phonological or conceptual differences between *cat* and *dog*, turns on answering whether the phi-specifications of morpheme exponents are like the features that differentiate *cat* and *dog* or not.

b.	g[i]- 2-	giiwe go.home		giiwe- go.home	yan 2SG.SUBJ	<i>you go h.</i>
c.		giiwe- go.home	w- ag 3 3PL	giiwe- go.home	waa- d 3PL 3SUBJ	<i>he goes h.</i>
d.	n[i]- 1	waab[a]m- aa see 3AN.OBJ		waab[a]m- Ø- see 3AN.OBJ	ag 1.ERG	<i>I see him</i>
e.	o-[>w] 3ERG	waab[a]m- aa- see 3AN.OBJ	[a]n OBV	waab[a]m- aa- see 3AN.OBJ	d 3.SUBJ	<i>he sees him</i>
f.	g[i]- 2	waabam- see	[i] 1OBJ	waab[a]m- i- see 1OBJ	yan 2SG.SUBJ	<i>you see me</i>
g.	n[i]- 1	waab[a]m- ig[o] see INV		waab[a]m i- see 1OBJ	d 3SUBJ	<i>he sees me</i>
h.	g[i]- 2	waab[a]m- in see INV		waab[a]m- in- see 2OBJ	aaanh 1SG.SUBJ	<i>I see you</i>

(Rhodes 1994: 432-3, meaning added, [x] means x does not surface)

The agreement prefix only shows up in the 'independent order' of the Ojibwa verb, which occurs in most simple independent clauses, and not in the 'conjunct order', which occurs in most subordinate clauses, in independent clauses with certain adverbials, or in certain discourse environments. Rhodes (1976, 1994) argues that the $2 > 1 > 3$ PH interaction is present only in the independent order, so that in the conjunct order EA and O do not interact in the $1/2 \leftrightarrow$ and $1 \leftrightarrow 2$ combinations at hand. Absence of the prefix in the conjunct is but ground for his conclusion. Independent morphological evidence comes from distributional differences in suffixes between the two orders, such as that of *i* in (9). In the independent order it occurs in $2 \rightarrow 1$ combinations, where the 2nd person EA controls the prefix, and not in $1 \rightarrow 2$ combinations, where the 1st person EA controls the prefix and the "inverse" marker *igw* appears in the slot corresponding to *i*. Here *i* is sensitive to the phi-features of both EA and O and so to their PH interaction. In the conjunct order however, *i* appears in both $2 \rightarrow 1$ and $1 \rightarrow 2$ combinations, and Rhodes (1976) argues from this and other such asymmetries that it is here a 1st person object marker, independent of interaction with the 2nd object (see Zuñiga 2002 for a lucid overview).⁵ Rhodes concludes that in EA \rightarrow O combinations involving one 1st/2nd person argument, there is PH interaction in the independent order, separating it into direct ($2 \rightarrow 1$, $1/2 \rightarrow 3$) and inverse ($1 \rightarrow 2$, $3 \rightarrow 1/2$) contexts, but not in the conjunct order, where all combinations are direct.

(9) Suffix *i*: Independent: $2 \rightarrow 1$ Conjunct: $X \rightarrow 1$, i.e. 1.OBJ

⁵ Note that although from shape it might appear that *igw* could contain the *i* suffix, this is not possible on distributional and morphophonemic grounds: all analyses (traditional, Pigott 1989, Rhodes 1976, etc.) agree on this point, although they do not all agree on the gloss of *i* (see Zuñiga 2002: 3.1, 3.2 for discussion).

a.	n-wābam-igw 1-see-INV	wābam- <i>li</i> -d see-1OBJ-3	'he sees me'
b.	g-wābam- <i>li</i> 2-see-2→1	wābam- <i>li</i> -an see-1OBJ-2sg	'you(sg) see me' (Zuñiga 2002: 103-4)

3rd person arguments in Algonquian can be grammatically animate or inanimate, and each 3rd person DP in the Algonquian languages is grammatically either *proximate*, a unique DP per clause that functions with central, topic, point-of-view qualities, or *obviative*. Combinations of two 3rd person EA→O are governed by their own hierarchies, 3 proximate > 3 obviative and 3 animate > 3 inanimate, and the outcome affects verbal morphology which is sensitive to whether the winner is the EA (direct contexts) or O (inverse contexts).⁶ The 3rd person hierarchies cannot be conflated with the 2 > 1 > 3 hierarchy, as they do not affect the prefix and are present in the conjunct order as mentioned below (Rhodes 1994: 432). It is unclear whether they are based on phi-features rather than such notions as topic, so they will play only a supporting role below, although the 3anim > 3inan interactions are of great interest. However, the proximate-obviative distinction referred to by them is known to be syntactic, and that comes in useful because one of the effects of 2 > 1 > 3 PH interactions is to affect the obviation status of a 3rd person subject of an adjunct clause which is reflected in the verbal morphology.⁷

The literature on Algonquian PH interaction splits on putting it into the syntax (Rhodes 1976, 1994 for Ojibwa, LeSourd 1976 for Fox, Béjar 2003 for Nishnaabemwin among the Algonquian languages) or morphophonology (Anderson 1992, Halle and Marantz 1993 for Potawatomi; cf. Dahlstrom 1986 for Plains Cree). Rhodes (1994) effectively demonstrates that for some Ojibwa varieties, the interactions as revealed in the morphology, for example by control of the agreement prefix, are in tight correspondence with syntactic diagnostics that refer to the winner of the interaction as the *pivot* of phenomena like control. In the domain that interests us most, 2 > 1 > 3 rather than 3prox > 3obv and 3anim > 3inan, the evidence is limited but clear: there are syntactic phenomena sensitive to the distinction between 1st/2nd vs. 3rd person. The theoretical interpretations are discussed in the next section; this one concentrates on presenting the evidence for the conclusion.⁸

⁶ The 3prox > 3obv hierarchy is actually 3 topic > 3 nontopic, which determines 3prox > 3obv whenever one of the arguments is proximate because the proximate must be the unique topic. Topichood rather than obviation is needed, because 3obv ↔ 3obv combinations exist in Algonquian (unlike 3prox, which must be unique) and can be either direct or inverse (Dahlstrom 1986: 53-4, Klaiman 1992: 247; cf. Rhodes 1974: 211 note 5, Bruening 2001: 124).

⁷ Ojibwa evidence from Rhodes (1994) is discussed below. Bruening (2001: 114ff.) demonstrates for the related language Passamaquoddy that the direct (3prox → 3obv) vs. inverse (3obv → 3prox), signalled by suffix morphology in the independent, affect scope and quantifier-variable binding, in both the independent and conjunct: O can scope over and bind a variable in EA only in the inverse with respect to these 3↔3 hierarchies.

⁸ Not all Algonquian languages show sensitivity to PH interactions for the diagnostics discussed. Dahlstrom (1986) shows that cross-clausal agreement in Plains Cree is not affected by the 3prox > 3obv hierarchy. Even within Ojibwa itself, Rhodes (1994: 443) points out that some speakers pick the EA as the pivot of cross-clausal obviation and/or cross-clausal agreement, rather than the DP determined by EA-O PH interactions, and this choice of pivot type is independent, so that the two diagnostics cross-classify with the two types of pivots. This does not affect the point made for those speakers for whom the contrasts are syntactic, but it restricts the choice of systems if it is to implement PH interactions for both types of grammars, as in Béjar and Rezac (2009).

Among the syntactic phenomena of Algonquian that differentiate EA from O, some are not sensitive to their interaction accord to phi-hierarchies and uniformly pick as their pivot EA or O, like argument-sharing between preverbs and verbs in such constructions as *stop(preverb) Ving* whose pivot (shared argument) is the EA. Others are sensitive to PH interactions and pick as their pivot the winner among EA and O of the PH interaction. Among these, some are applicable and some have only been tested for combinations of two 3rd person arguments, but at least the three in (10) are sensitive to the 1/2 > 3 hierarchy, subset of the 2 > 1 > 3 PH hierarchy governing agreement. Their pivot is the higher among EA and O on this hierarchy. One of Rhodes's most remarkable conclusions is that EA and O compete according to the 2 > 1 > 3 PH hierarchy in the syntax just when they do so in the morphology, that is in the independent but not conjunct order.

- (10) a. *Ban on inanimates*: The pivot cannot be an inanimate, even a DP that is grammatically animate like *mtig* 'tree', *mshiimin* 'apple', *pwaagan* 'pipe'. (Rhodes 1994: 333-4; see also Rhodes 1993: 144).
- b. *Cross-clausal obviation*: Only the pivot triggers obviation on the subjects of adjunct clauses. (Rhodes 1994: 440-1)
- c. *Cross-clausal agreement ('raising')*: Only the pivot (and only if topic and animate) can control agreement on certain upstairs verbs of mental activity, like *gkendank* 'to know'. (Rhodes 1994: 338-40, Bruening 2001: 275-8)

The ban on inanimates is demonstrated in (11). When EA and O are both inanimate, there is no legitimate outcome, regardless of which one is treated as proximate and which one as obviative, (11)a and (11)b. Introducing an animate argument permits a legitimate argument combination, provided the inanimate is not the pivot as determined by the 2 > 1 > 3, 3prox > 3 obv hierarchies. Thus in 3→3 examples, the ban has the consequence that the inanimate must be obviative and not be proximate: *The tree hit John* is fine only if *John* is proximate, creating an inverse configuration because O outranks EA and expressed in the morphology, and *mutatis mutandis* so with *John hit the tree* where the EA must be proximate and thus the configuration direct (Rhodes 1994: 433-4). Our main interest is in person distinctions, not obviation, and example (11)c involves a 1st person O. It outranks the inanimate EA on the 2 > 1 > 3 hierarchy and so creates an inverse configuration, both signalled by the morphology: the O controls the agreement prefix *n-* for 1st person, and the verb ends in the suffix *g* indicating an inverse context. The crucial contrast is with (11)d, which differs from (11)c by being in the conjunct rather than independent order. Morphology indicates that the conjunct lacks the 2 > 1 > 3 PH interaction, as discussed above: EA and O agree independently and there is no direct-inverse split. Such contexts behave as if direct and their pivot is invariably the EA. Accordingly, it is ruled out in (11)d because the EA is inanimate, despite the animate O:

"[T]he first form *bsikwid* is bad because it violates the Inanimate Ergative Ban. The second form is bad because it is the form appropriate to grammatical inanimates. [These two, and a passive form also bad] exhaust the available morphology for forming this person number combination. None is good." (Rhodes 1993: 145, referring to (11)d)

- (11) a. *Wgii-bsikwaan mshiimin niw pwaagnan.
The apple (mshiimin) struck the pipe-obv (pwaagn-an)
Note: verb is ok as 'he struck him-obv'
- b. *Wgii-bsikaagoon aw pwaagan mshiimnan.
'The apple-obv (mshiimn-an) struck the pipe (pwaagan)'
Note: verb is ok as 'he-obv struck him'
- c. Ngii-bsikaag aw mshiimin.
'The apple (gram. anim) struck me (n-) (independent)'
- d. Mii-sh *gii-bsikwid / ?*gii-bsikaagyaan aw mshiimin.
'[Then -MR] the apple (gram. anim.) struck me (conjunct, no inversion).'
(Rhodes 1993: 144-5, Ottawa Ojibwa)

An interesting aspect of this ban is that it restricts interpretive, not morphological animacy, as (10)a states and Rhodes emphasizes: morphologically animate but interpretively inanimate nouns like *mtig* 'tree' and *mshiimin* 'apple' count as inanimate. This indicates that the ban is a fact about syntax or interpretation rather than morphophonology, such as a requirement that the highest A-movement position be animate as discussed in the next section.⁹

The second diagnostic follows the same logic. Subjects of adjunct clauses are marked 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. The pivot is again the highest of EA, O on the PH hierarchies $2 > 1 > 3$, $3_{\text{prox}} > 3_{\text{obv}}$, with the former applying only in the independent. So the EA is the pivot in the conjunct order in (12)a, despite being lower on the $2 > 1 > 3$ PH than the first person O, and being a 3rd person animate proximate it triggers cross-clausal obviation on the adjunct verb. The conjunct in (12)a is triggered by the adverb *miish* 'then'; removing it yields the independent order in (12)b. Here the $2 > 1 > 3$ PH operative as signalled by the morphology, so the 1st person O is the pivot. Not being a 3rd person, it cannot trigger cross-clausal obviation. For the same reasons the 3rd person animate proximate cannot do so in (12)c either: now the EA is 1st person, the $2 > 1 > 3$ PH makes it the pivot of a direct configuration. Replacing the 1st person EA by an inanimate in (12)d lets O be the 3rd person proximate animate winner in an inverse context and so control the adjunct subject's obviation. Since obviation is a syntactic property as mentioned above, these examples show a syntactic PH interaction mirroring the distribution of the morphological one.

[EA pivot, direct: $3 > 1$, conjunct due to *miish*]

- (12) a. Miish naagshinig giishamid.
mii-sh naagoshi-ini-g gii-asham-i-d.

⁹ For such bans elsewhere, cf. Adger and Harbour (2007: 21) on Kiowa, or Abney's (1987) observation that the subject of English *poss-ing* gerunds may be a raisee, even an idiom chunk, clearly diagnosing a non-thematic position, but nonetheless with a strong bias towards animacy and against non-referentiality altogether:

- (i) (a) But [a proposition's seeming to a person to be true] is something better than that.
(b) I am happy about [it(?)'s] being likely that John will finish soon]. (Abney 1987: 208)
(c) I was surprised at [it(?)'s] seeming that John might not win]. (Abney 1987: 208)
(d) I was irked at [advantage(?)'s] being taken of John's situation]. (Abney 1987: 208)
(e) Serene made reference ... to [the cat's being out of the bag] (Google-search)

- then be.evening-OBV-3INAN PAST-feed-1OBJ-3SUBJ
Then, in the evening-OBV, he fed me.
[EA pivot blocked b/c inverse: 3 > 1 in independent]
- b. Naagshinig ngiishamig.
naagoshi-*ini-g ni-gii-asham-igo.
be.evening-OBV-3INAN 1-PAST-feed-INVERSE
In the evening-*OBV, he fed me.
[O pivot blocked b/c direct: independent]
- c. Naagshinig ngiishamaa.
naagoshi-*ini-g ni-gii-asham-aa.
be.evening-OBV-3INAN 1-PAST-feed-3 AN OBJ
In the evening-*OBV, he fed him.
[O pivot, inverse: independent]
- d. Naagshinig wgiibzikaagon.
naagoshi-ini-g o-gii-bizikaw-igo-n doopwin.
be.evening-OBV-3INAN 3ERG-PAST-strike-INV-OBJ table
In the evening-OBV, the table fell on him.
(Rhodes 1994: 440-1)¹⁰

The last diagnostic is cross-clausal agreement. In this phenomenon, certain matrix verbs with a clausal complement agree with a designated argument, the pivot, in the embedded clause, as if it were their own O, including for participation PH interactions with the matrix verb's EA.¹¹ The embedded clauses involved are necessarily conjunct, so in 1↔2 and 1/2↔3 combinations, the 2 > 1 > 3 hierarchy does not apply according to the morphology, the configuration is direct, and the pivot that controls agreement on the upstairs verb is the EA (Rhodes 1994: 438-9). In 3↔3 combinations, the 3prox > 3obv PH interactions do occur in the conjunct order according to the morphology and to other syntactic diagnostics, and they determine the pivot for cross-clausal agreement, which is the proximate regardless of whether EA or O (ibid.). That matches well with the different distribution of the two hierarchies across the two orders, but does not advance us beyond the preceding evidence. Moreover, approaches that put all phi-agreement into the morphology put cross-clausal agreement there too, so it does not count as evidence of syntactic status (Bobaljik 2008).

However, cross-clausal agreement provides a different source of evidence, uncovered by Bruening (2001) in the related Algonquian language Passamaquoddy. Recall that the pivot from the embedded is agreed with by the matrix verb as its O and participates in PH interactions with the matrix EA. This is reflected for example by control of the agreement prefix in the following examples, 1st person *n* and 2nd person *k*. Bruening shows furthermore that the manner in which the pivot links to its site within the embedded clause depends on its PH-interaction with the matrix EA according to both 3prox > 3obv and 2 > 1 > 3 hierarchies. If it is lower ranked than the EA, so the matrix EA→pivot combination is direct, the pivot must appear at the edge of the embedded clause if it is overt, and it must link to a gap within the embedded clause by a path free of islands. Thus in the 1_{EA} → 3_{O/pivot} combination in (13), the path cannot traverse an adjunct

¹⁰ NB: when it is possible, *ini* is optional, because all the sentences 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.

¹¹ See Dahlstrom 1986, Branigan and MacKenzie 2001, Bruening 2001 for other Algonquian languages, and Polinsky and Potsdam 2001 for Tsez.

island. If on the other hand the pivot outranks the matrix EA, yielding an inverse EA→pivot combination, then the pivot may appear within the matrix clause, and it links to a resumptive within the embedded clauses by a path that ignores islands. This is the case in the $3_{EA} \rightarrow 1_{O/pivot}$ and $1_{EA} \rightarrow 2_{O/pivot}$ combinations in (14).¹²

- (13) a. N-kosiciy-a wen elomi-ya-t [mesq Mali mace-ntu-hk] .
 1-know.TA-Dir who IC.away-go-3Conj not.yet M. start-sing-3ConjNeg
 I know who *t* left before Mary started singing.
- b. *N-kosiciy-a wen elomi-ya-t Mihku [mesq *t* mace-ntu-hk] .
 1-know.TA-Dir who IC.away-go-3Conj M. not.yet start-sing-3ConjNeg
 I know who Mihku left before *t* started singing.
 (Bruening 2001: 268)
- (14) 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-3Conj not.yet start-sing.1ConjNeg
 (I wonder if) my mother knows (about me) that everyone left before I started singing.
 (Bruening 2001: 275-6)
- b. K-piluwitaham-ul Mihku keti-maceha-t [’sami sakhip-huk-ihin].
 2-suspect-1/2 M. IC.Fut-leave-3Conj because bring-drive-2Conj
 I suspected (about you) that Mihku would leave when you drove up. (Bruening 2001: 277)

So the morphological PH interaction of the EA and the pivot in the matrix clause correlates with whether the pivot gets to the edge of its own clause by movement or by resumption. The difference between movement and resumption is a syntactic difference, not a morphophonological one, so the $2 > 1 > 3$ PH interaction has a syntactic correlate.¹³

The three diagnostics reviewed for Algonquian show that a subset of the PH interactions signaled by the morphology has syntactic or interpretive correlates: $1/2 > 3$ PH interactions in independent but not conjunct orders. The Algonquian evidence receives cross-linguistic support from Mapudungun and Cavineña, where syntactic correlates of PH hierarchies have also been uncovered although less profoundly exemplified.

¹² $1 \rightarrow 2$ is inverse in Algonquian; the morphology identifies $2 \rightarrow 1$ as direct, and this diagnostic could be used to test whether contrasts with $1 \rightarrow 2$ in being direct syntactically, but there are no data on this point (Bruening 2001: 277 note 10).

¹³ See Bruening (2001: 279ff.) for one theoretical interpretation. Very briefly, when the pivot links to a resumptive it is independently base-generated at the edge of the embedded clause, with a feature that requires it to undergo A-movement ("inversion") in the matrix clause, reflected morphologically as an inverse. If that is not possible because the matrix EA outranks the pivot and blocks the A-movement that would satisfy this feature, base-generation of the pivot at the edge of the embedded clause is not possible, and it must be base-generated within the embedded clause, and then move to its edge to be visible for matrix agreement. Whether such a system needs syntax to refer to phi-features is discussed in the next section; Bruening's proposal in this respect corresponds to Albizu's discussed there.

Arnold (1994, 1997) finds that EA-O PH interactions signaled by Mapudungun verbal morphology affect the distribution of overt subject pronouns in non-finite forms. Her analysis of its verbal morphology posits a $1 > 2 > 3$ proximate > 3 obviative hierarchy.¹⁴ This PH determines the controller of the primary agreement, EA in direct ($1 > 2$, $1/2 > 3$, $3prox > 3obv$) and O in inverse ($2 > 1$, $3 > 1/2$, $3obv > 3prox$) contexts. The direct-inverse contrast also determines the distribution of the inverse markers *e* and *mu*.¹⁵ The resulting system in finite forms is synoptically given in Table XX.¹⁶ The morphological direct-inverse contrast extends to non-finite (subordinate) forms in Table XX (ignoring for now the columns "overt"). In them the subject agreement marker is replaced by the infinitival *el*, *lu*, *yüm* morphemes, removing one evidence for PH interactions. However, the *e*, *mu*, and *mew* markers indicating inverse configurations in finite forms partition the non-finite paradigm into a clear direct context, $1/2 > 3$ (and the hypothetical $3prox > 3obv$), and a clear inverse context, $3 > 1/2$ (plus $3obv > 3prox$), with unclarity in the $1 \leftrightarrow 2$ combinations.

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

X→3	(-fi) (3.OBJ) + person _{EA} - number _{EA}
3→X	-e (INV) + person _O - number _O + -(m)ew
1SG→2SG	-e (INV) + 1.DU
2SG→1SG	-e (INV) + 1.SG
1→2 (rest)	-w (REFL) + 1.PL
2→1 (rest)	-mu (INV?) + 1.PL

Dark-inverse; Medium-middle; Ligh-direct

(16) Table: direct/inverse in Mapudungun non-finite forms (Zuñiga 2002: 229-230)

	-EL ₁ (older)		-EL ₂ (newer)		-LU	
	morphology	overt		overt		overt
X→3	(-fi)-el	POSS _{EA}	(-fi)-el	POSS _{EA}	(-fi)-lu	PERS _{EA}
3→X	-e -t -ew	POSS _{IA}	-e -t -ew	POSS _{IA}	-e -lu -mew	PERS _{IA}
1S→2S	-fi -el	POSS _{IA}	-fi -el	POSS _{EA}	-fi -lu	PERS _{IA}
2S→1S	-fi -el	POSS _{EA}	-fi -el	POSS _{EA}	-e -lu -mew	PERS _{IA}
1→2R	-w -fi -el	POSS _{IA}	(-fi)-el	POSS _{EA}	-w -lu	PERS _{IA}
2→1R	-mu-fi -el	POSS _{EA}	(-fi)-el	POSS _{EA}	-mu -lu	PERS _{IA}

Ligh - direct; Dark: inverse; Medium – unclear; POSS / PERS – overt possessive/personal pron.

¹⁴ The proximate / obviative distinction is not overly marked on DPs and so is posited to explain agreement.

¹⁵ The inverse marker is *e* except in 2→1 combinations totaling more than two participants, where *mu* replaces *e*.

¹⁶ The odd man out are 1→2 combinations, which Arnold calls "middle": historically and in the Huichille dialect, there are transparent inverse forms, *pe-e-yimi-Ø* 'see-INV-2s,SUBJ-1,OBJ' 'I see you', but the modern Mapudungun forms in the Tables look like they express "I see you (sg)" by "we (two) see you" and "I/we see you" if the total number of participants is more than two by "we (plural) see each other" (see Rhodes 1993: 145 on similar "morphological idioms" in Southwestern Ojibwe).

There are several syntactic correlates of PH interactions that Arnold uncovers, such as *wh*-movement (tested in 3↔3) clauses which questions the O of morphologically direct and the EA of morphologically inverse clauses, recalling the cross-linguistically common ban on ergative extraction and its repair in some Mayan languages fix by "demotion" of an ergative EA to absolutive (Berinstein 1985, 1990; cf. Davies and Sam Colop 1990; Hale 2001; Aissen 1999; Béjar and Rezac 2007). However, there is only one diagnostics is tested for the 1/2→3 portion of the hierarchy: the realization of an argument of non-finite clauses by an overt possessives (EL-infinitives) or personal (LU-infinitives) pronouns, as in (17). Arnold (1994: 38, 1997) observes that in 1/2↔3 and 3↔3 combinations, this pronoun is the EA in direct and the IA in inverse combinations, correlating perfectly with the morphological signals of the direct-inverse contrast, as shown in example (17) and recapitulated in Table XX (columns headed "overt").¹⁷ If the choice of the pronoun to be overt is determined by the syntax, for example by licensing an overt pronoun instead of *pro*-drop in [Spec, TP], then the 1/2→3prox→3obv subset of the PH interaction signalled by the morphology has a syntactic correlate.

- (17) a. mule-y mün allkü-tu-ñma-ya-fi-el ñi dungu [direct]
have-3s,subj you(p) listen-REG-SRC-FUT-OBJ-VN his word
You must listen to his word. (Arnold 1994: 38 < Smeets 1989:278)
- b. fey muna kutran-ka-w-üy mi trem-üm-a-t-ew [inverse]
she very illness-FAC-REF-3s,subj your grow-CAUSE-FUT-[INV]-VN-3,OBJ
[INV *e* missing: see Arnold 1994: 40 note 10]
She made a lot of sacrifices in order to raise you. (Arnold 1994: 38 < Smeets 1989: 278)

A final line of evidence for PH interactions in syntax comes from Cavineña (Tacanan, Bolivia: Camp 1985), where word order is affected. The Person Hierarchy in Cavineña is 1 > 2 > 3.¹⁸ There is no agreement, and the morphological effect of PH interaction is reflected in ergative marking on EA, O pronouns; the syntactic correlate is the order of the pronouns (Camp 1985: 44-5). Whenever EA and O are both expressed by pronouns, the EA pronoun has an ergative marker only if it is lower-ranked than O on this hierarchy, otherwise it is an unmarked absolutive just like O.¹⁹ Thus the EA is ergative-marked only in (18)a and the second clause of (18)c, and the unmarked absolutive in the rest. EA nouns are ergative-marked always. This PH interaction for marking correlates with PH interaction in word order; when the EA, O two pronouns are contiguous, the lower-ranked one on the 1 > 2 > 3 hierarchy precedes the higher-ranked one, so the EA comes before O in the same examples where it is ergative-marked, and after O in the rest (setting aside cliticization and second position effects, Camp 1985: 45-6). The effect on word order resembles the well-known elaborate hierarchies of 3rd person governing word-order in Navajo (Rice and Saxon 2002, Carnie and Jelinek 2005). Taking this evidence at surface value, word order in Cavineña is sensitive to PH interactions, and if word order is a syntactic property,

¹⁷ 1↔2 scenarios are more complex, and they are more unclear morphologically. Arnold 1994: 38, 1997 observes that the EL-forms chose 2nd person in 1>2 and 2>1, which Zuñiga 2002:235 qualifies. However, it does not affect the point that we get a 1/2>3 and 3>1/2(/3) contrast.

¹⁸ The hierarchy seems to extend to rank 3rd person pronouns above nouns, since an EA pronoun with an ABS O noun is also unmarked (Camp 1985: 44).

¹⁹ Cf. Lakämper and Wunderlich 1998 for a similar phenomenon, for O, in Cuzco Quechua

then there is a syntactic correlate of PH interactions that also appear in the morphology as ergative marking. Unlike in Algonquian and Mapudungun, the correlations covers the whole hierarchy, $1/2 > 3$ but also $1 > 2$. However, the paucity of data indicates caution.

- (18) a. Ya-*çe*-ra hi-pe-etibe-ya-hu *ta-çe-ra* ya-*çe* [O > EA]
 1-DU-ERG approach-on.way.back-pres-when_{ds} 3-DU-ERG 1-DU
 isara-*ça*-k^ware
 greet-arriving.obj-remote.past
 As we approached them, they greeted us. (Camp 1985: 44-5)
- b. Muda *tu-ke* ya-*çe* ba-*čine* [EA > O]
 dangerous 3-word.form 1-DU see-past
We thought it was dangerous. (Camp 1985: 41: EA > O)
- c. Yusurupai *mi-ke* *e-k^wana* a-ya, riya-ke semana [EA > O]
 thank 2-word.form 1-PL do-present this-which week
 kueti-*čine*-hu *mi-ra* *e-k^wana* naru-nuka-*čine* tibu [O > EA]
 past-pass-when_{ds} 2-ERG 1-PL care.for-again-past because
We thank you because you cared for us this past week. (Camp 1985: 45)

Taken together, these languages make a very robust case for syntactic and/or interpretive correlates of morphologically signalled PH-interactions between EA and O. However, the plain existence of the syntactic correlate of a morphologically visible phenomenon does not put it into the syntax, as we will see in the next section – which also leads up to a more robust diagnostic.

1.3 Φ interactions in syntax

The existence of syntactic correlates of EA-O phi-interactions demonstrates that uninterpretable phi plays a role in deciding which syntactic structures are grammatical, but it does not force it to be within syntax. Exploration of a specific syntactic model proposed for PH interactions makes this clear: the *clausal mapping* model developed in Jelinek (1993), Jelinek and Carnie (2005), Rice and Saxon (1994, 2002), Déchaine (1999), Bianchi (2006), among others.²⁰

The basic idea is to code a person hierarchy as a hierarchy of clausal layers each defined by a phi-feature class that attract "accessible" DPs with belonging to the same phi-feature class. "Accessible" is so defined as to have only the right DPs compete in the right way. The interactions discussed so far involve only EA and O and ignore DPs in PPs, so "accessible" would be DPs without inherent Case and the hierarchy of clausal layers then arguably relate to the traditional notion of A-movement and Case assignment. For a $1/2 > 3$ hierarchy for example, we may suppose a layer of the clause for 1st/2nd persons above a layer hosting 3rd persons only, such as Déchaine's (1999) PersonP above NumberP or Bianchi's (2006) SAP-P for Speech Act Participant above 3P, (19).

²⁰ Other models exist. Rhodes (1976) for Ojibwa and Arnold (1997) for Mapudungun propose that the direct and inverse maps the EA and O grammatical functions inversely, while other current generative models like Nichols (2001) and Béjar and Rezac (2009) have the difference affect the phi-feature checking and A-movement system.

- (19) 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)

1/2 > 3 PH interactions between EA and O on the 1/2 > 3 hierarchy are implemented as the need of the higher layer to attract any or all 1st/2nd persons but no 3rd persons which can only be hosted in the lower layer. The formal implementation might be via feature checking (Chomsky 1995) or a generalized Spec-Head criterion (Rizzi 1996, Sportiche 1996, Cardinaletti and Starke 1999); examples are the person licensing requirements of Béjar and Rezac (2003: 53) and Bianchi (2006: 2036) respectively. The resulting differentiation of DPs by structural prominence according to their phi-features can then be referred to by syntactic phenomena like cross-clausal obviation, so that the highest DP within these phi-related layers acts as the pivot for certain phenomena, and in a similar way by morphological spell-out like agreement control if that is viewed as morphological rather than syntactic.

The clausal mapping mechanism just sketched refers to phi-features in narrow syntax: adopting feature checking for example, the higher PersonP/SAP-P has uninterpretable 1st/2nd person features attracting (the highest or any) 1st/2nd person argument. However, it is not in fact necessary to place the clausal mapping mechanism within narrow syntax at all. Clausal mapping can be viewed as an interpretive requirement and syntax can be viewed as operating blindly to meet it, with structures that fail to do so being ruled out as noncovergent. Jelinek's own exploration of PH interactions is in this vein (Jelinek 1993, Jelinek and Carnie 2005). Following the Mapping Hypothesis as developed in Diesing (1992), Diesing and Jelinek (1995), the clause is divided into interpretive layers because of the way quantification works, (20): highest a quantifier layer, next a layer that maps into the restrictor of the quantifiers and is associated with presupposed (topical, old) information, and lowest a nuclear scope layer associated with new information. Phi-features are associated with a formal, *grammaticalized* "presuppositionality" feature in such a way that in a language with 1/2 > 3 PH, 1st/2nd person are grammaticalized as interpretively "presuppositional" and 3rd persons are not. The interpretive interface requires that all and only "presuppositional" information ends up in the restrictor or presuppositional layer of the clause. This ensures that 1st/2nd person DPs end up in a different clausal layer than 3rd person DPs, and partitions structures into direct versus inverse ones according to whether the EA or O occupies the higher layer.²¹

- (20) 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)

Against this system can be levelled the charge that "presuppositional" does not correspond to the notion of "presuppositional" used in natural language phenomena like restricted quantification. It is a grammaticalized notion of presupposition, so in 1/2 > 3 PH interaction

²¹ As described, the model requires a DP with given phi-features to occur in a certain clausal position, rather than requiring that a given clausal layer attract a corresponding DP if there is one. Languages such as Basque show this cannot hold in a simple way: a 1st/2nd person controls the agreement prefix if it is O, and if it is EA it does so only if there is no 1st/2nd person O, so a 1st/2nd person EA has no requirement of its own. However, the model can relativize the phi-featural requirements to a DP to its property of being an EA as well, by manipulating its featural content in consequence (an extra feature for being an EA), or by having the v head that introduces an EA interact with the syntax of mapping to clausal partitions.

languages, it picks out [participant] but not 3rd person DPs no matter how semantically presupposed, while in other languages for Carnie and Jelinek (2005) it is clitics, or animates, or definites, or semantically presupposed DPs that must move out of the nuclear scope for Carnie and Jelinek (2005).²² One can replace Jelinek's system with one that simply stipulates that the functional layer of the clause contains various interpretable functional heads referring to phi-features like Person, just as it contains others like Topic and Focus (cf. e.g. Taraldsen 1995, Sigurðsson 2004, Platzack 2004). To account for the variation in person hierarchies across languages, a parameterization mechanism for these heads is necessary, exactly like one is necessary to account for variability in the articulation of the left periphery in such terms as topic and focus. Thus a language without a person hierarchy might have an undifferentiated Phi° head that needs so phi-bearing argument, one with a $1/2 > 3$ person hierarchy might have a Person° above Number° , and one with a $2 > 1 > 3$ hierarchy might have $\text{Addressee}^\circ > \text{Speaker}^\circ > \text{Number}^\circ$. Once such parameterization is available to reflect cross-linguistic differences, it can be employed within a language. Ojibwa with the $2 > 1 > 3$ hierarchy in the independent but not conjunct order would have the functional sequence $\text{Addressee}^\circ > \text{Speaker}^\circ > \text{Number}^\circ$ if C is independent but not conjunct, just as the agreement properties of English classes depend on finiteness (see Bianchi 2006 for such a proposal for Algonquian).

In Jelinek's proposal and the variant outlined above, the placement of DPs into clausal layers according to their phi-features is an interpretive requirement. It is possible for narrow syntax to operate entirely blindly of it, and yet for PH interactions to still have syntactic correlates, because syntactic structures that fail to respect the requirement are uninterpretable and crash. Concretely, the syntactic A-movement mechanism can be supposed to freely distribute EA and O arguments across the presuppositional and non-presuppositional layers of the clause without referencing their presuppositional or phi features. If it fails to put 1st/2nd person into the presuppositional layer, the resulting structure is uninterpretable; equally so if it places 3rd person into it. So half the structures it produces are uninterpretable, although syntactically well-formed and morphologically realizable, and do not yield well-formed PF-LF pairs. We may call this mechanism *LF Filtering*: an LF requirement filters syntactic structures so as to leave only those that satisfy them as convergent.

Importantly, exactly the same scenario holds if the requirements that result in PH interactions are localized in the morphophonology rather than in interpretation: *PF Filtering*. The "Generalized Person Case Constraint" (21) of Albizu (1997) is one such proposed morphophonological condition, meant to subsume a variety of PH interaction (see further chapter IV). It requires that syntax feed morphophonology structures where person features are in a particular hierarchical relationship to each other, for example as the result of A-movement or *pro* movement or clitic doubling of the DPs in question. If it fails to do so, the syntax and its interpretation are fine, but morphophonology cannot realize the result and no wellformed PF-LF pairing results, (22).²³ Heading farther down this route, one could replace a morphophonological

²² It is not clear to what extent this is a problem. European languages may grammaticalize 2PL (French), 3SG (Finnish), or 3PL (older Czech) as second person polite singular (see e.g. Wechsler 2004), and grammaticalized neuter gender of nouns like Serbo-Croatian *deca* 'children' counts for interpretation even when the referent is masculine (Wechsler and Zlatic 1998). It seems an open and interesting question whether presuppositional status could be parametrized.

²³ For some PH interactions for which PF Filtering is less plausible than LF Filtering or a syntactic implementation. Recall that Rhodes (1993, 1994) shows that the ban on inanimate ergatives in Ojibwa, which is sensitive to PH interactions, bans DPs that are interpretively inanimate although grammatically (morphologically) animate, like *mtig* 'tree'. So PH filtering would have to be sensitive to interpretive animacy beside the general sensitivity of Algonquian

principle like (21) by arbitrary conditions as part of the lexical entries of affixes that spell-out a head to which the phi-features of EA and O are visible, for example as clitics on it: there is an affix to spell-out (22)a but none to spell-out (22)b (cf. Bruening 2001 for Algonquian). Under this view PH interactions of the Algonquian type fall under the same mechanism as the arbitrary phi-interactions of the Chukchi type discussed in section 1.1.²⁴

- (21) 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]. (Albizu 1997).
- (22) a. $\sqrt{[T^\circ \text{ pro}_{EA}=2 \ [T^\circ \text{ pro}_O=1 \ T^\circ]]}$
 b. $*[T^\circ \text{ pro}_{EA}=1 \ [T^\circ \text{ pro}_O=2 \ T^\circ]]$
 c. $\sqrt{[T^\circ \text{ pro}_O=2 \ [T^\circ \text{ pro}_{EA}=1 \ T^\circ]]}$

However, one should not in fact go far down this road, for there is an important limitative condition on LF/PF Filtering. In order to ensure congruence between morphological and syntactic evidence for PH-interactions such as that found in Algonquian, the interpretive or morphophonological conditions that filter syntactic outputs must apply to those syntactic structures directly. The structures submitted by syntax to the interfaces must not have a chance of being fixed by interpretive or morphophonological mechanisms, such as a morphophonological readjustment rule that would map (22)b to (22)c. This would give a syntax where 1st person EA c-commands a 2nd person O a well-formed spell-out that looks like one where a 2nd person O c-commands a 1st person EA, and consequently make it impossible to use a morphophonological condition banning the former as a filter on the syntactic structure that gives rise to it, as the proposed mechanism has it. Keeping to morphophonology specifically, processes of this type are known to be pervasive, and the more likely to apply the closer one gets to the insertion of actual exponents (e.g. Embick and Noyer 2001). These considerations suggest that if a morphophonological well-formedness underlies syntactic PH interactions by filtering certain outputs, the morphophonological constraint quite different in character from arbitrary conditions on vocabulary insertion that the morphophonology would get a chance to satisfy by its own mechanisms. In Distributed Morphology, the distinction can be made by placing a condition like Albizu's (1997) "high upstream" at the branching-off point before other morphophonological mechanisms get a chance to apply; chapter V/VI returns to this. Other approaches can make the distinctions in different ways, for example in a constraint on the co-occurrences of feature used to generate a paradigm space versus the realization of its cells in Paradigm Function Morphology (Bonami and Boyé 2006; cf. chapter V/VI). The same caveat holds of LF filtering.

The upshot is that the morphological and syntactic congruences in PH effects discussed up to down are not really solid evidence that PH interactions, and thus the uninterpretable phi to which they refer, are in the syntax. Interface filtering will do the job, and narrow syntax can operate blind to uninterpretable phi. That is not to say that the syntax-morphology congruences are

morphology to grammatical animacy.

²⁴ NOTE-10: For example, were the Chukchi antipassive to correlate with certain subjecthood properties of O that are otherwise borne by the EA, the feature that is responsible for fronting O, say Case on v , could be posited to be generally optional on v in Chukchi, and the limitation of O fronting to EA-O combinations of the antipassive could be achieved by claiming that $(T^+)v$ +Case can be spelled out only if T and v have the corresponding EA, O ϕ -features, allowing only derivations of $(T^+)v$ without Case to be spelled out otherwise.

without consequence for morphophonological approaches to uninterpretable phi. One of the attractions of Marantz's (1991) proposal is that it is interpretive: "Syntactic ungrammaticality will not result from the realization of case and agreement. In particular, there is always a default case realization." On the "filtering" model, syntactic ungrammaticality indeed does not result if syntax fails to produce a structure that meets the morphophonological requirement behind PH interactions, since it is a morphophonological requirement. However, as discussed in the preceding paragraph, this requirement must not be fixable by morphophonological means such as default realization or deletion of the offending phi-bundle, and so differs from other morphophonological requirements that are routinely so fixed. The requirements underlying PH interactions are special – in the Distributed Morphology model, they are "high upstream" at or near with the interface with syntax, before the rest of morphophonology gets a chance to apply.

We will end up coming back to a similar conclusion in chapter V/VI by a circuitous route goes through PH interactions that cannot reasonably be handled in this way. The PH interactions seen so far can be handled by interface filtering, because for each EA-O combination they can be viewed as involving a freely generated pair of structure, Σ and Σ' , one of which satisfies the interface PH condition and one which does not. The one which satisfies the interface requirement is convergent, say Σ where 1.EA c-commands 3.O or 1.O c-commands 3.EA, and the one which does not is not, say Σ' where 3.O c-commands 1.EA or 3.EA c-commands 1.O.

The PH interactions to follow add a twist. There are two structures, Σ and Σ' . Σ is a convergent syntactic structures provided that the EA is the winner of a PH interaction, namely direct contexts: for example, bare 1.EA c-commanding 3.O. Σ' is also a convergent syntactic structure, but only when Σ is unavailable, inverse contexts: for example, 3.EA is oblique and thus does not c-command 1.O. Σ' is *restricted* to inverse contexts, as if it were a *repair* of a problem that arises when Σ cannot align the prominence of the EA with the PH requirement. If an interface condition such as " $1/2 > 3$ if EA c-commands O" restricts the availability of Σ , the availability of Σ' would have to be given by its complement, for example "EA does not c-command O only if EA is 3 and O is $1/2$ ". This is pure codification of the distribution of the syntactic structures Σ and Σ' by interface conditions whose ad-hoc character is now manifest by their mirroring each other. By contrast, letting syntax see the uninterpretable phi that defines the distribution of Σ and Σ' lets it naturally relate one to the other as its complement for example by treating Σ' as the pre-movement version of Σ when movement is blocked.

It is hard to see this in an empirical vacuum. The rest of this chapter begins by showing what such Σ - Σ' relationships might look like, based on only suggestive evidence of EA-O PH interactions in Arizona Tewa, before a more detailed inquiry from French in the next chapter.

1.4 Φ repairs in Tanoan

The new type of PH interaction is found in the Tanoan languages: Southern Tiwa (Allen and Frantz 1983, 1986, Allen et al. 1990, Rosen 1990) and Picurís (Nichols 2001), which present one pattern for the present purposes, and Arizona Tewa (Kroskrity 1985, Klaiman 1991, Zuñiga 2002), which a somewhat different one and the one and the one that is pertinent to the argument being made here. The common features of the PH interactions in these languages, resumed in (23), is that the direct contexts with respect to the $1/2 > 3$ person hierarchy look like a plain active transitive, with a bare EA and O both controlling agreement, while inverse contexts look more like passives, more so in Southern Tiwa and Picurís with an oblique EA that does not

control agreement versus a bare O and "inverse" morphological marking on the verb like a passivizer.

- (23) a. *Person Hierarchy*: $1/2 > 3^{25}$
 (i) $1 \leftrightarrow 2$: inverse in Arizona Tewa, direct in Souther 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 agreement reduced in comparison to EA in direct.
 (ii) Southern Tiwa, Picuris: oblique EA non-agreeing; "inverse" morphology on V.

This represents a different pattern of direct-inverse relationships than the ones seen so far, because, on the surface, direct and inverse configurations have their own dedicated formations, the active and passive-like ones, rather than sharing a common one as in Algonquian. The Tanoan pattern belongs to a common pattern of PH interactions where the inverse is less transitive-looking than the direct (Klaiman 1992), which comes in many other forms, for example the one of Kashmiri where direct according to a $1 > 2 > 3$ PH interaction assume a canonical nominative-accusative pattern while inverses assume a nominative-dative, antipassive-like one (Béjar and Rezac 2009). An essential aspect of the systems of interest here is that the passive-like formation of the inverse is not available outside the inverse, like a PH-independent passive would be, and this is revealed by passing from Southern Tiwa to Arizona Tewa.

Southern Tiwa shows clearly the passive-like quality of the inverse. In direct contexts, $1/2 \rightarrow 3$ (24) as well as $1 \leftrightarrow 2$ (25), the EA and O must be bare DPs and control agreement ("A" refers to a morphological class that is a mixture of number and animacy), and it is not possible to realize the EA differently. In inverse contexts, $3 \rightarrow 1/2$ (26), the EA must appear in a PP like oblique signaled by the enclitic *ba*, like other PP-contained DPs it fails to agree, and the verb is affixed with the "inverse" or "passive" morpheme *che*.

[direct context: $1 \rightarrow 3$]

- (24) a. Ti-mu-ban 'uide
 1s_i:A_j-see-PAST child(A)

²⁵ There is good evidence that $3 \leftrightarrow 3$ combinations differentiate two values of 3rd person, a higher ranked 3+ and a lower-ranked 3, and so all directs can be posited to be $3+ \rightarrow 3$ and inverses $3 \rightarrow 3+$ (cf. Arnold's 1994 extension of the Algonquian 3 proximate > 3 obviate to account for the dual outcome of $3 \leftrightarrow 3$ interactions in Mapudungun). It comes from applicative constructions (Allen and Frantz 1983: 308, Allen et al. 1990: 347). The indirect object of verbs like *give* can appear either in a prepositional phrase, outside the agreement system, as in English *the lady gave a dog to you*, or behave like the direct object of plain transitives, as in English *I have you the dog*, including for PH interactions. The one asymmetry between the O of plain transitives and such "promoted" IO is that $3_{EA} \rightarrow 3_{IO}$ configurations are necessarily inverse and use the passive-like structure, unlike $3_{EA} \rightarrow 3_O$ which can be direct or inverse. This suggests that the IOs of the applicative structure are necessarily higher on the scale of "personhood" than direct objects, a 3+ rather than a 3 (chapter IV, note NOTE-10). Perhaps to be related to the 3+ vs. 3 distinction are other factors affecting the distribution of 3rd person: for Arizona Tewa, Kroskrity (1985: 315-6) notes that 3anim > 3 inan as in *The man drank water* can only be direct, cf. the Ojibwa ban on inanimate ergatives, while 3indef \rightarrow 3def as in *Some bobcat bit this dog* can only be inverse.

As far as the interaction of 3+ with the $1/2 > 3$ hierarchy goes, in Southern Tiwa $1/2_{EA} \rightarrow 3_{IO}$ combinations are necessarily direct like all $1/2_{EA} \rightarrow 3_O$ combinations, indicating that at least 3+ does not outrank 1/2, so that $1/2 \rightarrow 3+$ is direct just like $1 \leftrightarrow 2$ is direct. In Arizona Tewa, $1 \leftrightarrow 2$ interactions are inverse and so it would be possible to tell if 3+ is equally or lower-ranked than 1/2 from $1/2 \rightarrow 3+$ interactions, which should be inverse unless if 3+ is lower ranked. However, the relevant data, $1/2_{EA} \rightarrow 3_{IO}$ combinations, are not available to me.

I_i saw the child $_j$.

- b. *Uide(A) Ø-mu-che-ban na-ba
child A-see-PASS-PAST 1-INSTR

(Allen & al. 1990: 333)

[direct context, $1 \rightarrow 2$]

- (25) a. I_{ij} -mu-ban b. * a_j -mu-che-ban na-ba
1SG:2SG-see-PAST 2SG-see-PASS-PAST 1-INSTR
 I_i saw you $_j$. (You $_j$ were seen by me $_i$.)

(Alen and Frantz 1983: 304-5)

[inverse context: $3 > 1$]

- (26) a. seuanide-ba te-mu-che-ban
man-INSTR 1SG $_i$ -see-PASS-PAST
The man saw me $_i$ ('I was seen by the man').

(Allen and Frantz 1983: 305)

- b. No direct-like version with EA and O agreement: there is no $3 > 1$ agreement prefix combination available. (Allen and Franz 1983: 313 note 6)

It is in fact possible to restrict the Southern Tiwa inverse structure by constraints that do not refer to PH-interactions. Allen et al. (1990) posit the two constraints in (27) to underlie the distribution of direct and inverse structure. The Person Constraint requires a 1st/2nd person O to control "subject" agreement, like the S of intransitives, if the EA is 3rd person, barring $3 \rightarrow 1/2$ from the active-like direct structures. The unrelated Participant Chômeur Ban prevents a 1st/2nd person from being an oblique EA, restricting the passive-like inverse structures to $3 \rightarrow 1/2$ combinations. The ban restricts the EA without referring to O and so to EA-O interaction: it is a selectional restriction on the EA like the one found in ordinary passives or differential case marking discussed in section 1.1. This kind of analysis therefore envisages one structure Σ , the direct one, that is restricted by the requirement that the winner of the PH interaction be the EA, and an independently available structure Σ' that happens to mostly or entirely appear in inverse contexts simply because it bars oblique agents with certain properties, independently of PH-interactions. Another proposal in the same vein is Jelinek and Demers' (1983, 1994) analysis of Lummi direct-inverse alternations: a passive steps in to realize the $3 \rightarrow 1/2$ inverse contexts, but although it is unavailable if the EA is a weak 1st/2nd person pronoun, it has a wider distribution than just those EA-O combinations where the direct is unavailable.

- (27) a. The Person Constraint: An RN is ill-formed if it has a final 1-arc headed by a 3rd person nominal and a final 2-arc headed by a 1st or 2nd person nominal. [$*3.SU + 1/2.OBJ$, where 'SU' and 'OBJ' are 'final', i.e. fed by transformations]
- b. The Participant Chômeur Ban: An RN in which a 1st or 2nd person nominal heads a Cho arc is ill-formed. [$1/2$ cannot be put into the oblique *by*-phrase]

(Allen et al. 1990: 330)

For Southern Tiwa the foregoing analysis is tenable because 1 \leftrightarrow 2 combinations are direct just like 1/2 \rightarrow 3 combinations, and so a 1st/2nd person EA never appears as an oblique in the inverse structure. Arizona Tewa changes the distribution of direct and inverse just enough to make this unworkable: 1/2 \rightarrow 3 combinations are still direct with a bare 1st/2nd person EA, and 3 \rightarrow 1/2 inverse with an oblique 3rd person EA, but 1 \leftrightarrow 2 combinations join the inverses with an oblique-like 1st/2nd person EA. Therefore, the distribution of the inverse cannot be restricted by barring a 1st/2nd person EA from being oblique: it cannot be oblique *only if it outranks* O, an relational constraint that refers to EA-O PH interaction. In Arizona Tewa, the inverse form Σ' must be explicitly restricted to contexts where O is greater or equal to the EA on the scale 1/2 \rightarrow 3, and the direct form Σ to contexts where the EA is greater. Both refer to PH interactions.

Let's look at this in more detail. The Arizona Tewa direct is just like the Southern Tiwa direct, with bare agreeing EA and O in 1/2→3 combinations. The inverse is like Southern Tiwa in putting the EA in an oblique, with the suffix *di*, (28)b and (28)c, but as just discussed, the inverse is used not just for 3→1/2 but also for 1↔2 so 1st/2nd person appears as an oblique in that case. Beyond oblique marking the Arizona Tewa inverse differs from the Southern Tiwa one. In Southern Tiwa the oblique EA of the inverse does not agree, and so the agreement morphology is controlled only by O and is identical to that controlled by an intransitive subject. In Arizona Tewa, the oblique EA does control agreement on the verb, albeit agreement that differs from and is impoverished in the distinctions it makes with respect to the bare EA of inverse contexts. The agreement prefixes in Table XX used for inverse EA-O combinations (Set III) differ from both those used for direct EA-O combinations (Set II), and from those used for intransitive S (Set I). Furthermore, in Arizona Tewa, there is no inverse morpheme on the verb differentiating inverse from direct contexts. So despite having an oblique EA, the Arizona Tewa inverse does not look much like a passive; more like an agreeing ergative, but one restricted to inverse contexts.²⁶ The oblique *di* suffix of the EA independently marks instruments, comitatives, sources, benefactives (Kroskrity 1985: 314), but only in inverse contexts is it available for marking EAs (agents). This is shown in (29), which also demonstrates the independent passive of Arizona Tewa, unrelated to inverse contexts and marked signalled by the verbal affix *tí::* here the EA cannot be indicated, even by an oblique, and O controls regular intransitive agreement, Set I in Table XX.²⁷

- (28) a. Né'i k^wiyó dó-tay
this woman 1sII-know
I know this woman. (Zuñiga 2002: 184 < Klaiman 1991: 204f.)
- b. na: sen-e-di / 'u-di dí-k^wek^{hw}ǵdi
I man-PL-OBL you-OBL 2/3→1.III-shot
I was shot by the men / by you. (Kroskrity 1985: 311)
- c. ʉ na:n-di wí-tay
you we-OBL 1→2.III-know
You are known (or recognized) by us. (Kroskrity 1985: 311)

²⁶ Kroskrity 1985: 310-320, Zuñiga 2002: 194 point out that the cognate of *di* in Ria Grande Tewa has generalized to direct contexts for 1st/2nd person pronouns, becoming more of a plain ergative case marker..

²⁷ Kroskrity's agreement prefix glosses are modified in line with Zuniga 2002, that is of Table XX.

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

- (30) Table XX: Arizona Tewa agreement (Kroskrity 1985: 308, Zuñiga 2002: 184)²⁸

EA/S:	1s	1d	1p	2s	2d	2p	3s	3d	3p
Intransitive S (Set I)	'o-	ga-	gi-	'u-	da-	'i-	na-	da-	di-
3 DO, dir. (Set II)	dó-	'án-	'í:-	ná:-	den-	'obí:n-	mán-	den-	dí-
3 DO, inv. (Set III)	N/A			N/A			ó:-	'ó:bén-	'ó:bé-
2 DO	wí-			<i>reflexive</i>			wó:-	wó:bén-	wó:bé-
1 DO	<i>reflexive</i>			dí-			dí-		

NB: Inverse = Shaded. For 3→3, non-shaded = 3+→3, shaded = 3→3+.

Arizona Tewa therefore shows one formation, Σ , whose well-formedness must refer to EA-O PH interaction as being those contexts where EA outranks O on $1/2 > 3$, and another, Σ' , whose well-formedness must again refer to EA-O PH interaction on the same hierarchy as being those where EA does not outrank O. Alternatively, the well-formedness of Σ' could be viewed as referring to the illegitimacy of Σ since Σ' occurs only where Σ does not, a transderivational comparison where one structure or derivation is licensed only if another is impossible.

If Σ and Σ' are two different morphophonological realizations of the same syntactic structure, the Arizona Tewa system hides no great theoretical mystery. That they are such is certainly a possibility under the proposal that case and agreement are in the syntax, since they differ in the case of the EA and the agreement it controls. Because of its cross-linguistic repetition in PH interactions, it is worth in particular exploring the transderivational idea that Σ' licensing actually depends on Σ not being available for a particular EA-O combination. Patterns that are or that look like transderivational comparison are common in morphophonology (see chapter II). The English comparative formation is an example: the suffix *-er* can attach only to short adjectives like *quick*, giving *quicker*, and only if its attachment restrictions are not met is the analytic expression with *more* licensed, giving **rapider – more rapid* vs. **more quick*. The licensing of the *more ADJ* formation seems to refer to the ill-formedness of the *ADJ-er* formation, and it can be modelled by supposing that *-er* attachment precedes and thus bleeds the spell-out of an unsuffixed *-er* are *more* (cf. Embick and Noyer 2001, Embick 2007). Another example of transderivational morphophonology is the spell-out of lower rather than higher copy if and only if the default spell-out of the higher copy would incur a morphophonological problem (Bonet 1991, Bošković 2002), to which we return to chapter IV.

Turning concretely to Tanoan and putting case and phi into the morphophonology, we could suppose a morphophonological PH condition that lets morphophonology attach to the verb an inner AGR slot for O and an outer AGR slot for the EA only if they do not violate a requirement that the outer must have a higher person value than the inner (thinking of Albizu's (21) above). If they do, the outer AGR_{EA} is deleted (in Southern Tiwa) or impoverished (in Arizona Tewa), and this operation has an effect on the spell-out of the EA that donates AGR_{EA} , say by forcing lower

²⁸ In $1 \leftrightarrow 2$ combinations the O contributes more distinctions to the agreement than EA, having thus primacy as agreement controller; see Kroskrity (1985), and for a model lending itself to this, Béjar and Rezac (2009).

rather than higher copy to spell-out (thinking of Bobaljik and Branigan 2006) and the resulting position with respect to T reflected in whether the EA gets unmarked or marked case.

- (31) a. [EA O V+T ... [EA ... [O ...]]] *syntax*
 b. [EA O AGR_{EA}+AGR_O+V+T ... [~~EA~~ ... [Θ ...]]] *spellout if AGR_{EA} > AGR_O*
 c. [~~EA~~ O AGR_{EA}+AGR_O+V+T ... [EA ... [Θ ...]]] *spellout if AGR_{EA} > AGR_O*
 where EA c-commanding T is bare and EA c-commanded by T is oblique

However, there is evidence that Σ and Σ' are different syntactic structures in Arizona Tewa. Kroskrity (1985: 313-4) uncovers two putatively syntactic or interpretive diagnostics where the two structures differ. The first is that the inverse structure prevents relativization on its oblique EA, while the direct structure allows the relativization on its unmarked EA, as in (32). If accessibility to relativization is a syntactic fact, and oblique marking of the EA is affecting it, this oblique marking is visible to the syntax as well. At the same time, one can imagine alternatives such as relativization based on null pronouns that cannot be spelled out with the oblique marking that a morphological algorithm assigns them.

- (32) wó:-k^hεge-n-'i na-hik^yan-mí
 3→3SG.III-help-PROG-REL IMP-happy-OBLIG
 May you who are helped be happy! [O of inverse relativized]
 *May he/she who has helped you be happy! [EA of inverse relativized]
 (Kroskrity 1985: 313)

The other diagnostic is a limitation of cross-clausal anaphora or conjunction reduction (cf. Zaenen et al. 1985 as a subjecthood diagnostic). In (33), there is a gap for the intransitive subject of the main clause that is bound or controlled by an antecedent in the preceding embedded clause. That antecedent is the EA of direct and the IA of inverse contexts. The oblique marking of EA in inverse contexts prevents it from participating in this apparently syntactic phenomenon.

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

Given the present state of knowledge about these diagnostics, they are only suggestive; the data sets are not robust, less is understood about the phenomena than one would like, and alternatives come to mind. The phenomenon studied in the next chapter, abstractly close kin to Arizona Tewa PH interactions, eliminates this doubt. Let us therefore suppose that the direct and inverse structures differ syntactically, and proceed to investigate the consequences of the conditions on the distribution of Σ and Σ' , for these refer to uninterpretable phi.

Σ is a syntactic structure that is licensed only if the syntactic configuration of EA and O in Σ , say for concreteness one where EA c-commanding O, meets the person hierarchy requirement

that 1st/2nd person DPs c-command 3rd person DPs. This is a requirement over both interpretable and uninterpretable phi-features: viewed as restricting the distribution of a 1st/2nd person DP for example, it refers to the fact that another DP is 3rd person rather than 1st/2nd person, and this is not interpretable on the 1st/2nd person DP. As we have seen in the preceding section, it is possible to model this person hierarchy requirement in the morphophonology if we wish to put all uninterpretable phi there. Syntax simply produces Σ , and a morphophonological condition C1 that 1/2 DP c-command 3 DP filters out Σ structures that do not match it: those where EA is 3 and O is 1/2, or where EA and O are both 1/2.

However, there is also the distinct syntactic structure Σ' : for concreteness, one where the EA is a PP, and so legitimate by condition C1 because it applies to two DPs. But Σ' is not generally legitimate. It exists only when Σ is illegitimate, namely for 1/2/3_{EA}-1/2_O combinations. So we need a second condition on uninterpretable phi to license Σ' , condition C2 that a PP (of the *ba* type) containing a 1/2/3 DP must co-occur with (or c-command, etc.) a 1/2 DP.

This, however, leaves the realm of the reasonable. Σ and Σ' are distinct syntactic structures the licensing of each of which separately refers to the mutual relationship of the phi-features of EA and O, one uninterpretable to the other. To put these licensing conditions into the morphophonology is to enrich it with a panoply of syntactic primitives rich enough to separately state the unrelated syntactic-like conditions C1 and C2. The enrichment goes far beyond that envisaged in Marantz (1991), where the possibility of morphophonological mechanisms spanning unbounded chunks of structure and very partially recapitulating c-command is justified by the generalization that uninterpretable phi-features do not act as licensing conditions on syntactic structures. That generalization is wrong, for the licensing of the syntactic structure Σ and Σ' each refers to uninterpretable phi. Enriching the morphophonology to state C1 and C2 can certainly be done, but it takes all sense out of seeking to enrich it in the first place. Even were the only way to state the conditions on Σ and Σ' is by arbitrary filters on syntactic structures, that bullet out to be bitten. The uninterpretable phi here seems to be in the syntax.

A syntactic approach offers more elegant alternatives, if those person hierarchy interactions that condition syntactic structures are susceptible to hierarchical generalizations like those of Arizona Tewa or Ojibwa, and do not need an arbitrary EA-O list as does Chukchi. One possibility is to differentiate syntactic dependencies for 1st/2nd person from those for 3rd person, which introduces the necessary asymmetry. In (34), the initial configuration has EA selected by ν in [Spec, ν P] as an oblique PP, and O moves above the EA. T has a probe that looks for 1st/2nd but not 3rd person. If O is 3rd person, it finds the EA and attracts it from its PP, stranding the P which does not get spelled out; these are 1/2→3 configurations of Σ . If O is 1st/2nd person however, T finds O and cannot attract the EA, which remains in-situ in its PP as an oblique; these are 1/2/3→1/2 configurations Σ' . The difference between bare/ ν P-external and oblique/ ν P-internal EA can naturally have the syntactic correlates found by Kroskrity.²⁹

- (34) a. $T_{1/2 \text{ person-}} [O [\nu P [PP P EA] \nu \dots \Theta]]$

²⁹ The analysis of null case morphology due extraction of the DP complement of a overt case as a PP is similar to the general "peeling" proposal for Case of Michal Starke, p.c., Caha (2007), Medová (2008); I am grateful to Michal Starke for walking me through it. Less specifically, the oblique EA can be the spell-out of a ν P-internal EA and bare EA of a ν P-external one, suitable to approaches associating the marked ergative case to being ν P-internal (Nash 1996). The same ν P-internal/external difference can be articulated through Case-assignment rather than spell-out, e.g. ν P-internal Case assignment gives to the EA one structure, oblique-like, which later Case-assignment by T can over-ride, unfortunately paradoxically to a less marked one (cf. Rezac 2003, Richards 2007).

- | | | | | |
|----|-------------------|--------------------------|---|-----------------------------|
| b. | EA _{1/2} | T _{1/2} person- | [O ₃ [_{vP} [_{PP} P EA _{1/2}] v ... Θ]] | T-EA Agree and EA movement |
| c. | | T _{1/2} person- | [O _{1/2} [_{vP} [_{PP} P EA _{1/2/3}] v ... t _O]] | T-O Agree, no T-EA relation |

Much is suspect or missing here – extraction out of a PP specifier, the mechanism of agreement with an EA that stays in the PP, and so on – but the mechanism is only an existence proof of a reasonable narrow-syntactic mechanism resulting in the Arizona Tewa Σ and Σ' structures under the right conditions, if uninterpretable phi is visible to syntax (for a concrete attempt to implement such ideas, see Béjar and Rezac 2009).

The next chapter will eventually end up suggesting that such simple mechanisms are untenable, and that the way in which syntax refers to uninterpretable phi capitalizes on a striking property of Σ and Σ' : their complementarity. The less marked, more simply transitive Σ is found when the EA is not lower on the person hierarchy than the O, and the more marked Σ' when it is. This suggests that Σ' is a "repair", a "last-resort" structure that steps in when the more unmarked Σ cannot satisfy a condition on uninterpretable phi of EA and O, and fixes the problem by removing one of the arguments from competition with the other (making the EA oblique in Arizona Tewa). The appeal and the deterrent of such an approach is the same: the more marked Σ' does look like last-resort person licensing repair when Σ would fail, and this description holds over an impressive range of person hierarchy interactions, but it makes for a transderivational computation in the syntax.

1 Chapter IV: The Person Case Constraint and its repairs in French

1.1 Introduction

The last chapter terminates on a Person Hierarchy interaction that is not reasonably modeled by restricting uninterpretable phi to the morphophonology: the licensing of different syntactic structures refers to uninterpretable phi. However, the evidence that truly syntactically different structures are involved was slender in the sole language illustrating this scenario, Arizona Tewa. This chapter investigates the scenario in detail from the *Person Case Constraint* (PCC) and its repairs in French, establishing both the conclusion that uninterpretable phi is needed for the licensing of syntactic structures, and delimiting the analytical options of how it plays that role. One of these options is explored in the next chapter.¹

The PH interactions of Arizona Tewa can be characterized as in (1).

- (1) PH-interaction in Arizona Tewa: EA has direct case unless O is equal to or higher than it on the scale $1/2 > 3$, in which case EA is oblique.

The Person Case Constraint and its repairs can be given a similar form, although the first characterization in (2) looks rather different. It describes an alternation between clitic and strong pronouns of the indirect object IO, in a context defined by the presence or absence of a 1st/2nd/*se* accusative clitic direct object O. The alternation is illustrated in (3), where the clitic cluster is in italics. Its key element, established below in detail, is that the alternative realizations of the IO are in complementary distribution. The unfocussed dative pronoun must be a clitic outside the contexts where it co-occurs with a 1st/2nd/*se* accusative clitic, and can only be a strong pronoun or (dialectally) a locative clitic in those contexts. These contexts will henceforth be spoken of as the *Person Case Constraint* (PCC), approximated in (4) as a constraint on clitic clusters until a deeper inquiry reveals its proper syntactic character.

¹ NOTE-00. There are several practical perils in investigating French: a strong normative pressure by Parisian colloquial and literary/school standards; native competence in several levels with quite distinct grammars; and the impression given by far-reaching homogenization that there is no regional dialectal variation left. Example (i) illustrates with reference to my principal consultant, Mélanie Jouitteau (MJ), middle-class speaker of Nantes French. In the literary/school norm, FR-L, *Paul et Marie* cannot be clitic doubled by the weak pronoun *ils*, the clitic cluster *la leur* is as such, and the 1PL weak pronoun is *nous* (*elle* 'she' would be [ɛl]). FR-L is rarely a native tongue. One colloquial variety, FR-C, is found best in very informal settings as with friends of the same age-group: the subject is obligatorily clitic doubled, *on* instead of *nous*, *la leur* obligatorily > *leur* and *leur* optionally > *y* (*elle* [ɛ] or [ɑ]). FR-C exists alongside another colloquial level, FR-M, used elsewhere, both being genuinely native tongues throughout the acquisition period: the subject is only optionally clitic doubled, *on* for *nous*, *la leur* > *leur* (and > *la le leur*, but **leur la*), *leur* * > *y* (but *lui* > 'ui, 'i, *y) (*elle* [ɛ]). Cf. Lambrecht (1981). Among points of genuine *dialectal* variation in the example is the availability of *en* beside *de lui* to pick up an animate argument and *la leur* > *leur*, *la le leur*, *leur l'* and *leur* > *y* optionally or obligatorily. There are triggers to navigate the different levels, structural and lexical. All this must be carefully distinguished from complexity: causatives of (di)transitives for example, require careful contextualization and if not done they may evoke a more "literary" level, yet they occur at FR-C for all that.

- (i) Cette fille_i, Paul et Marie_k doivent s'⟨en_i⟩ méfier ⟨d'elle_i⟩. Pourquoi nous la_i leur_k avons présenté? FR-L
 Cette nana_i, Paul et Marie_k i doivent s'⟨en_i⟩ méfier ⟨d'elle_i⟩. Pourquoi on (*la_i) leur_k / y_k a présenté? FR-C
 this girl, P. and M. they must SE ⟨GEN⟩ distrust ⟨of her⟩. why we him.A them.D / LOC have introduced
 This girl, Paul and Marie must be distrustful of her. Why have we introduced her to them?

- (2) PH-interaction in French: unfocussed pronoun IO is a dative clitic unless O is a 1st/2nd person or *se* reflexive clitic, in which case IO is a strong pronoun.
- (3) a. On *la* \langle *leur* \rangle présentera \langle *à elles / \sqrt aux filles \rangle [unfocused DAT pronoun → clitic]
 one her.ACC them.DAT will.introduce to them to.the girls
 One will introduce her to them / to the girls.
- b. On *te* \langle **leur* \rangle présentera \langle à elles \rangle [except if ACC=1st/2nd/SE: DAT → strong]
 one you.ACC them.DAT will.introduce to them
 One will introduce you to them.
- (4) Person Case Constraint (first take): a dative clitic is impossible in a clitic cluster containing a 1st/2nd/*se* accusative clitic (\approx [+person] accusative clitic, see below).

There is a striking similarity to the French and Arizona Tewa PH interactions: a complementary distribution of two structures according to conditions on the combinations of phi-features of two arguments, with the emergence of a superficially more marked structure (oblique, strong pronoun) only when a less marked structure (direct, clitic) is unavailable. The similarity goes even farther. An irreducible difference between the two alternations is that in Arizona Tewa the subject and direct object (EA and O) are affected, while in French the indirect and direct object are (IO and O); this is taken up in the next chapter. Less significant is the form of the alternating element, for by the end of this chapter we will see that the French clitic-strong pronoun alternation is a Case-based alternation closely similar to a direct-oblique alternation. Finally, the conditions of the French alternation do not at first sight resemble the neat person hierarchy of Arizona Tewa, but that first sight is misleading, for much work concludes that 1st and 2nd but not 3rd person share some "person"-like property with on the one hand the *se* reflexive clitic of French, and on the other with "applicative" datives of all persons, including dative clitics.² So the French IO alternation can be stated very similarly to that of the Arizona Tewa EA:

- (5) PH-interaction in French: unfocussed pronoun IO is a dative clitic unless O is equal to or higher than it on the scale 1/2/SE/dative > 3, in which case IO is a strong pronoun.

The property grouping 1st/2nd/SE/dative clitics is henceforth referred to as [+person]; the end of the next chapter returns to its likely identity as grammaticalized animacy.

² NOTE-10: For *se* reflexives, see Bonet (1991: 1.2.4, 2.1), Kayne (2000), also Cinque (2004: note 27), and especially Rivero (2004) for a relationship between the personhood of *se* and the Person Case Constraint. The work identifying some 1st/2nd/non-3rd "person"-like properties for datives is large: it comes from morphological patterning and agreement (Anagnostopoulou 2003: 270-2 from Georgian, Bobaljik and Wurmbrand 2002 from Itelmen, Rezac 2008c), the Person Case Constraint itself (esp. Taraldsen 1995, Boeckx 2000, Anagnostopoulou 2003, Adger and Harbour 2007, Rezac 2008b) and other person hierarchies (Rosen 1990: 678 on Southern Tiwa), and interpretation (Adger and Harbour 2007: 21, cf. Boeckx 2000: 366f.). There remains significant differences between (at least 3rd) person datives and 1st/2nd person accusatives on these criteria; we return to some for the PCC in sections 1.5.6 and 1.6.3, and for the other criteria such datives as the inanimate non-possessors discussed in Kayne (1975: 106), and the inanimate possessors or wholes of part-whole relations discussed in Pijnenburg & Hulk (1989: 260) and Ormazabal and Romero (2007: 338-9).

- (6) [+person] = 1st, 2nd person, *se* reflexive of French type, applicative datives

The PH interaction of French will prove to make a robust case for what the PH interactions of Arizona Tewa hint at: two distinct syntactic structures are licensed by conditions that refer to uninterpretable phi. As with Arizona Tewa, it is not obvious that this is so, for the PH interaction (3) could quite elegantly be construed as two alternative spell-outs of the same underlying syntactic structure. The first part of this chapter establishes that two distinct syntactic structures are indeed involved: after a background on French clitics in section 1.2 and a more detailed examination of the properties of the PH interaction in section 1.3, the case for a syntactic alternation in repairs of the Person Case Constraint is made in section 1.4 and contrasted with other clitic cluster gaps and transformations. Modularity would draw the difference between the syntactically repairable Person Case Constraint and other clitic cluster gaps by putting the former into the syntax, and this seems right: section 1.5 accordingly investigates the constraint and its repairs in more depth and in more complex structures, laying out its syntactic character.

Section 1.6 brings these results to bear on the big question raised at the end of the last chapter: whether the complementarity of the two structures involved in these PH alternations occurs through *local* computation, or whether it instantiates a *transderivational* computation whereby a more complex structure emerges into grammaticality only when the ordinary one is blocked. An empirically adequate local approach, pioneered by Couquaux (1975) in the powerful EST framework, turns out to be difficult in subsequent developments of transformational grammar due to the limitation of syntactic dependencies to information "on the path" of the dependency, a problem that will recur and will be unified with "Dependent Case" in the next chapter. The transderivational approach and reactions to it go back to Kayne (1975) (see further section 1.6):

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

(Kayne 1975: 174, but cf. p. 176)

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)

That is not quite correct, as Kayne points out in contrasting the Person Case Constraint with the irreparable but very similar clitic cluster gaps discussed in chapter II. Modularity will step in to single out the Person Case Constraint as a syntactic licensing problem in contrast to other clitic cluster gaps. Yet that is only a part of the solution, for even most syntactic problems with clitics fail to be repairable by an unfocused strong pronoun, betraying the untenability of a generalized transderivational principle like "minimize structure if possible". In chiseling out the shape of the mechanism necessary, this chapter ends by preparing the way for the proposal in the next: the Person Case Constraint is a failure to meet Full Interpretation (the Case Filter) at the interface with external systems, and only such failures license limited transderivational repairs: the addition of an uninterpretable feature (a Case licenser).

1.2 Background on French clitics

The Person Case Constraint in French affects clitics. The data here are drawn entirely from proclisis (enclisis shows the same patterns), where clitics typically occur in the cluster in (7) filled by the clitics in (8).³

- (7) Proclitic cluster: 1/2/SE-3.DAT-3.ACC-GEN-LOC
- (8) 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*

Two minimally different constructions will play a key role in the following discussion: dative and locative arguments (Kayne 1975, Couquaux 1975). The verb *présenter* 'introduce to' takes a dative indirect object, *parler* 'speak to' a dative object, *penser* 'think about' takes a locative object, and *répondre* 'reply to' alternates between a dative for animate and a locative for inanimate objects. Dative and locative arguments have identical surface realization as prepositional phrases headed by *à* 'to', but they diverge in their clitic form. When an unfocussed pronoun, a dative is obligatorily realized as a dative clitic marked for person and number, while a locative is only *optionally* realized as the invariable locative clitic *y*. Like locatives are genitive and partitive arguments headed by the preposition *de* 'from' when phrasal and cliticized as *en*.

- (9) a. Elle présentera Paul aux étudiants // à EUX. [DAT argument]
 she will.introduce Paul to.the students to them
 She will introduce Paul to the students / to THEM.
- b. Elle *⟨leur⟩* présentera Paul *⟨*à eux⟩* [DAT unfocussed pronoun → oblig. clitic]
 She them.DAT will.introduce Paul to them
 She will introduce Paul to them (unfocussed).
- (10) a. Elle pensera aux étudiants / à EUX [LOC argument]
 she will.think to.the students to them
 She will think about the students / about THEM.
- b. Elle *⟨y/*leur⟩* pensera *⟨à eux⟩* [LOC unfocussed pronoun → opt. clitic]
 she LOC/them.DAT will.think to them
 She will think about them (unfocussed).

In distinguishing phi-features, dative clitics are like accusative clitics, and both are pronoun-like, while and locatives and genitives are set apart and PP/adverb-like. Various differences discussed below confirm these groupings and shed light on the precise character of the difference. At the end of this chapter, it will prove key in understanding an apparently unrelated difference

³ Although 1st/2nd person clitics make no case distinctions, it can be recovered by diagnostics like quantifier float, and are included in the glosses. The *se* clitic will be glossed SE unless further specification is needed: it plays the role of a dative and accusative reflexive, and inherent (lexicalized) clitic, and a mediopassive formant.

between the two groups of major interest in what follows: the *Cliticization Requirement* (12) (Kayne 1975: 172-6, Couquaux 1975, Morin 1979a, Postal 1984, 1989, 1990, Cardinaletti and Starke 1999; de Kok 1985 and Nyrop 1925: 188.1°, 218-221 discuss its history). Datives and accusatives have no choice but to cliticize if they are unfocused pronouns, while locatives do so only optionally, as (9)-(10) indicate and (11) clarifies with context. The focus that licenses strong pronouns includes contrast and the introduction of a new discourse referent as by pointing (cf. the Appendix).⁴ Other special interpretive properties of clitics like Condition B (section 1.4.3) are shared by all clitics, so the Cliticization Requirement is unusual.

- (11) a. A: Tu connais Marie? B: Oui, j' <y> pense <à elle> souvent
 A: you know Marie? B: yes, I <there> think <to her> often
- b. A: Tu connais Marie? B: Oui, je <lui> parle <*à elle> souvent.
 A: you know Marie? B: yes, I <her.DAT> speak <*to her> often
- {MJ}
- (12) *Cliticization Requirement*: unfocused pronouns as accusative or dative complements must be clitic; as locative and genitive complements they may be strong or clitic.

As mentioned, the Cliticization Requirement will eventually be related to an independent difference between these two groups: locative clitics are PPs/adverbs, along with strong dative and locative pronouns and DPs, while dative clitics are much more like bare DPs, as accusative clitics and nominative/accusative strong pronouns and DPs clearly are. One line of evidence comes from floating quantifiers (Kayne 1975: 1.11, 136, 2.6-7, 2.12, 2.14, Zaring 1991, Roberge and Troberg 2007: 300).⁵ Two floating quantifier phenomena are relevant: VP-internal and VP-peripheral floating quantifiers. VP-internal floating quantifiers in (13) can be licensed by A'-fronted bare DPs but not A'-fronted PPs, including dative and locative *à*-phrases. Clitics show a different pattern: the locative clitic patterns as a PP, the dative one as a bare DP and licenses a VP-internal floating quantifier (preceded by *à*), along with the accusative one. VP-peripheral

⁴ NOTE-20: Accusative strong pronouns require more salience than datives, and for some speakers they seem to be ungrammatical entirely (Kayne 1975: 173f., 183, 2000: 166, Postal 1990: 178), while for others they are quite acceptable under the said conditions (MJ, Sandfeld 1970 [1928]: 72, Burston 1983: 269, Kayne 2000: 180 note 13, Cardinaletti and Starke 1999: 218 note 5); see Kayne (2000: 179 note 11), Cardinaletti and Starke (1999: 222 note 35) for analytical options. The difference extends even to structures like (i), but with variation, cf. (ii) (in none is a clitic possible). Cf. notes NOTE-90, XX. The Cliticization Requirement is sometimes held to have strong pronouns in coordinate or modification structures as exceptions, but this seems incorrect for French; see section 1.6.3.

(i) a. Il téléphone autant à moi qu'à Jacques. b. ?*Il aime autant moi que Jacques.
 he calls as.much to me as to Jacques he likes as.much me as Jacques (Tasmowski 1985: 245)

(ii) On dit que cette fille-là "One says that that girl"

a. aime **(*seulement) toi. b. n'aime que toi.
 likes only you NEG likes but you (= likes only you)

(Kayne 1975: 183 vs. for *seulement* Cardinaletti and Starke 1999: 152)

⁵ NOTE-25: Other differences in cliticization between the two groups that plausibly also come to this. Only locative and genitive clitics can climb out of infinitives under certain modals, and be separated from an infinitive by some adverbs (Kayne 1975: 79 note 7, 430, 2000: 65, Pollock 1978, Taraldsen 1983, Cinque 2002; cf. note NOTE-150), escape certain ECM complements (note NOTE-150), and break clitic cluster cohesion by climbing out of causative complements hosting the clitic *se* (note NOTE-110). These all suggest different landing sites or mechanisms.

bare floating quantifiers reveal the same distinctions: these can be licensed by dative and accusative clitics, but not by locative ones, (14).⁶

- (13) a. \langle Ces femmes, que \rangle elle \langle les \rangle connaît toutes.
these women, who she them.ACC knows all
- b. Ces femmes, à/avec qui j'ai parlé/pensé $(*(\text{à}/\text{avec})$ toutes)
these women, to/with who I have spoken/thought (to/with) all
- c. Je leur ai parlé / y ai pensé $(*(\text{à})$ toutes.
I them.DAT have spoken / LOC have thought (to) all
- (14) a. Elle \langle leur_i \rangle a $(*(\text{à})$ tous_i offert des bonbons \langle *aux étudiants_i / *à EUX_i \rangle
she them.D has (to) all offered bonbons to them / to THEM
- b. Elle \langle *y_i \rangle a tous_i pensé \langle *à eux \rangle
she LOC has to all thought to them

A closer look at the VP-peripheral bare floating quantifiers (14) is very revealing about the syntax of datives. There are two types of theories of such floating quantifiers available (Bobaljik 2003, Fitzpatrick 2006): ones where they are the remnant of the licensing element stranded by its further movement (Sportiche 1988, Starke 2001: 4.2, Boskovic 2004), and ones where they are adverbs in an anaphoric relationship to the element whose interpretation they affect (Déprez 1989, Bobaljik 1995, Doetjes 1997, De Cat 2000, Fitzpatrick 2006: chapter 4). The elements that license VP-peripheral floating quantifiers in French, in (15), are identifiable as nominals that have undergone A-movement past the VP-peripheral site of the quantifier. This includes dative clitics, but not locative clitics which seem to be PP/adverb-like.

- (15) Floating quantifier licensing: DP (or phi-set?) c-commanding from an A-position.
- a. Licensers: accusative, dative clitics; nominatives raised to [Spec, TP]
- b. Non-licensors: accusative, dative non-clitics in VP; nominatives in-situ in [Spec, vP] (Lahousse 2006, Déprez 1990); A'-fronted phrases, including nominatives (Déprez 1989: 94); any PPs, in-situ or fronted (as in stylistic inversion).

Kayne (1975: 152ff.) deduces from the floating quantifier pattern that the dative clitic originates in the analogue of the English double object construction, *give them candy*, and nonclitic *à*-phrases in the prepositional construction, *give candy to them*. Anagnostopoulou (2003: 281-4) casts this in contemporary terms as follows. First, French non-clitic indirect objects

⁶ I give a bare quantifier linked to a dative clitic with no degradation as for an accusative, and it is so for many speakers, in transitives and intransitives alike (Sportiche 1996: 232f., 270 note 9); parameterization might lie in the result of P+pronoun amalgamation discussed below for (17)b. My exposition sets aside relativized accusatives, which do license VP-peripheral floating quantifiers, unlike datives or locatives. These come from a separate phenomenon, leftward quantifier movement of a VP-internal bare quantifier (see Bobaljik 2003: 3.2 for a resume of Kayne 1975, Sportiche 1988, Déprez 1989), and/or the same phenomenon that licenses optional participle agreement for A'-fronted definite accusatives (q.v. Kayne 1989, Déprez 1998, Kayne 2000: 180 note 18; the rare marginal licensing of VP-peripheral/internal floating quantifiers by A'-fronted datives is perhaps to be related to participle agreement with a dative clitic that some speakers permit).

headed by *à* are like English ones headed by *to*, base-generated and remaining as a PP below the direct object, and never c-commanding it or higher elements like the VP-peripheral floating quantifier. Second, French dative clitics like the indirect objects of the English double object construction are base-generated in or move to the specifier of the applicative head Appl° above the direct object (cf. McGinnis 1998, 2001, Pylkkänen 2002, Cuervo 2003). For the first proposition, it is clearly correct that such a prepositional structure is *available* to some *à* PPs such as the dative indirect object arguments of verbs like *présenter* 'introduce' discussed so far (see note 7 and section 1.5). I adopt it as (16)a (eschewing high / low applicatives differences, here irrelevant: Pylkkänen 2003, McGinnis 2001, Cuervo 2003). For the second proposition, there is considerable convergence of evidence that dative clitics in Romance always signal such an applicative construction (Anagnostopoulou 2003, Demonte 1995, Cuervo 2003), perhaps because of absence of preposition stranding (cf. Kayne 1981) or locality (Anagnostopoulou 2003, but cf. section 1.5.5) and I will assume as (16)b. However, it proves untenable to ban non-clitic *à*-phrases from the applicative construction, for we will find that at least some non-clitic datives like psych experiencers and causees must be applicative arguments above the direct object (section 1.5.4), as is the case in Spanish more generally (esp. Cuervo 2003: 121ff.). These applicative *à*-phrases do not license floating quantifiers, so it is the step cliticization as A-movement of a nominal past the floating quantifier site that is essential in the licensing.⁷

⁷ The diagnostics for the double object versus the prepositional construction familiar from English (Larson 1988, Pesetsky 1995, Harley 2002), are often not of much use for French.

Neutral word order: Dative *à* PPs follow direct objects, whether lexical, benefactive, psych-experiencers, or causee external arguments, which certainly do not all have the same structural relationship to the object (cf. section 1.5). The same holds of neutral word orders in Spanish, where c-command diagnostics clearly show to different structural relationships correlating with clitic doubling of the *a* PP. See further Cuervo 2003, Demonte 1995.

C-command symmetries: In the basic ditransitive structure, the data are ambiguous. Quantifier-variable binding from the direct object into a following *à* PP is generally fine. The reverse is however true as well (ia), and is no evidence for a double object structure (contra Harley 2002), because it is available with PPs in general (ibc, cf. Zubizarreta 1998: 12-15, 147 for d-linked quantifiers and narrow focus on the direct object, but it holds more generally, although note the contrast with narrow focus on the object in i-c vs. i-d (cf. Zubizarreta 1998 note 55)). Evidence from the binding of *lui-même* 'him-self' type reflexives and *l'un-l'autre* 'each other' type reciprocals is clearer: binding from the direct object into the following *à*-phrase is always fine, while it is less felicitous in the reverse direction and sometimes unavailable as for 1st/2nd person (Postal 1989: chapter 1; see section 1.5.3). (English too allows backward binding and scope from *to*-PPs into direct objects easily: Burzio 1986: 203, Williams 1994: 254, Pesetsky 1995: XX.)

- (i) a On a rendu son_k livre à chaque enfant_k / personne_k (sans le_k prévenir d'abord)
 We returned his book to each child (focus: wide, DO, *à*-XP) / no one (focus: wide, DO{***test: *à*-XP})
 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 assignment at each civil servant's place (focus: wide, DO, PP)
 We did not deliver his assignment at anybody's place. (focus: wide, ??DO)

{MJ}

Interpretation: The "possessor restriction" that the indirect object be a potential possessor of the direct object, which constrains applicative but not the prepositional construction in various languages, constrains dative clitics but not *à*-phrases in French (ii-a), though cf. (ii-bc). It is in general possible for both a dative clitic and an *à* PP to be the possessor, as in (ii-c) (without the parochial restrictions noted in Kayne 1975: 137-8, Larson 1988: 377 note 44, Harley 2002 ex. 10). The *à*-phrase can also express (iii), which English must code by the double object construction (Pijnenburg and Hulk 1989: 260, Harley 2002), but this in English can be overturned by information structure (Krifka 2004), and theories of it seem to make it possible for a low PP to have the right reading (e.g. Harley 2002).

- (ii) a Anne ⟨y/*lui⟩ a envoyé une paquet ⟨à Londres⟩.
 Anne sent a package to London. (*lui* ok with London for a possessor in London: 'London may already have the package' is a felicitous follow-up to *lui* but not *y*.) {MJ}

- (16) a. v_{acc} [VP DP/pronoun [V [ApplP P°/Appl° [à DP]]]]] [prepositional structure]
 b. v_{acc} [ApplP [à DP/dative clitic] [P°Appl° [VP V DP/pronoun]]] [applicative/double object structure]

The two structures are given in such a way that the preposition of (16)a is the same element as the Appl° of (16)b, which is characteristic of theories positing a derivational relationship between the two (Baker 1988, Ormazabal and Romero 1998), but also available for theories that base-generate them separately (cf. chapter V, section XX). The structures also homologize the dative clitics and *à* + DP, suggesting that the dative case of the clitic and the *à* preceding the DP are the same element spelled out differently according to the phrasal or head nature of the indirect object, as in (17).⁸ The amalgamation of the dative case marker and the clitic pronoun in (17)b must be such that the clitic behaves as a DP in licensing a floating quantifier, here coded as the pronoun projecting. In contrast, locative clitics are presumably P + pronoun structures where the P projects, accounting both for their distinctive landing site in cliticization and for their inability to license floating quantifiers. The difference is as that of Stowell (1989) for quirky versus inherent case.

- (17) a. [PP *à*_{P°} DP] b. [_{D°} *à*_{P°} + pronoun_{D°}]

Dative clitics can represent various types of datives, only some of which can appear as non-clitics: subcategorized dative arguments or *lexical* datives like the indirect objects of *présenter* 'introduce' and *écrire* 'write' discussed so far, *extended* datives including benefactives, malefactives, and possessors, and *causee* datives.⁹ Each group is discussed in more detail as it becomes relevant to the Person Case Constraint and its repairs.

-
- b Il (lui) écrit un poème (pour/à son amoureuse éventuelle)
 He is writing his eventual lover a poem. {MJ}
 c Marie *lui* a donné un coup de fer, à mon pantalon.
 Marie ironed it, my pair of pants. (Kayne 1975: 106)

(iii) Marie a donné un coup de pied à la table.

Mary gave the table a kick / *a kick to the table. (Pijnenburg & Hulk 1989: 260)

⁸ NOTE-30: Neither the dative case marker nor the preposition *à* counts as a barrier to c-command for binding and scope, but that is a general property of prepositions (Pesetsky 1995: 172-180, 22ff., Phillips 1996: 44-8). Vergnaud (1974: 246-8 note 35), Jaeggli (1982: 28 [1980: 54-6]), and Zaring (1991) argue that the dative *à* is a case marker not a preposition, as in the proposal here, from its obligatory distribution across members of a coordinate structure in conjunctions and the ability to distribute across them in the first place when the conjunction is a relative clause head, in contrast to prepositions including the locative *à* (for Jaeggli, while Vergnaud not discussing locative *à* groups the genitive *de* with the dative *à*). However, Roberge and Troberg (2007: 298-300) show that when interpretive and phonological differences are controlled for, there is no asymmetry; cf. Abeillé et al. (2006: 2.6). Among alternatives, see Adger and Harbour (2007) for dative case and Kayne (2004) for *à*.

⁹ NOTE-40: There is a further kind of dative, the non-argumental "ethical dative" restricted to clitics (Leclère 1976, Jouiiteau and Rezac 2008). It has radically different properties from argumental datives, such occurring above the future aspectual *aller* 'go', forming multiple clitic combinations that combine freely with non-ethical datives, and invisibility to auxiliary selection, binding, and the Person Case Constraint.

- (i) ... Je *te me* vais *te me vous* *lui* faire passer un sale quart d'heure...
 ... I you me go you me you(PL) him.DAT make pass a dirty quarter-hour ...
 I'm gonna make him pass a lousy quarter-hour... (Jouiiteau and Rezac 2008)

1.3 The Person Case Constraint and its repairs

Chapter II concluded that clitic cluster gaps and opaque clitics in Romance are inert in syntax and interpretation. At first sight, the Person Case Constraint looks just like another such morphophonological gap, and so it is analyzed in the seminal studies of Perlmutter (1971) and Bonet (1991), along with its pan-Romance and cross-linguistic analogues.

- (18) *Person Case Constraint*: *[+person] accusative clitic in a cluster with an argumental dative clitic, where [+person] = 1st, 2nd person and *se* reflexive.¹⁰

The PCC in French holds across all argumental dative clitics, lexical, extended, and causee datives illustrated in (19), as it does cross-linguistically (Bonet 1991: 194-200). The non-lexical datives take one option for stating the PCC off the table, in terms of selectional restrictions, if there is no selectional relationship between a possessor dative and the possessed theme, or a causee dative and a lower direct object. This point can be made more strongly in Romance languages with more general multi-predicate "restructuring" constructions that pool clitics in a single cluster, as well as for clitics and agreement cross-linguistically, since the constraint holds of them (e.g. Rivas 1977, Luján 1980, Contreras 1979, Bok Bennema 1981 on Spanish; Rezac 2005, Dotlačil 2004: 80f. on Czech; Etxepare 2003, 2005 on Basque).¹¹ I eschew selection as a plausible mechanism from here on in.

- (19) a. Elles *la/*te/*se* *leur* présentera
she them.ACC/you/SE them.DAT will.introduce
She will introduce them/*you/*herself to them. [PCC: lexical dative]
- b. Elles vont *la/*te/*se* *lui* mettre dans les bras.
They will her/*you/*SE.ACC him.DAT put in the arms
They will put her/*you/*themselves in his arms. (cf. Kayne 1975: 174) [PCC: possessor dative]
- c. Elles *la/*me/*se* *lui* fera *t_{lui}* [embrasser/épouser/choisir *t_{la/me}*].
they him/*me/SE.ACC him.DAT will.make kiss/marry/choose.
They will make him kiss/marry/choose her/*me/*themselves. (see section 1.5.3) [PCC: causee dative]

¹⁰ NOTE-43: Argumentality excludes ethical datives (note NOTE-40), and partly inherent dative *se*, while inherent accusative *se* behaves always as if argumental; q.v. the Appendix. On middle *se* and datives, see Rezac 2008d.

¹¹ NOTE-45: Spanish with its general clitic climbing makes the point with (i), where the dative is the internal argument of the upstairs verb and the accusative of the downstairs one. The ban extends to 3rd person animates as well (Rivas 1977, Luján 1980, Contreras 1979, Bok Bennema 1981). Ormazabal and Romero (2007) develop a persuasive argument that in Spanish 3rd person clitics group with 1st/2nd/*se* clitics for Person Case Constraint when either morphologically animate (*leísmo*), or when bound by an animate (see chapter VI, note NOTE-117), but not when simply morphological unmarked for animacy and interpreted as animate. The latter is the case in (i), so something about the climbing configuration seems to be "enhancing" the simply interpretive animacy of the 3rd person clitic to make it fall under the PCC; closely related seems to be the observation that otherwise optional clitic climbing here is virtually obligatory for inanimate 3rd person (op. cit., and for Basque, Etxepare 2003). However, compare perhaps the PCC-independent ban of note NOTE-112.

(i) *Se_i la_k* permití *t_i* [tocar/*besar *t_k*] a Juan_i. (*se la < le la*)
SE her.ACC permitted play/*kiss to Juan
I permitted Juan to play it (=her, the flute) / *to kiss her (the girl). (cf. Rivas 1977: 172)

In place of the combinations proscribed by the PCC, there emerge other structures, which have the remarkable property of not being available outside PCC contexts. Descriptively at least then, they can be called *PCC repairs*. The core questions of this chapter are whether they are syntactically or merely morphophonologically distinct from the missing clitic combinations, and whether they are "repairs" in a theoretically interesting sense. The repair that concerns us most closely is the *phrasal repair*: the unfocussed pronoun in a PCC context and only there is realized as a strong pronoun, in violation of the Cliticization Requirement. As various investigations emphasize (notably Kayne 1975, Postal 1990), it is available in discourse contexts where the Cliticization Requirement would require a clitic outside the PCC; the Appendix is a more detailed presentation of the contexts and the contrast for the key examples in this chapter, annotated with ° after the example number. This repair seems generally available to speakers of French wherever the PCC is found (cf. Postal 1981: 307 note 24).¹² It can only affect the dative; the Cliticization Requirement of the accusative cannot be suspended, whether or not a speaker permits focussed accusative pronouns as per note NOTE-40 (Kayne 1975: 174, Morin 1979a: 296, Couquaux 1975: 53, Burston 1983: 269, Postal 1990: 178; see also the Appendix). Beside it stands the *clitic repair* studied in Couquaux (1975) and Postal (1990), whereby the dative clitic is replaced by a locative one in a subset of the same contexts that permit the phrasal repair, and arguably dependent on the latter. It is available only in some varieties, and it is to be carefully distinguished from a general dative-locative substitution that simply fails to incur, rather than repair, the PCC (Rezac 2008e). Here it plays a supporting role only, but an important one, and so is given when data are available: its output is not an independently possible string containing a dative pronoun, unlike the phrasal repair which differs from such strings only in lack of focus on the dative, and so it provides a separate line of confirmation for judgments. The seminal discussions of the repairs are Kayne (1975), Couquaux (1975), and Postal (1990), along with Bonet (1991: 200-213) for their analogues elsewhere in Romance.¹³

(20)°	a.	Philippe	<i>vous/se_X</i>	<i><*leur/*me_Y></i>	présentera	<i><à eux/à moi_Y></i>	[phrasal repair] demain.
		Philippe	you/SE.A	them/me.D	will.introduce	to them/to me	tomorrow
	b.	Philippe	<i>les/la_X</i>	<i><leur_Y></i>	présentera	<i><*à eux> / <√à EUX_Y></i>	demain
		Philippe	them/her.A	them	will.introduce	to them / to THEM	tomorrow
	c.	*Philippe		<i>leur/me_Y</i>	présentera	<i>elle_X</i> .	
		Philippe		them/me.D	will.introduce	her	

¹² NOTE-48: The extent of the PCC in French is perhaps not quite invariable. Johan Rooryck points out that some speakers might treat 3rd person masculine animates (only) along with other [+person] clitics, both for the gap and the repair, though this is not so for MJ and my other consultants. See chapter VI, note NOTE-117.

¹³ NOTE-50: Spanish avoids PCC contexts by using strong pronouns, which are available independently, but suspending their otherwise obligatory clitic doubling. For indirect objects, doubling correlates with the double object construction, and lack of doubling the prepositional construction (Demonte 1995). Bonet (1991:203) shows that doubling is suspended for 3rd person DAT if there is one, while if both DAT and ACC are 1st/2nd person, the choice of which not to double is free. This is identical to French when it is DAT that is not doubled. Freedom of non-doubling either DAT or ACC in 1/2.DAT-1/2.ACC combinations follows if the ACC, which is not distinct morphologically from DAT for 1st/2nd person, is really in the doubled object construction when doubled as an instance of *leísmo* (cf. Ormazabal and Romero 1998, 2003, 2007). As for the French repairs, suspension of clitic doubling only fixes the PCC, and not for example the repeated morph sequence incurred by the cooccurrence of spurious and impersonal *se* (Bonet 1991: 201-4).

[Context: X has not met Y yet. Of course,] Philippe will introduce X to Y tomorrow.

- (21)^o a. Philippe *vous/se* $\langle *leur/\sqrt{y} \rangle$ présentera (, à Marie et à Louise).
 Philippe you/SE.A them.D/LOC will.introduce to Marie and to Louise
 (Postal 1990: 127-8)
- b. Philippe *m(e)/s(e)* $\langle *te/\sqrt{y} \rangle$ présentera demain(, à toi).
 Philippe me/SE.A you.D/LOC will.introduce tomorrow to you
 (Couquaux 1975: 56-7)
- c. Philippe *l(a)* $\langle \sqrt{leur}/*y \rangle$ présentera (, à Marie et à Louise)
 Philippe her them.D/LOC will.introduce to Marie and to Louise
 (Postal 1990: 127)

These repairs are not available to all datives, but only to those whose syntax and interpretation is compatible with the prepositional construction, as we will see in section 1.4.5. When unavailable, as with possessor datives (see ex. (47)), there is no way out; in particular, it remains impossible to realize the accusative as a strong unfocussed pronoun, (22). When available, they remain so when a given predicate is embedded under a higher predicate with clitic climbing, as in (23) (Kayne 1975: 297; see Couquaux 1975: 45 for the clitic repair, and de Kok 1985: 371 for more wide-spread clitic climbing in older French).

- (22) On va $\langle *te \rangle$ *lui* mettre dans les bras $\langle *toi \rangle$.
 one will you.ACC him.DAT put into the arms you.ACC (cf. Kayne 1975: 175)

- (23) Il *me_i* $\langle *lui \rangle$ fera [présenter *t_i* (à elle) par ses parents].
 he me.ACC her.DAT will.make introduce to her by his parents. (Kayne 1975: 297)

The limitation of PCC repairs to PCC contexts manifests itself in a very striking way that is fundamental to understanding the phenomenon: PCC repairs are not available for other clitic cluster gaps (see Rezac 2008d for discussion of the following material). Monopredicate examples include the following gaps: in (24), 3SG.DAT + LOC *lui y* (Morin 1981: 99 note 6, Miller and Monachesi 2003: 3.4); in (25), 3SG.ACC + LOC *l'y* in the context of a dative (Heggie and Ordóñez 2005: 12f.); in (27), a middle (non-object) *se* + DAT (Postal 1990: 167f.). None of the gaps can be repaired by PCC repair.

- (24)^o a. l'oiseau $\langle leur_i \rangle$ y donne à manger $\langle *à eux_i \rangle$.
 the bird them.D LOC gives to eat to them
- b. l'oiseau $\langle *lui_i \rangle$ y donne à manger $\langle *à lui_i \rangle$.
 the bird him.DAT LOC gives to eat to him
 [It's because the nest protects its young that] the bird feeds them/*him there.
- c. l'oiseau *nous* $\langle *lui_i \rangle$ donne à manger $\langle à lui_i \rangle$.
 the bird us.ACC him.DAT gives to eat to him
 [It's because his youngling is hungry that] the bird gives us (worms) to him to eat.
 {MJ }

- (25)° a. on les/??l' y a donnés à Fañch.
 one them/??him.ACC LOC has given to Fañch
 we gave them/??him to Fañch (Maï's friend) there.
- b. on y a donnés *lui/*leur à Fanch.
him/them
 we gave *them/*him to Fañch (Maï's friend) there.
 [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 ____]
- {MJ}

- (26)° Un tel mensonge / cela ne se < *lui/y> dit pas <à Louise/*à elle>
 such a lie this not SE her.DAT/LOC says not to Louise/*to her
 One does not tell such a lie to Louise/*to her
- {MJ} (cf. Postal 1990: 167f.)

However, the unavailability of PCC repairs to non-PCC clitic cluster gaps has been generally made on the basis of obligatory clitic climbing examples that bring together two dative clitics (Kayne 1975: 172ff., 290f., 296f., Couquaux 1975: 53, 71 note 11, Postal 1981: 308-314, 1983: 412, 1984: 122 and notes). Such sequences would necessarily arise in certain obligatory clitic climbing structures due to the Cliticization Requirement. Multiple dative clitics are variably tolerated by speakers on the following scale from least to most widely tolerated: *3.DAT + 3.DAT < %%1/2.DAT + 3.DAT < %1/2.DAT + 3.ACC + 3.DAT < impossible, that is type **lui leur* 'him them' (out for everyone) < %%*me lui* 'me him' (e.g. Postal 1983) < %*me la lui* 'me her him' (e.g. Tasmowski 1985) < impossible (e.g. Kayne 1975) (see Rezac 2008d, Postal 1983, 1984, 1990, Tasmowski 1985: 297 note 36, 360-1, de Kok 1985: 383, 386, 479, and more briefly Kayne 1975: 175, 1994: 21, Roetgiest 1987: 152f., Miller 1992: 265, Miller and Sag 1997: 598, Nicol 2005: 159f.). Contexts that require clitic climbing yet run into a ban on multiple datives are simply irreparable. One such environment is raising verbs with a dative experiencer embedding an adjective with a dative complement, which contains a single cliticization site for both (see section 1.5.5 for more on such adjectives):

- (27)° a. Paul *me* < *leur/*y> 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; cf. Kayne 1975: 175, Tasmowski 1985: 259 note 12).
- b. *Paul *lui leur* paraît antipathique / sympathique / désagréable <à eux>.
 Paul him.DAT them.DAT seems unpleasant / sympathetic / unpleasant to them
 Paul seems to her to be unpleasant / sympathetic / unpleasant to them.
- {MJ}

A second context is the causative of a ditransitive, and of unergative + dative for those speakers that treat these as transitives; the causee external argument is dative here (see section 1.5.3 for more on causatives). If the causee and embedded dative indirect object are both unfocussed pronouns, they must both cliticize and, in the most common causative structure,

share the same cliticization site due to obligatory clitic climbing. A problem incurred by the ban on multiple datives cannot be repaired by not cliticizing one of them. (29) gives a nice minimal pair: the sequence *vous*_{DAT-causee} *lui*_{DAT-IO} is out for some speakers due to the ban on multiple datives, and it is then irreparable; a homophonous *vous*_{ACC} *lui*_{DAT-IO} is also out, but by the PCC and repairable. Other, independently available causative structures must then be used, as in note NOTE-110.

- (28)^o a. Paul *lui* fera porter les livres aux étudiants TOUTSUITE.
 Paul him.DAT will.make carry the books to.the students immediately
 Paul will make him carry the books to the students immediately.
- b. Paul *lui* ⟨?∗*leur*⟩ fera porter les livres ⟨∗à eux⟩ TOUTSUITE.
 them.DAT to them
 Paul will make him carry them the books immediately.
 [Context: E forgot to bring the books to P's students! What will they do now? __]
 {MJ} (see the Appendix for full contextualization)
- (29) a. On ??*vous*/∗*leur* ⟨*lui*⟩ fera présenter Jacques ⟨∗à elle / √à ELLE⟩
 one you/them.D her.D will.make introduce Jacques to her/to HER
 We will make her introduce Jacques ??to you/∗to them.
- b. On *vous* ⟨∗*lui*⟩ fera présenter *e*_{vous} ⟨à elle⟩ par Jacques
 one you.A her.D will.make introduce to her by Jacques
 We will make you be presented to her by Jacques.
 {MJ} (cf. Kayne 1975: 296f., Postal 1981: 308)

These particular structures are conspicuous by getting the dative clitics that cause the irreparable gap from separate predicates. That constitutes an immediate contrast with the PCC repairs we have seen so far, which all involve clitics deriving from arguments of a single predicate, and that might be true generally in French due to its limits on clitic climbing (but see chapter V for PCC repairs in Finnish and Basque that occur in larger domains). Quite weak reference to syntax could be employed to differentiate the two kinds of clusters, for example successive-cyclic climbing through the edge of each predicate-defined phase. However, we have already seen an irreparable involving two internal arguments, the *lui* y gap in (24) above, and that kind of evidence can be replicated for multiple datives. It is sometimes possible to add a benefactive dative clitic to a verb that takes a lexical dative argument (Rouveret and Vergnaud 1980: 169-171, Rezac 2008d). If the lexical dative argument is an unfocussed pronoun, it must cliticize, and the resulting problem is not repairable by using an unfocussed strong pronoun:

- (30) On *te* *lui* ⟨∗*lui*⟩ a chanté sa chanson ⟨à Pauline/∗à elle⟩.
 One you(ETH) him.DAT her.DAT has sung her song to Pauline/to her
 We sang Pauline/∗her his song for him, you see. {MJ}

It is then a very robust aspect of the limitation of PCC repairs to PCC contexts that they cannot repair clitic cluster gaps other than the PCC. This conclusion appears to hold elsewhere: the Spanish analogue of the phrasal repair cannot rescue clusters repeating identical clitics (note

NOTE-50), and the Basque PCC repair discussed later on here cannot help with arbitrary gaps in its agreement morphology (Rezac 2008a). Yet the PCC at first sight resembles such gaps by its form. The following section raises the stakes by showing that the phrasal PCC repair, at least, is clearly syntactically distinct from the gaps in dative-accusative clitic combinations that it supplies, not just another morphophonological realization of it. An immediate consequence is the verification of the existence of the Arizona Tewa scenario discussed in the last chapter and its consequence, that uninterpretable phi is in the syntax. It becomes incumbent on the theory of the PCC to properly differentiate it from other gaps in clitic clusters that refer to uninterpretable phi, which are inert for syntax and interpretation, as their placement into the morphophonology predicts. If modularity holds, the PCC should be a syntactic rather than a morphophonological restriction, and we return to this after the syntactic character of PCC repairs is established.¹⁴

1.4 The syntactic nature of PCC repairs

1.4.1 A morphophonological approach

A priori, the repairs of the Person Case Constraint are amenable to either a morphophonological or a syntactic treatment, explored respectively by Bonet (1991) and Couquaux (1975), Kayne (1975), Postal (1990), Rezac (2007). Bonet's elegant, simple morphological account of the phrasal repair brings to the fore the fundamental prediction of any morphological approach: its

¹⁴ NOTE-70: Finding syntactic correlates like PCC repairs would be one way to approach the question, not resolved here, of whether modulations of the PCC like the "weak PCC" of Bonet (1991) and the "*me*-first" and "ultrastrong" PCC of Nevins (2007), make a natural class with the PCC. The issues raised by Ormazabal and Romero (2007: 332-4) give good cause to be skeptical of the weak PCC in Romance, which putatively allows 1/2.ACC + 1/2.DAT while still blocking 1/2.ACC + 3.DAT (for French, see Heger 1966: 28, Ashby 1977: 76, Simpson and Withgott 1986: 160 note 6, Schwegler 1990: 99, Nicol 2005). the possibility is heavily restricted by the lexical identity of the verb (e.g. *enviar* vs. *mandar*, both 'send'); for each number, there is often only a single the cluster ordered by person like *te me*, sometimes with a fixed interpretation (2.DAT > 1.ACC) while for some speakers with both (2.DAT > 1.ACC and 1.DAT > 2.ACC); and unlike clitics otherwise, the clitic pronouns in it cannot link to a strong pronoun in argument position via clitic doubling. (Cf. Cardinaletti's (2008) description of Italian: weak PCC exceptions are for her restricted to *mi ti* 'me you(sg)' of all 1st/2nd + 2nd/1st person combinations (while others speakers do allow e.g. *vi ci* 'you us', Bianchi 2006: 2039 note 34), interpretable as IO + DO or DO + IO in proclisis but as IO + DO only in enclisis). Ormazabal and Romero suggest a non-argumental clitic or clitics are involved, making the parallel with ethical datives; linguistically informed speakers' intuitions indicate this is on the right track for some. An alternative is suggested by Anagnostopoulou's (2008) discovery that the PCC holds of weak pronouns in German, which unlike Romance clitics were thought immune to it, under certain configurational conditions, but then only in its weak form; the weak PCC might then be a weak pronoun phenomenon (but see Cardinaletti and Starke 1999: 170 ex. 58 for strong evidence that weak pronouns are not affected by the PCC at all, not affecting the point being made here). This could link to the absence of PCC-like restrictions in Romanian enclisis (Săvescu 2007), noting that French enclitics are closer to strong pronouns although not identical to them (Morin 1979a: 309-311); yet the PCC holds of enclitics in French. The phenomenon also recalls the prevalence of partly opaque portmanteau forms for 1↔2 combinations emphasized by Heath (1991, 1998), Rhodes (1993), particularly in the dual interpretation of *te me* mentioned above, and in the same vein, the parasitic "like licenses like" cases noticed for gender by Anagnostopoulou (2003: 202), and for number by Holmberg and Hróarsdóttir (2003: 1001), Etxepare (2005), and Preminger (2008). An intriguing possibility would suppose these to be lexicalized units somehow satisfying the thematic requirements of both the elements they contain (cf. Kempson 2007, as well as Cardinaletti 2008 for other lexical clitic combinations). However, Nevins' (2007) approach that modulates the PCC itself fits the independent parametric variation discussed in chapter III among Tanoan languages in counting 1↔2 interactions as direct or inverse, that is whether with respect to the PH 1/2 > 3 a direct is when the EA out-ranks or is not out-ranked by O. The same comments apply to the "ultra-strong" PCC posited on the basis of Romanian and Arabic, where the literature reports unexpected sensitivity to number (Farkas and Kazazis 1980: 79-81, Haspelmath 2004).)

inertness for syntax. The prediction is incorrect and the phrasal repair is syntactic, putting uninterpretable phi in the syntax, and establishing a contrast between the Person Case Constraint and syntactically inert clitic cluster gaps that can serve as a probe into the modular architecture of grammar.

Bonet's (1991: 201-9) proposal for the phrasal repair falls under a phenomenon since studied elsewhere, *lower copy spell-out* to repair a morphophonological problem with the default higher copy spell-out. Copy spell-out is a phenomenon outside the mapping to LF, in the syntax-to-PF mapping, the morphophonology, and it can therefore be sensitive to morphophonological constraints without violating modularity; the PCC is proposed to be such a constraint. The proposal is specifically: (i) a dative clitic and a dative strong pronoun are the realisations of the head and the foot respectively of a movement chain in the syntax; (ii) normally the top of a chain is pronounced; (ii) when a morphological constraint such as the PCC renders this impossible, the foot can be pronounced.

- (31) a. Elle *les* *leur_i* présentera *à eux_i*
 she them.ACC them.DAT will.introduce to them
- b. Elle *vous* *leur_i* présentera *à eux_i* *PCC →
 you.ACC
- c. Elle *vous* *leur_j* présentera *à eux_i*

The use of lower copy spell-out to resolve morphophonological problems has been advanced independently, notably by Bošković (2002) for repetition avoidance in multiple *wh* movement. In Romanian, all *wh*-phrases must move to the front of the clause (32)a, except when a sequence of two identical *wh*-words would result, in which case the lower *wh*-word is pronounced lower in the clause, (32)b. Bošković proposes that syntactically the lower *wh*-word moves as other *wh*-words do, for syntax should be blind to morphophonological repetition, but a lower than the top copy is spelled-out because the spell-out algorithm's preference for top copy spell-out is overridden by an anti-repetition constraint, (32)c.

- (32) a. Cine $\langle ce \rangle$ precede $\langle *ce \rangle$?
 who what precedes
 b. Ce $\langle *ce \rangle$ precede $\langle ce \rangle$?
 what what precedes
 c. $[ce_i ee_k \text{ precede } ee_i ce_k]$

(Bošković and Nunes 2007)

Bonet's proposal has the great virtue of handling an apparently transderivational and transmodular paradigm without reifying either property. The phrasal repair looks like the strong pronoun syntactic structure depends on the failure of the clitic structure due to a morphophonological constraint on clitic clusters, and could be so treated (cf. Kayne 1975: 172-6, Postal 1981: 308 note 25, quoted in section 1.1). On Bonet's proposal however, the strong pronouns of the repair spell out the same syntactic structure as the clitics. Thus the transmodular aspect disappears, and the transderivationality is brought into the fold of familiar phenomena in morphophonology: the domain of analytic-synthetic alternations like the *quicker – more rapid* alternation of the English comparative or the agreement suffix – strong pronoun alternation of

Irish (see chapter II for discussion and references). These can be handled transderivationally, by having the analytic form directly refer to the availability of the synthetic form, or not, by stipulating complementary distribution or bleeding orders, but whatever the analysis, in morphophonology such phenomena are systemic and inescapable. Not so in syntax.

However, putting PCC repairs in the morphophonology makes a strong and incorrect prediction: the syntax and interpretation of the strong pronoun repairs is the same as that of the corresponding clitics. Recent work by Polinsky and Potsdam (2006) on backward control and raising emphasizes and substantiates this property of lower copy spell-out specifically. Backward control is control that is syntactically and interpretively just like standard "forward" control, but the controller surfaces phonologically in the lower clause where English is held to have PRO. The authors adopt Hornstein's (2000) view of control as movement between theta positions, and propose that backward control differs from standard control only in spelling out the lower rather than the higher copy. It follows that for all syntactic and interpretive diagnostics, the controller behaves as if there were a full-fledged copy upstairs, as in English. (33) shows this for the licensing of a reflexive in the upstairs clause where the controller is phonologically absent, an argument of particular strength since it can be compared with the inability of cross-clausal agreement in the same language to license reflexives (Polinsky and Potsdam 2001: 260).

- (33) [yesī žek'ā_i ʔagarawyo-r γutku roda] ~~yesī žek'ā_i~~ nesā nesir oqsi.
 this man.I.ERG relative-DAT house.ABS build.INF REFL.DAT began
 The man began for himself (for his own sake), to build a house for his relative.
 (Tsez, Polinsky and Potsdam 2006: 178)

The following sections show that the structures introduced by PCC repairs are syntactically distinct from those of dative clitics, for floating quantifier licensing, binding, and compatibility with right dislocation. They are followed by a less absolute but spectacular contrast between PCC repairs and clitic cluster transformations in the attention they pay to the syntax of the structure where they apply. The results render a morphophonological approach untenable, and put the phrasal repair and uninterpretable phi with it squarely in the syntax – along with their problems of apparent transderivationality and transmodularity.

1.4.2 Floating quantifiers

Dative (and accusative) clitics but not non-clitics license bare floating quantifiers, (34), indicating they but not non-clitics pass through an A-position above the VP-peripheral site of the quantifier (section 1.2). The phrasal PCC repair, which replaces a dative clitic by a strong pronoun, fails to license a bare floating quantifier just like other non-clitics.

- (34) Elle *la* \langle *leur*_i \rangle a tous_i présenté \langle *à EUX_i / *aux étudiants_i \rangle
 she her them.DAT has all introduced to THEM / to.the students
 She introduced her to all of them/*THEM/*the students. (all good without *tous*)
- (35) Elle *m'* a (*tous_i) présentée à eux_i.
 she me has all introduced to them
 She introduced me to (*all of) them.

If the repair were a lower copy spell-out of the same clitic-strong chain of which the clitic is the top-copy spell-out, it would be expected not to affect the licensing of floating quantifiers within the syntax, since copy spell-out is determined outside syntax. We can verify that morphophonological transformations of the clitic cluster indeed do not affect the licensing of floating quantifiers. In the transformation of 3.DAT+3.ACC clitic combinations in French varieties by deletion of the accusative, the ability of the accusative clitic to license a floating quantifier is unaffected.

- (36) Je *les/Ø_i* *lui* ai tous_i déjà présenté.
I them.ACC her.DAT have all already introduced

{MJ}

The failure to license floating quantifiers can be pressed for quite a specific conclusion about the structure of the PCC repair: not only is there a dative strong pronoun, but the dative clitic is not present. This conclusion is possible because French allows the clitic doubling of non-dislocated dative and accusative strong pronouns (retaining their contrastive focus) (Kayne 2000). The clitic doubling the strong pronoun can license a floating quantifier between them, so there is nothing incompatible between a floating quantifier and a strong pronoun.¹⁵ What is missing in the PCC repair structure is specifically the clitic to license the quantifier.¹⁶

- (37) a. Je *vous_i* ai tous_i vu VOUS_i.
I you.ACC have all seen YOU
b. Je *vous_i* ai tous_i parlé à VOUS_i.
I you.ACC have all spoken to YOU

{MJ}

{MJ}

1.4.3 Binding Conditions

Clitic pronouns are subject to Conditions A and B of the Binding Theory: they must be disjoint from the subject, except for the clitic *se*, which must be anaphoric to it. Strong pronoun however can be anaphoric to the subject, even without *même* 'self' (Couquaux 1977, Morin 1978, Zribi-

¹⁵ Control for a possibility suggested by Peter Svenonius pc.

¹⁶ Floating quantifier licensing must distinguish overt and covert movement and is licensed only by the former (David Pesetsky pc), even where it is licensed by A'-movement (McCloskey 2000), although one notes at least one major difference between A and A'-licensing of floating quantifiers, that for derived subjects (ibid, p. 76ff.). In a system where the difference between overt and covert movement is coded in narrow syntax, the theory of floating quantifier licensing can be made sensitive to the difference: pre- versus post-spellout cycle, substitution versus adjunction, feature versus phrasal movement, or cyclic versus long movement, or finally, in violation of modularity, whether or not a given copy has phonological content (is spelled out). Current proposals delimit the potential mechanism: Pesetsky (2000) demonstrates the need for covert phrasal A'-movement to resolve the antecedent-contained deletion, and there is assumed to be but a single syntactic cycle where overt and covert movement interleave and are distinguished only by which copy is spelled out (Brody 1995, Bobaljik 1995, Pesetsky 1998, 2001, Nissenbaum 2001, Chomsky 2004). My guess is that covert A'-movement fails to license floating quantifiers for the same reason that *wh*-in-situ fails to respect subjacency, for example movement in one fell swoop that does not bring it into a sufficiently local relationship with a VP-peripheral floated quantifier to license it (see Richards 2001: chapter 2 for an overview of the history and theory of *wh*-in-situ immunity to subjacency).

Hertz 1980, 2003). This includes dative and accusative strong pronouns, focused by the Cliticization Requirement, as well as those immune to it like locative ones:

- (38) a. Jacques_i $\langle s'_{i/*k} / lui_{i/*k} \rangle$ achète des billets $\langle \grave{a} LUI_{i/k} \rangle$.
 J SE him.DAT busy tickets to him
 Jacques is buying tickets for him(self).
- b. Jacques_i $\langle y_{k/*i} \rangle$ pense $\langle \grave{a} lui_{i/k} \rangle$ (TOUT le temps)
 J LOC thinks to him all the time
 J thinks about him(self) (ALL the time).

It is typically held that these binding conditions are syntactic or interpretive (cf. Zribi-Hertz 2003). This view predicts correctly that the behaviour of clitics is immune to their morphophonological transformations. Chapter II has discussed the Spanish spurious *se* phenomenon in this respect, which transforms a non-*se* to a *se* clitic without changing its non-reflexive interpretation. In French, a good case in point is the deletion in French varieties of the accusative in 3.ACC+3.DAT clitic clusters (Miller 1992: 172, citing Morin 1979b, Auger 1994: 82-3, Bonami and Boyé 2006: 296, Rezac 2008d). The \emptyset introduced by this phenomenon must be disjoint from both the subject and the dative, just like an overt accusative clitic is.

- (39) L'organisateur_k $le/\emptyset_{i/*k/*m}$ $lui_{m/*k/*i}$ présentera demain.
 the organiser him.ACC him.DAT will.introduce tomorrow

In contrast, the unfocused strong pronoun introduced by the phrasal PCC repair behaves not like a clitic, but like a strong pronoun; it can be disjoint or anaphoric to the subject. This is a mismatch between the properties of dative clitics and those of dative strong pronouns that replace them in the phrasal PCC repair: while both are alike and unlike strong dative pronouns elsewhere in lacking focus, for binding they behave like clitics and strong pronouns respectively.¹⁷ Therefore, the phrasal PCC repair is not an interpretation of the syntactic structure underlying a clitic; it is based on a syntactic structure unavailable to clitics.

- (40) Jacques_i $nous/*les$ a donné / présenté $\grave{a} lui_{i/k}$ (DES L'AEROPORT)
 J us.ACC has introduced to him as.soon.as the airport
 J gave/introduced us/*them to him(self) (at the airport). [no focus on $\grave{a} lui$] {MJ}

The argument is marred by two possibilities, but it can be recovered in a stronger form. First, one could suppose that strong pronouns are the spell-out of a chain terminating not just in non-*se* clitics but in *se* as well. In that case, the PCC repair in (40) is an alternative spell-out of a structure that would give rise to *nous lui* on the disjoint and to *nous se* on the coreferential reading, if it were not blocked by the PCC, that is of the same syntactic structures as those that underlie clitic. The second possibility arises in approaches that remove Condition A and/or B from syntax. A common variant involves assuming Condition A as the use of a reflexive if possible, leaving non-reflexive pronouns for "elsewhere", without a separate Condition B (Reinhart 1983, Bouchard 1985, Burzio 1989, 1991, Déchaine and Manfredi 1994, Williams

¹⁷ Condition B as a test suggested by Benjamin Spector, pc.

1997, Hornstein 2000, Reuland 2001, 2005b, Kiparsky 2002; see Zribi-Hertz 2003: 209 for problems). Alternatively, the distribution of *se* and non-*se* clitics could be regulated by morphophonology, if it is given the power to determine the realization of a clitic according to its (non)coreference with the subject in an A-movement domain.¹⁸ Either approach could hold that the impossibility of *nous se* (40) by the Person Case Constraint removes *nous se* alternative from consideration by the "elsewhere" condition governing the use or spell-out of the non-*se* clitic *lui* in *nous lui*, so *lui* is permitted in a coreferential meaning. The result *nous lui* is again filtered by the Person Case Constraint, but now lower copy spell-out applies to give *nous ... à lui* in (40), spelling out a syntactic structure that is not different from that underlying clitics.

Both possibilities can be eliminated by considering a situation where they fail: overlapping reference. Condition B rules out a pronoun not only when it is identical to a sufficiently local antecedent, but also when it overlaps with it; however, there is in that case no reflexive form available. This case can be made in English (Lasnik 1981), but judgments are far sharper for French clitics (Kayne 2002: 143-6, Rooryck 2006).¹⁹ There is no way to express (41)a using a clitic. A strong pronoun is fine with overlapping reference, but because it is dative and this is not a PCC repair context, it must be focussed. Thus, the syntactic structure underlying overlapping reference has no clitic realization at all, and the absence of such a realization does not license an unfocussed strong pronoun. Consider now (41)b, which combines overlapping reference and PCC repair context. The PCC repair here introduces an unfocussed strong pronoun, and as for strong pronouns generally, overlapping reference is possible for it. The syntactic structure underlying the dative strong pronoun here cannot be viewed as the alternative realization of a structure underlying dative clitics, because those cannot support overlapping reference, and cannot be realized as unfocussed pronouns in overlapping reference contexts. The availability of overlapping reference for the unfocussed strong pronouns of PCC repairs entails they must come from a syntactic structure distinct from that underlying clitics after all.

- (41)^o a. Vous $\langle *t' \rangle$ avez acheté un billet $\langle \sqrt{\text{à TOI}} / * \text{à toi} \rangle$.
 we me.DAT have bought tickets to ME / to me
 You bought tickets for YOU [, not your sister!]/*you [although you knew we our seats were for free?!].
- b. Vous *vous* $\langle *te \rangle$ êtes toujours dédiés $\langle \text{à toi} / \text{à TOI} \rangle$.
 you(PL) you(PL).ACC you(SG).DAT are always devoted to you/to YOU

¹⁸ Eric Schoorlemmer, Johan Rooryck, pc.

¹⁹ NOTE-75. See Rooryck 2006 for specific exceptions (1SG...1PL but not 1PL...1SG, for example) that prove the point by contrast. Cf. Rhodes 1993 for agreement systems. For English, see Chomsky 1973: 241, Lasnik 1981, Higginbotham 1985: 576, Seely 1993, Fiengo and May 1994: 43-6, Berman and Hestvik 1997, Reuland and Everaert 2001: 644, Reinhart and Reuland 1993, Kiparsky 2002, most positing some syntactic or interpretive restriction such as disjointness among the parts of coarguments on the distributive reading (Reinhart and Reuland 1993). That may be so in French as well, as below.

- (i) Jean-Jacques_i a promis à Marie-Claude_j de $*\text{les}_{i+j} / * \text{se}_{i+j}$ mettre chacun sur ballot.
 Jean-Jacques_i promised to Marie-Claude_j to put $*\text{them}_{i+j} / * \text{themselves}_{i+j}$ each on the ballot. {MJ}
- (ii) a. Nous m'avons / Nous on m'a / Vous t'avez choisi.
 we me have / we one me.ACC / you(PL) you.ACC have chosen
 Collective context: after much deliberation, we/you as a group have chosen me/you (as representative).
- b. Nous on $\langle l' / *m' \rangle$ a chacun choisi $\langle \sqrt{\text{MOI}} \rangle$.
 we we him/*me.ACC have each chosen ME
 Distributive context: we pass into the election booths and as a we each picked him/*me/ $\sqrt{\text{ME}}$.

You have always devoted yourselves to you (wide focus)/YOU.

{MJ}

We may note as a secondary result that the Condition B problem with overlapping reference does not license the PCC repair. To complete the paradigm showing this, see need to create a Condition B problem with two internal arguments since the Person Case Constraint and its repair make use of two internal arguments, as in (42).²⁰ In this instance then, syntax appears to be modularly encapsulated from an aspect of the (interface with) interpretation, if that is where binding conditions reside. We return to this consequence briefly in chapter V and VI.

- (42) On la_i $\langle lui_{*i} / leur_{*i+j} \rangle$ a décrite $\langle *à elle_i / \sqrt{à ELLE_i} / *à elles_i / à ELLES_i \rangle$
 one her.A her.D / them.D has described *to her / to HER / *to them / to THEM

{MJ}

1.4.4 Right dislocation

French right dislocation is compatible with clitics but not with strong pronouns, for both dative and locative complements, (43). Couquaux (1978: 213 note 6) observes that the unfocussed strong pronoun introduced by phrasal PCC repair as well as the locative clitic introduced by the clitic repair behaves like other strong pronouns and locative clitics in this respect: it is not compatible with right dislocation.

- (43) a. Roger $\langle leur \rangle$ parle $\langle *à EUX/*à eux \rangle$ (par skype ou par téléphone), à ses amis.
 Roger them.DAT speaks to THEM (by skype or by telephone), to his friends

{MJ}

- b. Roger $\langle y \rangle$ pense souvent $\langle *à eux \rangle$, à ses amis.
 Roger LOC thinks often to them, to his friends

{MJ}

- (44) a. Roger $m' y$ a présenté, (à eux / à vous / à ses amis)
 R me LOC has introduced to them / to you / to his friends

- b. Roger m' a présenté à eux (, *à ses amis)
 R me has introduced to them to his friends

(Couquaux 1978: 213 note 6)

The nature of the constraint on right dislocation is unclear. It cannot be a problem with any focus introduced by a strong pronoun: locative strong pronouns lack such focus, and accordingly unlike dative strong pronouns they can pick up an immediately mentioned discourse referent and keeping it backgrounded, as in (11)a. De Cat (2007) argues at length that both left and right dislocation involve an independent base-generation of the pronoun and the dislocated phrase from such evidence as the absence of reconstruction and island conditions, which exacerbates the problem of constraining their link because it is harder to make it syntactic. There are independent differences between left and right dislocation that seem related. First, left-dislocated phrases resist repetition of prepositions selecting their pronominal link, (45)a, while right-dislocated

²⁰ Pointed out by Mélanie Jouitteau, p.c.

phrases tend to require them (Kayne 1994: 152 note 25, De Cat 2007: 508, 514-5). However, the latter requirement is not absolute (De Cat 2007: 526), and when the preposition is not repeated, a right-dislocated phrase can be linked to a strong pronoun, (45)b. Observing that dative and locative strong pronouns but not clitics come with the preposition *à*, perhaps right dislocation is constrained by some notion of repetition avoidance. This affects the bearing of its restriction to clitics on PCC repairs according to whether the avoided repetition is semantic (i.e. a ban vacuous repetition of information) or morphophonological.

- (45) a. (??A) ses amis, Roger ⟨y⟩ pense souvent ⟨à eux⟩
 to his friends, Roger LOC thinks often to them {MJ}
- b. Roger pense souvent à eux, (*à) ses amis.
 Roger thinks often to them to his friends {MJ}

1.4.5 Limitations of repairs to *à PP* datives

The preceding syntactic diagnostics establish that there is a syntactic structure underlying the dative strong pronoun of PCC repair that is not the syntactic structure underlying a dative clitic: the syntax and interpretation of clitics must be absent and all of it that characterizes strong pronouns present, save for their focus interpretation. This section explores a related property of PCC repairs: they are only available for dative pronouns whose thematic meaning can be expressed by a strong pronoun in the prepositional construction, not just by a clitic in the applicative construction.

- (46) PP restriction: PCC repairs can affect a dative clitic α only if:
 descriptive: α can be replaced in a given structure by a focussed dative strong pronoun β (each in their appropriate surface positions) while keeping the thematic meaning of α , setting aside unclarities with benefactives for some speakers.
 theoretical: α can be replaced by a strong pronoun in the prepositional construction.

Unlike the foregoing diagnostics, the PP restriction can follow naturally in Bonet's approach to the phrasal repair of the Person Case Constraint as the spell-out of the lower copy in a movement chain. If only those datives whose thematic meaning can be expressed by the prepositional construction participate in such a movement chain, only they have a lower copy to be spelled out as a strong pronoun. The rest are base-generated in the applicative construction whose only spell out is a clitic. However, the PP restriction restricts not just the phrasal but also the clitic repair, where the dative clitic is replaced by a locative one. That, we will see, goes against the grain and facts of minimally different clitic cluster transformations in the morphophonology, and suggests a syntactic approach.

Couquaux (1975: 58-61) sets the direction of the argument by noting that the possessor dative (found with inalienable possession) cannot be affected by either PCC repair, and relating this to the impossibility of coding it as a non-clitics, (47) (see also Kayne 1975: 174-5, Tasmowski 1985: 246, Postal 1990: 139-141). In terms of section 1.2, possessor datives are unavailable in the prepositional construction, where the direct object c-commands the dative.

This is predicted by the syntax or meaning of an possessor dative, which must move out of or bind a variable in the direct object (Landau 1999, Pylkkänen 2002: 43-57, respectively).²¹

- (47) a. *On *m'* a jeté dans les bras à ces filles / à ELLES. [poss. DAT → clitic]
 one me.ACC has thrown into the arms to these girls / to THEM
- b. On *la/*me* leur a jeté dans les bras, à ces filles. [poss. DAT: PCC]
 one her/*me.ACC them.DAT has thrown into the arms, to these girls
- c. *On *m'* ⟨y⟩ a jeté dans les bras ⟨à elles⟩. [poss. DAT: no clitic repair]
 one me.ACC LOC has thrown into the arms to them
 (Couquaux 1975: 58, 60, for (a) + *la*, *ELLES*)

Possessors belong with benefactive (and adversative) datives to extended datives, and Postal (1990: 130-4) shows that to these also neither PCC repair can apply. An example is the verb *acheter* 'buy' in (48), which allows either a lexical source or an extended benefactive dative, but only the former survives under PCC repairs:

- (48) a. Philippe *vous* achètera à ce colon. [benefactive vs. lexical dative]
 Philippe you.ACC will.buy to this colonist
 Philippe will buy you from/for this colonist.
- b. Philippe *vous* ⟨*lui⟩ achètera ⟨à lui⟩ [benefactive dative: no phrasal repair]
 him.DAT to him
 Philippe will buy you from/*for him.
- c. Philippe *vous* y achètera, à ce colon. [benefactive dative: no clitic repair]
 LOC
 Philippe will buy you from/*for this colonist.

(Postal 1990: 131-2)

In this case, the unavailability of PCC repairs does not immediately correlate with the restriction of benefactives to clitics: dative non-clitics are generally degraded in comparison to

²¹ NOTE-80: The reduction is in fact incomplete in two ways. First, section 1.2 has not restricted datives in the applicative construction to clitics in French, as Anagnostopoulou (2003: 282) does, since we will see genuine instances of non-clitics with psych-experiencers and causees. (Spanish permits non-clitic possessor datives in the applicative construction, clitic-doubled but themselves in [Spec, ApplP], Cuervo 2003: 72-89.) Second, direct object possessums can have non-clitic inalienable dative possessors with some variation (Kayne 1975: 154, 159, 175, Rouveret and Vergnaud 1980: 176 note 52, Rooryck 1988b: 379, unrelated to colloquial adnominal à PP possessors), irrelevant to PCC repairs where the direct object is a clitic causing the PCC and a clitic cannot be a possessum (cf. Rooryck 1988b: 383). I sketch two possibilities that seem to me appealing. On a movement account for all possessor datives, the distinction between direct object and other possessums suggests islandhood conditions, so that direct objects are open to extraction of à-DP/PP possessums but PPs like *dans les bras* to movement of D° possessums only, that is dative clitics. On a base-generation account, the direct object-other possessum contrasts suggests a height difference, so that possessors base-generated in [Spec, Appl] are sufficiently high to bind a variable within a direct object, but A-movement to a VP-external position is necessary to let them bind one within an PPs like *dans les bras*, and only cliticization (or the mechanism leading up to it) makes available that movement. (One could also explore mixed accounts of base-generation for all but direct object possessums where movement is available.)

clitics, sometimes quite impossible, but other times quite good, including with *acheter* 'buy' itself (see e.g. Kayne 1975: 169-170, esp. note 121, Leclère 1976, Rouveret and Vergnaud 1980: 170, Morin 1981: XX, Rooryck 1988b). There are however environments, varying among varieties or idiolects, where benefactives can only be clitics. One is discussed by Rooryck (1988b): for some speakers a benefactive is impossible if the direct object is cliticized or cliticized out of, (49). Another is discussed by Postal (1990: 152-4): for some speakers focussed dative strong pronouns unlike other *à*-phrases cannot be benefactives, (50), setting pronouns apart from NPs.²²

- (49) Je l' ai acheté à mon frère.
 I it.ACC have bought to my brother.
 I bought it from/*for my brother. (Rooryck 1988b: 384)
- (50) J'ai acheté cela à Jacques / à lui (mais/et/,) pas à Louise
 I have bought that to Jacques / to him (but/and/,) not to Louise
 I bought this from/for Jacques // from/*for him (but/and/,) not Louise. (Postal 1990: 153)

Benefactive *à*-phrases thus do not seem to derive from the same structure as lexical dative *à*-phrases, not subject to these restrictions. Rooryck (1988b) proposes that benefactive *à*-phrases are adjunct PPs like *pour* 'for' phrases, and these are constrained by these restrictions. In order to enforce the PP restriction, PCC repairs cannot target these *à*-phrases even for speakers who can put focussed pronouns there, for example by restricting PCC repairs to creating the prepositional construction. Alternatively, one could suppose that benefactive datives require a special type of applicative that is constrained by the said restrictions. Section 1.5 establishes applicative datives cause the PCC not just as clitics but also as *à*-phrases, so PCC repairs naturally cannot target them and are restricted to producing the prepositional construction.

Finally, causatives furnish rather neat evidence correlating the availability of PCC repairs and the prepositional construction specifically. Causative structures are investigated with respect to the PCC in section 1.5.3, and here only the evidence bearing on the PCC restriction is pertinent. Consider first (51)a. The direct object of the causativized verb is the clitic *le*, and obligatorily climbs into the matrix clause. The causee subject is a dative and realized according to the Cliticization Requirement as a clitic if an unfocussed strong pronoun, or as an *à* phrase otherwise, including a focussed strong pronoun. Turn now to (51)b, where the direct object is a [+person] clitic. For most verbs like *choisir* 'choose', [+person] direct object clitics are out in the causative whether the dative causee is a clitic (by the PCC) or any *à*-phrase (by what will turn out to be the PCC). For these verbs, as (51)b shows, the PCC repair cannot turn a dative clitic

²² NOTE-90: While benefactives are clearly subject to constraints that distinguish them from lexical datives, none seem to hold uniformly for all speakers. For (49), see Rooryck 1988b vs. Authier and Reed 1991: 34. MJ lacks the restriction, along with Postal's consultant to judge by (48)a. On the other hand, benefactives are limited to clitics in Spanish (Cuervo 2003: 194ff.), which has otherwise a wider range of non-clitic applicative objects. For (50), MJ likewise lacks this constraint and permits other examples of this type out for Postal's (1990) consultant (p. 161f.), but the ban resurfaces as for the latter in reduced (participial) relatives (p. 151f.). In them only lexical datives may occur as strong pronouns, focussed (not unfocussed, in contrast to the PCC repair, to which Postal assimilates it). The key to the finite-reduced relative distinction may be in the clitic doubling that focussed dative pronouns prefer for MJ (cf. Kayne 2000), since cliticization is only available in finite and not participial clauses. Cf. note NOTE-100 and chapter V, note NOTE-3. Finally, some speakers resist benefactive datives as complex reflexives of the *lui-même* but not complex reciprocals of the *l'un l'autre* type: see Postal 1990: 134ff., 191 note 31, 154ff., 1989: 50, noting variation in the former restriction.

into an unfocussed dative strong pronoun (which is an *à*-phrase). That may seem natural given the impossibility of *à* phrase causees with [+person] object clitics, but it is only so if the *à* phrase that results from PCC repairs has the relevant properties of the causee *à* phrase. Now turn to (51)c. The verbs *voir* 'see' and *connaître* 'know' are an exception to the normal behaviour: [+person] direct object clitics are out only when the dative causee is a clitic (the PCC) and not when it is an *à*-phrase. In turn, for these verbs the PCC repair can turn the dative into an unfocussed dative strong pronoun, (51)c, for some speakers, or with the clitic repair (51)d for those who have it. Other speakers, *independently* of PCC repair and for both classes of verbs, do not allow the realization of dative causees as strong pronouns even focussed, (51)c. For these speakers, the PCC repair again fails and cannot realize the dative as an unfocussed dative strong pronoun of the type in (51)b.²³

- (51) a. Les amis de Nicolas_i *le* \langle *lui_i* \rangle feront choisir/voir/connaître
 the friends of N him.ACC him.DAT will.make choose/see
 \langle à Jacques / à ELLE / *à *lui_i* \rangle DEMAIN, pas aujourd'hui.
 to Jacques / to HER / to him TOMORROW not today
 {MJ}
- b. Les amis de Nicolas_i *me/te/vous* \langle **lui_i* \rangle feront *choisir/ $\sqrt{\text{voir}}$ / $\sqrt{\text{connaître}}$
 the friends of Nicolas me/you/you.ACC him.DAT will.make choose/see
 \langle à Jacques / à *lui_{i/k}* / à ELLE \rangle DEMAIN, pas aujourd'hui.
 to Jacques / to him / to HER TOMORROW not today
 Nicolas'_i friends will make Jacques/him_{i/k}/HER see/*chose me tomorrow, not today.
 {MJ}
- c. */ $\sqrt{\text{On}}$ pourrait *vous* faire voir/connaître à ELLE mais pas à lui.
 one could you.ACC make see/know to her but not to him
 One could make her know you but not him.
 { $\sqrt{\text{MJ}}$ } (* in Postal 1990: 173 + CAPs)
- d. On *m'* *y* a fait connaître/voir, à ses amis.
 One me.ACC LOC has made know/see, to their friends
 One made them (my friends) know/seem them.
 (Couquaux 1975: 46)

These data exemplify in two distinct ways the following correlation: a dative causee clitic can be turned into an unfocussed dative strong pronoun by PCC repair if and only if

²³ NOTE-100: MJ clearly allows dative strong pronouns here as focussed causees and as unfocussed ones in PCC repair, and this goes along with the consultants of Kayne 1975 (1975: 298 note 25) as well as Morin (1977: 19, reported in Postal 1981: 312). By contrast, dative strong pronouns cannot be causees for Postal's two consultants in Postal (1984: 312, contrasting Morin, and 1990: 173f. and note 71, contrasting Kayne's *On vous fera connaître à elle* 'One will make her know you.'). A correlate to this difference seems to be whether dative strong pronoun are allowed in causative structures as *complements* of unergatives like *téléphoner* 'telephone', *écrire* 'write', *répondre* 'reply' (as focussed; they are clearly not allowed as unfocussed, which followed from the Cliticization Requirement). MJ allows them with the contrastive focus that Postal's informants do not allow (1981: 313f., 1984: 122, 1990: 174), cf. Bissel (1944: 332); Kayne (1975: 296) implies they are ok with heavy focus; while Seuren (1973) rejects not just dative but also locative strong pronouns, which are ok in Kayne (1975: 296 note 24). Cf. note NOTE-90 and chapter V, note NOTE-3.

(i) Elle *le* fera téléphoner à VOUS d'abord, puis aux étudiants.
 she him.ACC will.make telephone to YOU.ACC first, then to.the students {MJ}

independently of the repair, a focused dative strong pronoun can code the causee. It indicates that the PCC repair results in an unfocussed dative strong pronoun that behaves just like the independently available focussed dative strong pronoun in its availability to code a causee, both in the context of a [+person] accusative clitic in (51)b, and in general in (51)c-d. The correlation delimits a theory of PCC repairs to yield structures that are relevantly identical to independent *à*-phrase causees as far the constraints on the latter are concerned. Taking specifically the constraint blocking [+person] accusative clitics with *à*-phrase causees, section 1.5 argues that it is incurred whenever a dative c-commands rather than is c-commanded by the direct object, that is in applicative but not prepositional constructions. Along with evidence from possessor datives this motivates the specific form of the PP restriction formulated above.

While I suspect that the PP restriction as formulated is on the right track, it can be modified or even replaced by the entirely different proposal of 35 demotion of Postal (1990), without detracting from the chief contribution of the restriction to this section: it is suggestive of the syntactic rather than morphophonological character of PCC repairs. I say suggestive, for unlike the foregoing diagnostics like binding properties, it does not immediately seem to be beyond the bounds of a reasonable theory of morphophonology to implement the restrictions on PCC repairs and their coincidence with restrictions on dative *à*-phrases, as noted at the beginning of this section. Nevertheless, it is conspicuously not a property of the morphophonological transformations of Romance clitic clusters to enforce such coincidence. Catalan furnishes minimal pairs. It has the clitic PCC repair, replacing a dative with a locative clitic in PCC contexts and subject to the limitation to lexical datives, (52) (Bonet 1991: 209-213). It also has a morphophonological 3SG.DAT→LOC clitic transformation in the context of a 3.ACC clitic, (53) (cf. Bonet 1991: 74). Unlike the PCC clitic repair, this transformation applies to all 3SG dative clitics regardless of their being lexical, possessive, or benefactive. This blindness to syntax seems to be a persistent property of morphophonological transformations of Romance clitic clusters, and calls for a principled reason: it holds for example of spurious *se* of Spanish in chapter II, or of the replacement of 3SG/PL.DAT *lui, leur* by LOC *y* in colloquial French (Rezac 2008e), or of 3SG.DAT *lui* only in Quebec French (cf. Auger 1994: 102 ex. 74b). One way of deriving it is through the traditional restriction of morphophonology to word-like domains like the clitic cluster and its host, in contrast to syntactic context such as the structural correlates of being a possessor versus a lexical dative, which cannot (cf. chapter II).

- (52) a. An en Pere, *m'* *hi* / **me* *li* [DAT→LOC PCC repair for lexical dative]
to the Pere, me.ACC LOC / **me*.ACC him.DAT *va recomanar* *en Josep*.
Josep recommended me to him (Pere). (Bonet 1991:209)

- b. **M'* *hi* *va pintar* [*DAT→LOC PCC repair for benefactive]
me.ACC LOC painted
S/he painted me for him/her. (Bonet 1991:213)

- c. **T'* *hi* *posaran* *a la falda* [*DAT→LOC PCC repair for possessor]
you.ACC LOC will.put.3PL in the lap
They will put you in his/her lap. (Bonet 1991:213)

- (53) a. *L'* *hi* *va pintar* [3SG.DAT *li* →LOC *hi* for benefactive]
him.ACC LOC painted

she painted it for him.

[3SG.DAT *li* → LOC *hi* for possessor]

- b. *L' hi deixaren en la falda*
 him.ACC LOC they.put on the lap
 they put him on her lap.

{Rubén Ludeña Chalmés, p.c.}

1.4.6 The syntax of PCC repairs and of the PCC

Binding conditions, floating quantifiers, and right dislocation, show the phrasal repair of the Person Case Constraint to have a syntax and interpretation distinct from that underlying dative clitics and identical to that of dative strong pronouns save for the Cliticization Requirement. The PP restriction sheds further light on it: only a subset of dative clitics is susceptible to repair, and these correlate well with those that alternate with strong pronouns, tentatively identified as the prepositional construction. With the conclusion that the phrasal repair is syntactically distinct from a clitic, one of the questions posed in this work is answered: syntax does refer to some occurrences of phi that are not interpretable in the reference. There are syntactic structures that whose well-formedness depends on reference to the phi-features of a nominal outside that nominal, bearing out the hints of Arizona Tewa. In the phrasal PCC repair, the syntax underlying a dative clitic is impossible if and only if there is a [+person] accusative clitic, and the syntax underlying an unfocussed dative strong pronoun is possible in the same context only. Descriptively, use of the strong form of an unfocussed dative pronoun correlates with and thus constitutes agreement with the presence of a [+person] accusative clitic.

In and of itself, this conclusion has immediate consequences on the nature of various phenomena involving the interpretability of phi-features. Consider an issue currently subject to intense research, that of "fake indexicals" (Heim 2008, Kratzer forthcoming). The sentence *Only I presented myself to her* has a natural reading where nobody else in the context introduced themselves to her. To get this reading, *only* must operate on the formula *x presented x to her*, not *x presented me/myself to her*, leaving the 1SG phi-features of *myself* either apparently uninterpreted. Among the approaches to this conundrum, one line would leave the 1SG phi-features of *myself* unspecified in the part of syntax that leads to interpretation, and put them in afterwards (Kratzer forthcoming). That now seems excluded, for we can check in French that the [+person] status of *me* in the French translation is syntactically visible by triggering the Person Case Constraint and its repair, (54). We return to similar consequences in chapter VI.

- (54) *Ya que moi qui me <*lui> suis/sois présenté <à elle>*
 there.is only me who me.ACC her.DAT am.IND/SUBJ introduced to her
 Context: "We should have made her welcome, but __. No one else among you thought it important to present yourselves to her."

{MJ}

The strong pronouns resulting from the phrasal repair call to mind locative strong pronouns, which are identical with dative strong pronouns save for the Cliticization Requirement. The existence of the locative repairs strengthens the similarity, for just as locatives alternate between

strong pronouns and locative clitics, so for some speakers does the PCC repair.²⁴ The seminal work of Couquaux (1975) already reaches this conclusion, arguing that in PCC contexts, dative complements adopt the syntax of locative complements (p. 64). In the rich framework available to him, Couquaux formulates a rule changing [+dative] to [-dative] pronouns in the relevant context prior to the application of cliticization, this feature being all the difference between dative and locative complements (see further section 1.6.1). One way of reconstructing the intuition in current approaches is in the theory of Cardinaletti and Starke (1999): dative and accusative clitics are versions of the corresponding pronouns impoverished by a lack of DP-internal (and so inherent) Case assigner κ , and the Cliticization Requirement is a preference for the poorer structure of clitics if they are available. Extending these ideas, the PP-hood of locative clitics and the absence of the Cliticization Requirement for locative strong pronouns alike indicate that both have κ . PCC repairs can then be characterized as the requirement that κ be present on dative pronouns in PCC contexts, deriving the suspension of the Cliticization Requirement from the absence of a corresponding clitic, and perhaps the optional realization of the result as a locative clitic (Rezac 2008e).²⁵ This sketch will be developed in section 1.6, beside and against alternatives, leading into the next chapter's concern with the meaning of 'forcing' or 'adding' κ in the foregoing description.

First however, the next section turns to a deeper investigation of the syntactic structures subject to the Person Case Constraint and its repair, providing essential material for theories of them. That inquiry is likewise demanded by the conclusion that the Person Case Constraint differs from other clitic cluster gaps in having a syntactic repair. Modularity now indicates that the Person Case Constraint ought to be a syntactic rather than a morphophonological problem like the other, irreparable, clitic cluster gaps, and this an investigation of the syntactic structures where it occurs or does not verifies.

²⁴ Catalan might give further support, developing a suggestion in Bonet (1991: 211-2). Catalan avoids the PCC either by using a strong pronoun without clitic doubling and without focus (i), both required otherwise, or by substituting the locative *hi* clitic for a dative clitic (ii). However, the latter is unavailable for dative clitics doubling a clause-internal *a*-phrase (i), only for bare ones (or ones doubling a CLLDed phrase). It is mysterious what blocks the latter strategy on the morphophonological approach adopted by Bonet, where they are respectively failure to spell out a top copy as clitic versus its impoverishment to a locative clitic. However, if with Couquaux (1975) we view the locative clitic of PCC repairs as reflecting a locative rather than a dative syntax, it follows that it cannot double an *a*-phrase, since such doubling is available only to dative arguments (iii), not to locative ones.

- (i) *M(*'hi) ha presentat a la Maria*
me.ACC LOC has introduced to the Maria
S/he has introduced me to Maria. (Bonet 1991:212)
- (i) *An en Pere, m'hi / *me li va recomanar en Josep.*
to the Pere, me.ACC LOC / me.ACC him.DAT recommended.3 the Josep
Josep recommended me to him (Pere). (Bonet 1991:209)
- (ii) *En Pau li ha presentat en Josep a la Maria*
the Pau him.DAT has introduced the Josep to the Maria
Paul has introduced Josep to Maria. (Bonet 1991:212)

²⁵ An independent question is whether κ and κ -related formal differences are all the difference between locative or dative complements, for example in the nature of the preposition and/or *à*-marker involved (cf. note NOTE-30 for Jaeggli's 1980 proposal that *à* is a case marker with datives but a preposition with locatives). Couquaux (1978: 212) and Bonet (1991: 211, 2008) highlight that the strong pronoun introduced by PCC repairs has a dative, not a locative interpretation. However, Manzini and Savoia (2002: 135-6) point out that the same verb and the same situation can systematically be construed as a goal or a location, recalling *spray-load* alternations. Cf. French: *répondre* 'reply to' codes inanimate objects beside a dative for animate ones, but with *penser* 'think about' both are dative.

1.5 The PCC in complex structures

1.5.1 *Introduction*

The Person Case Constraint has been stated as a ban the co-occurrence of accusative and dative clitics in the same cluster, (18), similar to other clitic cluster bans. Uniquely among them however, the PCC is visible to syntax in order to condition the PCC repair. Understanding this difference is imperative, for it threatens modularity. Clitic cluster gaps do not have syntactic repairs because they belong to the morphophonology, and the autonomy of syntax from morphophonology derives it. To this, the PCC is a counter-example, unless it is not a morphophonological constraint at all, but a syntactic one.

- (18) *Person Case Constraint*: *[+person] accusative clitic in a cluster with an argumental dative clitic, where [+person] = 1st, 2nd person and *se* reflexive.

This is precisely right. This section works its way through fairly complex structures of datives and accusatives in French to show that the PCC is a constraint that cannot even be stated over clitic clusters, not only over their surface form, but also once all accidental and systematic syncretisms are pared away. It is a constraint restricting dative and accusative combinations in a certain non-local c-command relationship even if they don't end up being clitics, and not affecting dative and accusative clitic combinations if they come from different configurations:

- (55) *The Person Case Constraint*: * [+person] accusative clitic c-commanded by a dative argument within the domain of its accusative Case licenser.²⁶

By way of introduction, an instantiation of the Person Case Constraint in Icelandic is first briefly surveyed here (based on Taraldsen 1995, Sigurðsson 1996, Anagnostopoulou 2003, Holmberg and Hróarsdóttir 2003, and esp. Sigurðsson and Holmberg 2008; cf. Rezac 2008a.). It reveals clearly and simply what in French will appear only off the beaten path and sometimes dimly; cf. chapter V, section XX for similar evidence in Basque. Section 1.5.6 sketches a general theory of the PCC covering these various instantiations.

The Person Case Constraint in Icelandic restricts not clitics, which the language does not have, but verb (T/INFL) agreement, which is restricted to nominative controllers. There are no restrictions on agreement in the absence of a dative, so that in (56) the in-situ 1PL nominative controls 1PL agreement on the verb+T°. A dative prevents [+person] but not other nominatives from agreeing, (57)a versus (57)b.

- (56) Líklega höfum það þá bara verið við.
probably have.1PL it then only been we.NOM
Probably, it has then only been we. (Sigurðsson and Holmberg 2008)
- [person agr with in-situ nominative]

- (57) a. *Honum var/varst gefinn þú.
him.DAT was.3SG/ 2SG given you(2SG)
He was given you. (Schütze 1997: 117 < Thráinsson pc)
- [DAT > NOM: *person agr]

²⁶ It is the c-command part that will be demonstrated; as far as the evidence surveyed here is concerned, the domain in which this must be true might as well be the minimal TP.

- [DAT > NOM: $\sqrt{\text{number agr}}$]
- b. Honum voru gefnir t_{honum} peningarnir.
 him.DAT were.3PL given the.money.NOM.PL
 He was given the money. (Schütze 1997: 122 < Andrews 1990a: 211)

However, the dative only does so if it is base-generated c-commanding the nominative and remains so within the TP. (57) illustrates the "quirky subject" construction of Icelandic (without analogue in French): an applicative dative is base-generated above the nominative theme and raises to [Spec, TP] to become the subject. The same ditransitive verb has also the option of base-generating the dative below the theme in the prepositional construction, and it is then the nominative that raises to [Spec, TP] and behaves as a subject. When this occurs, there is no restriction on agreement, (58).

- [NOM > DAT: $\sqrt{\text{person agr}}$]
- (58) Þú varst gefinn $t_{\text{þú}}$ honum.
 you.NOM were.2SG given him.DAT
 You were given to him. (Schütze 1997: 117 < Thráinsson pc)

Even when the dative is base-generated above the nominative in (57), it is possible under certain conditions for the nominative to A-move past the dative to [Spec, TP], as in (59). A dative (underlined) in [Spec, TP] (boxed) prevents person but not number agreement with the nominative (bold); but when the *wh*-extracts, person agreement becomes available if, and only if, the nominative raises to [Spec, TP], so that the dative does not c-command it within the TP, (59)c vs. (59)d. When the nominative cannot be freed of the interference of a c-commanding dative by base-generation or movement, other, independently available structures must be used (cf. Hrafnbjargarsson 2004 for some).

- [DAT > NOM: *person agr]
- (59) a. Líklega mundi/*mundumj henni þá t_i virðast **við**j vera hæfir.
 probably would.3SG/*1PL her.DAT then seem we.NOM be competent
 We would then probably seem to her to be competent.
- [DAT > NOM: $\sqrt{\text{number agr}}$]
- b. Hvaða knapa_j mundi/munduj (t'_i) þá t_i finnast **þessir hestar**j vera fljótir?
 what jockey.DAT would.3SG/3PL then seem these horses.NOM be fast
 To what jockey would these horses then have seemed to be fast.
- [*person agr: DAT_{wh} ... $t_{\text{DAT}} > \text{NOM}$]
- c. Hverjumj mundi/*mundumj (t'_i) þá t_i virðast **við**j vera hæfir?
 who.DAT would.3SG/1PL then seem we.NOM be competent
 To whom would we then seem to be competent?
- [$\sqrt{\text{person agr: DAT}_{\text{wh}} \dots \text{NOM} > t_{\text{DAT}} > t_{\text{NOM}}}$]
- d. Hverjumj mundumj/*mundi viðj þá t_i virðast t_j vera hæfir?
 who.DAT would.1PL/3SG we.NOM then seem be competent
 To whom would we then seem to be competent?
 (Sigurðsson and Holmberg 2008, annotations added)

Icelandic then shows quite clearly the correlation of the Person Case Constraint with a specific syntactic configuration: the dative must c-command the [+person] nominative within the domain of agreement, the TP. In French agreement is not concerned, since within the TP nominatives always come to c-command datives. In the simple examples involving accusative

clitics so far, it has always been the case that a dative clitic c-commands the accusative one to create the PCC, while a dative \bar{a} -phrase has had available to it the prepositional structure where it does not c-command the accusative clitic and so does not create the PCC. In more complex structures of Table XX however, it is possible to force both a dative \bar{a} -phrase to c-command the dative clitic, giving the PCC, and an accusative clitic to c-command the dative clitic, with no PCC. These structures reveal the independence of the PCC from clitic clusters and its sensitivity to c-command. The following subsections make this argument, after a swift detour about the abstract, surface-independent force of the reference to "case" in the formulation PCC in (55).

(60) Table XX: PCC distribution in French (ACC ends up as clitic)

Dative	PCC: DAT c-commands ACC	No PCC: ACC c-commands DAT
clitic	<i>Lexical dat.</i> : introduce HIM.D HER/*ME.A <i>Extended dat.</i> : put HIM.D _i HER/*ME.A in the _i arms <i>Causative.</i> : make HER.D chose HER/*ME.A	<i>ECM</i> : believe HER/ME.A attached HIM.D
à-phrase	<i>Causative</i> : make à-KATE chose HER/*ME.A <i>Psych-experiencer</i> : it needs à-KATE HER/*ME.A	<i>Lexical dat.</i> : introduce HER/ME.A à-KATE

1.5.2 The role of Case

The *dative* and *accusative* in the formulation of the Person Case Constraint reflects case prior to morphophonological syncretisms, because the PCC does not affect dative-dative clitic clusters syncretic with accusative-dative ones (Postal 1981, 1983, 1984, 1990). Simplest and most convincing are raising structures (61), with a dative experiencer of the raising verb and a dative complement of the embedded adjectives. These tend to be good at least for 1st/2nd dative + 3rd person dative clitic sequences even for many speakers who allow no other multiple dative clitics, as discussed in section 1.3 (see Kayne 1975: 175, Morin 1981: 100 note 7, Postal 1981: 318f., 1990: 176, Miller 1992: 265, Miller and Sag 1997: 598, Nicol 2005: 159f.). Somewhat more complex are causatives of ditransitives and unergatives + dative, with a dative causee-subject and a dative object, for those speakers that allow them (see references under ex. (26)).²⁷

- (61) Pierre *me* *lui*_{k/*Pierre} [paraît *t*_{me} fidèle / sympathique / antipathique *t*_{lui}].
 Pierre me.DAT him.DAT seems faithful / sympathetic / unpleasant
 {MJ} (cf. Postal 1981: 318)
- (62) Pierre *me* *lui* a fait téléphoner / envoyer un cadeau.
 Pierre me.DAT him.DAT has made telephone / send a gift
 (Postal 1983: 392)

Speakers permitting these structures categorically refuse the PCC dative + accusative combinations syncretic with them, not only in the simple monopredicate examples seen so far, but also in the more complex causative structures with a dative causee-subject and accusative object fully parallel to (62) (next subsection). The PCC cannot be stated over the surface realizations of clitics, as the traditional appellation "*me lui* constraint" would have it, or over any

²⁷ Reflexive *se* is out as well (Couquaux 1980: 213ff, 1983, 1977: 135, Morin 1983; with *sembler* 'seem' even 1st/2nd person reflexives seem out, unlike what Couquaux 1983: 66 note 4 reports for *être* 'be'). This is usually attributed to an independent factor (Chain Condition of Rizzi 1986b, Lethal Ambiguity of McGinnis 2004, cf. the agentivity condition on the *se* binder in Reinhart and Siloni 2005). Cf. note NOTE-122 for related discussion.

representation where the dative-accusative syncretism of [+person] pronouns is in vigour. This syncretism is a systematic property of French and neighbouring Romance varieties, and goes deeper than an accident of vocabulary entries (cf. Bonet 1995: 617, Adger and Harbour 2007, Ormazabal and Romero 2007). Yet at some level it must not obtain and accusative and dative *me* must be distinct for the proper application of the PCC, as in the syntax.

1.5.3 Causatives of transitives

The first complex structure to be examined is causatives of transitives. Along with the verb *falloir* in the next section, they show that what matters for barring [+person] accusative clitics in the PCC are not dative clitic but any c-commanding datives.

The relevant causative structure has the following properties.²⁸ The causative verb *faire* 'make' takes an infinitival complement, making a more or less a single clause: the infinitive is

²⁸ NOTE-110: See esp. Kayne 1975: chapters 3, 4, 1991, 2000: chapter XX, Rouveret and Vergnaud 1980, Quicoli 1980, Postal 1981, 1983, 1984, 1989, Tasmowski 1984, 1985, Zubizarreta 1985, Gibson and Raposo 1986, Santorini and Heycock 1988, Pijnenburg and Hulk 1989, Roberts 1991, Miller 1992: chapter 5, Miller and Sag 1997, Guasti 1996, 1997, 2005, Bobaljik and Branigan 2006, Folli and Harley 2007. For unergatives with a dative causee, see beside Postal and Tasmowski op. cit., Morin 1980, Reed 1992, Abeillé et al. 1997, Baschung and Desmets 2000.

There are other causative patterns more marginally available with *faire*, and speakers resort to these when the regular causative pattern is impossible for any reason, although they also exist independently: the ECM and the 'mixed' patterns. ECM structures, canonically found with verbs like *laisser* 'let' but highly literary with *faire* 'make', differ from the regular complements of the latter in that the transitive subject is accusative rather than dative, the embedded clause can include negation and passive auxiliaries, and there is no clitic climbing (for most speakers: see Tasmowski 1985: 314, 362 note 7, Postal 1990: 196 note 69 commenting on Dorel 1980). For its use with *faire*, see Miller 1992: 253-7, Abeillé et al. 1997, Tasmowski 1985; cf. Bissel 1944: 333-4, Kayne 1975: 295 note 22, Postal 1981: 315. Far more colloquial is the *mixed* causative: the subject of a transitive is dative and the embedded clause cannot host negation or passives, but clitic climbing is suspended. Its availability is not fully understood; for example, some speakers require a dative-taking verb or an actual dative in it, (i) (Postal 1981: 315; cf. Kayne 1975: 295 note 23, Postal 1981: 315, 1983, 1984, Tasmowski 1985: 287, 315f., 330, 363f., Baschung and Desmets 2000). It is not merely the repair of the regular climbing structure, since it is available even when clitic climbing is, but it is regularly used when climbing is impossible (double datives, PCC). Binding indicates clearly that the infinitival structure is richer than that of infinitives that permit clitic climbing: in *faire* without but not with clitic climbing a pronominal clitic argument of the infinitive can be coreferential with the matrix subject, (iv) (Morin 1978, de Kok 1985: 598 note 2, Kayne 2000: 23), as in ECM (iii) but unlike in monopredicate structures (ii). The inability to corefer (Condition B) is a property of restructuring multipredicate structures, independent of clitic climbing (Miyagawa 1987, Wurmbrand 2001: 54f., Rezac 2005). On the flip side, the reflexive clitic *se* as an argument of the infinitive corefers with the causer if it climbs and with the causee otherwise, a well-known fact (Kayne 1975: 6.1) that seems to instantiate the same generalization. If *se* stays downstairs, other pronominal clitics cannot climb, (v) (Kayne 1975: 427-31, Rouveret and Vergnaud 1980: 153ff., Tasmowski 1984: 405, 1985: 231 note 5, 365 note 3; adverbial clitics are not subject to this constraint for some speakers, Kayne 1975: 427-430, cf. notes NOTE-25, NOTE-150, NOTE-158); this is a familiar phenomenon of clitic cohesion attributed to infinitival structure that renders climbing obligatory if rich and impossible if poor for any and all clitics together (Aissen and Perlmutter 1983).

(i) Marie lui a fait le leur donner / le permettre / *le manger.

Marie him.DAT has made it.ACC them.DAT give / it.ACC permit / it.ACC eat

(Postal 1981: 315)

(ii) a Jean $l_{k/*i} / s'_{i/*k}$ aime. b Jean $lui_{k/*i} / s'_{i/*k}$ offre des cadeaux.
Jean him.ACC/se likes Jean him.DAT/se offers presents

{MJ}

(iii) Elle les voit $la_{k/i}$ quitter.
she them.ACC sees her.ACC leave

(de Kok 1985: 598 note 2)

structurally too poor to host negation and temporal/aspectual or passive auxiliaries; clitics thematically dependent on the *it* in a single cluster attached to *faire*; the infinitive linearizes to the left of all its arguments including its subject, indicating its raising and perhaps amalgamation with *faire*. In the *active* construction that will concern us most, the subject of an embedded transitive is marked as a regular dative, being a clitic or an *à*-phrase according to the Cliticization Requirement; the object of a transitive and the subject of an unaccusative are both accusative; the subjects of unergatives are sometimes treated like transitive and sometimes like unaccusative subjects according to complex and variable factors; the other internal arguments of the infinitive are treated exactly as they would be if it were independent. The *passive* causative looks and behaves the same, save for the subject of transitives and unergatives: it is absent or realized by a *par* 'by' phrase, like and with the same restrictions as in plain passives.

- (63) a. Azenor *⟨lui⟩* a fait manger les gâteaux *⟨à Nelson⟩*.
 Azenor him.DAT has made eat the cakes to Nelson
 Azenor made Nelson eat the cakes [causative of a transitive, active]
- b. Azenor *lui* les a fait manger.
 Azenor him.DAT them.ACC has made eat
 Azenor made him eat them.
- c. Azenor *⟨les⟩* a fait manger *⟨les gâteaux⟩* *(par Nelson)*.
 Azenor them.ACC has made eat the cakes by Nelson
 Azenor made the cakes be eaten (by Nelson). [causative of a transitive, passive]

Our concern is with the causee dative subject of transitives in the active construction, which participates in the Person Case Constraint in (64). As a dative clitic, it blocks a [+person] accusative clitic object of the infinitive that would end up in the same clitic cluster, and Postal (1981: 312) accordingly identifies the PCC here. However, the causee dative also blocks a [+person] accusative clitic even if it is not itself a clitic but an *à*-phrase, unlike the *par* 'by' phrase of the passive (Postal 1989). In this it recalls the participation in other languages like Icelandic of nonclitic datives in the PCC, and the restriction is identified as the PCC in Rezac (2007: 123).²⁹

-
- (iv) a. Manon_i me *⟨l'_{k/*i}⟩* a fait *⟨la_{k/i}⟩* présenter à Jean-Pierre.
 Manon me.ACC her.ACC has made her.ACC introduce to Jean-Pierre
 b. Mamie_i, elle me *⟨les lui_i⟩* a fait *⟨les lui_i⟩* envoyer, les chocolats
 grandma she me.DAT them.ACC her.DAT has made them.ACC her.DAT send the chocolates
 c. Ilse_i leur a fait lui_{i/k} téléphoner.
 Ilse them.DAT has made her.DAT telephone
- {MJ}
- (v) a. ?Marie a fait se les acheter Jean.
 Marie has made SE them.ACC buy Jean
 Marie has made Jean buy them for himself.
 b. *Marie les a fait s'acheter (à) Jean.

(Rouveret and Vergnaud 1980: 154)

²⁹ NOTE-112: Dative causees are often infelicitous with animate objects in general (Kayne 1975: 241f., Postal 1981: 120f. note 5, 9, 12), but this independent of and in fact attenuated by the dative being clitics (i), and seems to group with effects like specificity rather than just animacy (Kayne 1975: 241f., Tasmowski 1985: 350-3, who nevertheless conflate the two effects despite their not behaving similarly, as Postal op.cit. points out; see note NOTE-120 for Tasmowski's account that seems suited to the non-PCC effect here). Exceptions vary among speakers: for MJ,

- (64) a. Marcel *⟨les/*vous⟩* a fait choisir/épouser *⟨Martin et Claude⟩* à Jacques
 Marcel them/*you.ACC has made choose/marry Martin and Claude to Jacques
 Marcel made Jacques choose Martin and Claude/them/*you. [dative à-phrase EA: *[+person] acc. clitic]
- b. Marcel *les/*vous* *lui* a fait choisir/épouser.
 Marcel them/*you.ACC him.DAT has made choose.
 Marcel made him chose them/you. [dative clitic EA: *[+person] acc. clitic]
- c. Marcel *vous* a fait choisir/épouser par Jacques.
 Marcel you.ACC has made choose by Jacques
 Marcel made you be chosen by Jacques. [par EA: √[+person] acc. clitic]
- {MJ} (cf. Postal 1989: 2-3)

To this behaviour, a handful of verbs make an exception studied in Postal (1989), like *voir* 'see' and *connaître* 'know'.³⁰ They allow [+person] accusative clitics if their causee is an à-phrase, but still not if it is a clitic, that is just like the lexical dative arguments of verbs like *présenter* studied up to this point. In keeping with this parallel, they also allow the clitic sequence that incurs the PCC to undergo PCC repairs and be realized as a dative strong pronoun, which is naturally unavailable for the foregoing verbs where a [+person] accusative clitic is blocked by a dative clitic and à-phrase alike (see note NOTE-100 for independent variation).

- (65) Les amis de Nicolas_i *me* *⟨*lui⟩* feront voir/*choisir
 the friends of Nicolas me.ACC him.DAT will.make see/*choose
⟨à Jacques / à lui_{i/k} / à ELLE⟩ DEMAIN, pas aujourd'hui.
 to Jacques / to him / to HER TOMORROW not today
 Nicolas'_i friends will make Jacques/him_{i/k}/her see/*chose me tomorrow, not today. {MJ}

The role of c-command in the Person Case Constraint in Icelandic suggests that for verbs like *choisir*, causee dative à-phrase trigger the PCC because they c-command the object that ends up as the accusative clitic, unlike lexical dative à-phrases which can occur in the prepositional construction below it, and that in turn *voir*-type verbs are special in allowing their causees the

épouser 'marry' and sometimes *choisir* 'chose' (as in Postal 1989) and *embrasser* 'kiss' (as in Kayne op.cit.) behave thus, as does *toucher* (*le/*me faire toucher a la balle* 'make the bullet touch him/*me'), but not *effleurer* given in the same sentence type in Kayne (op.cit.), or e.g. *marrier* 'marry', *assasiner* 'assassinate', *soigner* 'take care of', *opérer* 'operate', ungrammatical with animate clitics. Perhaps to be compared are effects of animacy on clitic climbing in Spanish in note NOTE-45: 3rd person animates cannot climb though not affected by the PCC, while inanimates must.

- (i) Elle *⟨?lui⟩* fera tuer son mari *⟨par/*à son amant⟩*
 she him.DAT will.make kill her husband by / to her lover
 She will make ?him/*her lover kill her husband. (Kayne 1975: 241)
- (ii) Marcel l'/*vous a fait(e) épouser au medecin.
 Marcel him/her/you.ACC has made marry to.the doctor
 Marcel made the doctor marry him/her/*you. {MJ} (Postal 1989: 2)

³⁰ For MJ, *voir* uses this pattern only colloquially, but *connaître* generally, if with a restricted meaning *faire connaître* 'introduce' (cf. Postal 1989: 68, who notes competition between *connaître* and *faire la connaissance de* 'get to know'); also here for MJ are *haïr* 'hate', *oublier* 'forget', and sometimes (very colloquial) *choisir* 'choose', *embrasser* 'kiss' (*oublier*, *choisir* in contrast to Postal 1990, who also gives *reconnaître*).

latter structure. Both predictions are correct, divorcing the PCC from clitic-hood of the dative and tying it to dative > accusative c-command. A simple contrast illustrating this is (66), preliminary to the more extended discussion below. Postal (1989) shows that while the direct object can bind into the *à*-phrase of lexical datives, indicating c-command O > *à*-phrase IO, but not into a causee, indicating causee > O, except for *connaître*, O > causee (see note NOTE-130 for *voir*). On this diagnostic, an *à*-phrase creates the PCC if and only if it c-commands the [+person] accusative clitic.

- (66) La psychiatrie a -- √révélé / *fait choisir / √fait (se) connaître -- Marcel à lui-même
 the psychiatry has revealed / made chose / made (SE) know Marcel to him-self
 (Postal 1989: 7-9, 11, 132 note 16, Kayne 1975: 371-2)

Let us now consider the evidence in more detail. It does not seem controversial that the causee dative *à*-phrases of the *choisir*-class c-command the direct object of the infinitive, unlike lexical datives in the prepositional construction of section 1.2. Causee dative correspond go the external co-argument of the direct object and they have subject-like properties. One is intervention effects attributed to the Specified Subject Condition (see esp. Kayne 1975: 4.3, Rouveret and Vergnaud 1980, Emonds 1999; also Quicoli 1980, Postal 1984, Pijnenburg and Hulk 1989, den Dikken 1995: 252ff., Bobaljik and Branigan 2006). A causee as an *à*-phrase blocks the cliticization of dative, locative, and genitive internal arguments out of the embedded clause, unless itself cliticized (locative adjuncts and extended datives are not so restricted). This property cannot be tested for lexical datives or *voir*-type verbs for lack of relevant internal arguments to cliticize.³¹

- (67) a. Jean a fait [mettre ce livre à Pierre sur l'étagère]. [locative argument]
 Jean has made put this book to Pierre on the bookshelf.
 b. Jean <leur> y fera [mettre ce livre <*à Pierre> t_y]. [locative argument cliticization and SSC]
 Jean them.DAT LOC will.make put this book to Pierre
 (Rouveret and Vergnaud 1980: 178)
 c. Paul <les> lui fera porter <ces livre> à sa femme. [dative argument cliticization and SSC]
 Paul them.ACC him.DAT will.make carry these books to his wife.
 Paul will make him carry them/the books to his wife.
 *Paul will make his wife carry them/the books to him.

(Kayne 1975: 290)

³¹ NOTE-120: Postal (1984) argues against the Specified Subject Condition account for the ban on dative cliticization out of infinitives with uncliticized dative and accusative causees, but his own account also relies on the notion of a subject. An alternative that does not refer to subject is the interpretive account of Tasmowski (1985: 356-360), Miller (1992: 5.5.6), extended to some of these effects, but not to all: in particular, it is explicitly not meant to affect locative cliticization since replacing a dative by a locative clitics lifts restrictions on the former altogether (Tasmowski 1985: 360f., cf. Rezac 2008e, vs. even the best-discourse conditions for a sentence like (67)b with a locative give ??, p. 359). Cf. also section 1.5.3. Similarly, parsing proposals have been entertained for cases like (67)c with both causee and indirect object as *à*-phrases, where there is an overrideable preference for taking the first as the causee (Ruwet 1972), but as Rouveret and Vergnaud (1980: 177) if one of them is a clitic as in (67)c the requirement to interpret it is the causee is categorical, not a preference.

There is therefore good evidence that causees but not lexical dative *à*-phrases necessarily c-command the direct object.³² This groups causees with dative clitics and against lexical dative *à*-phrases on the one hand for c-command of the direct object, since dative clitics use the applicative construction, and on the other for triggering the Person Case Constraint. The link between these two properties supposed on a cross-linguistic basis predicts that causee *à*-phrases of *voir*-type verbs are not restricted to c-commanding the direct object, since they do not compel the Person Case Constraint. An indication that this is so has already been mentioned with (66), but as that datum is quite isolated, it needs to be strengthened.

Postal (1989) is devoted to the differences between causees of *choisir* and *voir* type verbs, establishing results that in the present framework and the results in it about the PCC (Sigurðsson 1996, Albizu 1997, Anagnostopoulou 2003) lend themselves to interpretation as the expected c-command asymmetries. By a battery of diagnostics, he shows that causativization involves two structures. One is the one discussed up to now, where the dative external argument is more prominent than the direct object, and it is available to both *choisir* and *voir* type verbs. The other is an "inversion" structure where, as an *à*-phrase, the dative external argument is *less* prominent than the direct object, like the lexical dative in the prepositional construction, as for the binding diagnostic above in (66). This structure is available only to *voir* type verbs, not to the *choisir* type. It is optional beside the normal structure, save when the latter would incur the ban on [+person] accusative clitics in the presence of an *à*-phrase causee, when the inversion structure is forced. One difference between the two structures emerges in the control into *sans* 'without' phrases or of manner adverbials like *avec plaisir/enthousiasme* 'with pleasure/enthusiasm'. The controller can normally be the external argument but not a "low" internal argument like the direct object and lexical dative (for "high", extended datives, see the next section). The causee dative of the *choisir* and *voir* class is a controller, except when there is a [+person] accusative clitic. Then the *choisir* class does not allow *à*-phrase causees at all, and the *voir* class does, but they cannot control these adverbials. Therefore, [+person] accusative clitics forces a causative structure with a dative causee whose prominence is like that of an internal rather than an external argument, as Postal concludes.

- (68) a. Cela *les* fera connaître/choisir à Hervé (sans PRO_{Hervé} le regretter).
 that them.ACC will.make know/choose to Herve without PRO it regretting
 That will make Herve know/choose them without (his) regretting it.
- b. Cela *vous* fera connaître/*choisir à Hervé (*sans PRO_{Hervé} le regretter).
 that you.ACC will.make know/choose to Herve without PRO it regretting
 That will make Herve know (*without (his) regretting it) you / *choose you.
 (Postal 1989: 95-6)

³² Another "specified subject" type property is the causee blocking binding by the causer into the embedded clause (Kayne 1975: 264-6, 4.2). A different argument for the subject-like status of dative causees can be constructed from the licensing of secondary predicates in (i) on the theory of Pykkänen (2002: 26-42), which would make the clitic causee but not the lexical applicative dative a "high" applicatives, like the external argument of transitives – with many unclarities once we move to other datives and other secondary predicates (cf. Zubizarretta 1985: XX).

(i) Elle *leur_i* *a donné / √a fait manger le gâteau nus_i
 she them.DAT has given has mad eat the cake naked
 She has *given them / √made them eat the cake naked.

- (69) a. Cela les a fait choisir/oublier à Jules (avec plaisir)
 that them.ACC has made choose/forget to Jules with pleasure
 That made Jules choose / forget them with pleasure. (Postal 1989: 69)
- b. Cela les/*nous a fait voir à Jacqueline avec enthousiasme
 that them/*us.ACC has made see to Jacqueline with enthusiasm
 That made Jacqueline see them/*us with enthusiasm {MJ} (cf. (51)b above).

Postal's results about relative prominence of causees are formulated in the relational grammar framework, where these diagnostics have been used to investigate other "inversion" phenomena. The analysis involves the demotion from grammatical function 1 (subject) to 3 (indirect object) (Harris 1981, Perlmutter 1984, and esp. Legendre 1989a). Landau (2005: section 8) reviews this literature in a study of psych-experiencers (see next section), and carefully argues that the prominence in question is to be construed in structural rather than semantic terms, since diagnostics like adjunct control in (68) do not identify a homogeneous theta-role. Independent support derives from the binding paradigm in (66) since anaphora binding in such contexts is held to be sensitive to structural prominence.³³ We may therefore conclude that *à*-phrase causees triggering the Person Case Constraint are structurally high, at the same level as the adjuncts that they control under Landau's proposal, while those that do not are structurally low, like lexical *à*-datives in the prepositional construction, (70), limited to only certain verbs like *voir* (perhaps as lexicalized complex predicates, Jones 1996: 454).

- (70) a. faire choisir/voir: *faire* ... [_{VP/high-AppIP} dat causee/EA [... *choisir/voir* ... acc/O]
 b. faire voir: *faire* ... [*voir* acc dat-causee/EA]

The role of c-command for an *à*-phrase creating the PCC converges with the properties of the constraint in languages like Icelandic.³⁴ Causatives are the first construction where the PCC is divorced from facts about clitic clusters, since the dative creating it is an *à*-phrase, not a clitic, at

³³ NOTE-130: The binding data is complex, because it holds only of one *voir*-type verb. *Connaître* 'know', allows the direct object to bind a complex reflexive in the *à*-phrase causee; this is expected since the binding situation is exactly as with a direct object binding a complex anaphor in an *à*-phrase indirect object. The same parallelism holds in the more restricted reverse binding by the *à*-phrase of a complex anaphor in the direct object (Postal 1989: chapter 1). At first sight unexpected is that *voir* 'see' and *reconnaître* 'recognize' do not have either binding possibility. Postal (1989) proposes that with *voir* but not *connaître*, the direct object obligatorily promotes to the subject of the infinitival clause of the inversion structure. This explains why for *voir* the *à*-phrase causee cannot bind a complex reflexive direct object, which is now too high. It would also explain why the direct object cannot bind into the causee *à*-phrase if somehow being a promoted subject triggered the need for *se*, but at first sight, this is not so, (i).

(i) Hervé (se) plaît à lui-même *t*_{Hervé}.

(It's not true that nobody likes Herve.) Herve likes himself. {MJ, 19/7/2008}

³⁴ NOTE-135: As an alternative, *voir*-causees and/or lexical *à*-datives could be taken to occur in a low applicative structure c-commanding the direct object within some local domain like the minimal VP, in contrast to a high applicative structure for regular causees and psych-experiencers. Whatever the exact situation, the Person Case Constraint can be tied to c-command of a [+person] accusative by a dative outside of the minimal domain of the former rather than pure c-command, and indeed often is (esp. Anagnostopoulou 2003), properly distinguishing high (PCC) from low (non-PCC) applicatives. It is worth noting that the inversion structure cannot serve as the input to dative cliticization of the causee since the resulting *me lui* clusters are out even with *voir*. This follows from the hypothesis adopted in section 1.2 that clitics are restricted to applicative constructions in French, relativized to the proper notion of (e.g. high) applicative if needed.

least overtly. The next section bolsters this evidence from with psych-experiencers and discusses the possibility of covert clitics doubling PCC-creating *à*-phrases.

Before leaving causatives, there is an observation to be made that will recur several times below to become important in section 1.6: problems with cliticization that are not due to the Person Case Constraint are not repairable by the PCC repairs, and alternative causativization strategies must be used (as in note NOTE-110). The Specified Subject Condition paradigm has this property: one cannot replace *leur/à Pierre* by unfocussed *à eux* in (67)b or *lui* by unfocussed *à lui* (placed after *à sa femme*) in (67)c. Another problem arises with the causativization of unergatives with a dative internal argument, like *téléphoner* 'telephone', *répondre* 'reply to'. These appear in the causative type under discussion in two ways, with variation according to verb and speaker (see note NOTE-110): either treated as transitives with a dative subject, or as intransitives with an accusative subject. In the latter pattern, the dative internal argument cannot cliticize, (71). The problem differs from the Specified Subject Condition paradigm for transitives above: only dative and not locative or genitive arguments are affected (cf. Kayne 1975: 399f., Postal 1984: 141), and cliticizing the accusative causee-subject of the unergative actually worsens cliticization of the dative internal argument (Tasmowski 1985: 360). Unaccusatives with a dative internal argument causativize in the same pattern, with accusative subject causee, but have no trouble cliticizing their dative argument, (72). Tasmowski (1984, 1985: 356-360) and Miller (1992: 5.5) develop a nonsyntactic account based on a conflict between the tendency to interpret both a dative clitic and the accusative causee agent as topics, and indeed Tasmowski (1985: 360) shows the conflict to be fully resolvable by context, which renders dative cliticization in examples like (71)b good (cf. note NOTE-120; Rooryck 1988a offers another semantic approach, Kayne 1975: 4.3, Rouveret and Vergnaud 1980, Quicoli 1980 use the Specified Subject Condition, and Postal 1984, Goodall 1987 provide other syntactic accounts). This problem also cannot suspend the Cliticization Requirement, which requires a dative strong pronoun to be focussed, (71)c for example, as pointed out by Kayne (1975: 292-7), Postal (1981: 313f., 1984: 122), Tasmowski (1985: 316) (see the Appendix for a fully contextualized example).³⁵

- [caus. of unerg: *dat./√loc clitic, Cliticization Requirement]
- (71)^o a. Elle <**le*> *lui/vous* fera répondre <*Jean>.
 she him.ACC her/you.DAT will.make respond Jean
 She will make Jean answer to him/you. {MJ}
- b. 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)
- c. Elle *le* fera répondre aux étudiants / *à vous / √à VOUS d'abord, puis aux étudiants.
 she him.A will.make answer to.the students / to you / to YOU first then to.the students
 She will make him answer to the students / to you / to YOU first, then to the students.
 {MJ}
- [caus. of unacc.]
- (72) Elle <*le*> *lui* fera parvenir <votre lettre>.
 she it.ACC her.DAT will.make arrive your letter

³⁵ Postal is studying grammars that do not permit the dative complement of unergatives be a strong pronoun in causatives even under focus; not so for MJ or it seems Kayne 1975, removing this factor: see note NOTE-100.

She will make you letter reach her.

1.5.4 *Falloir*

A second environment where the Person Case Constraint appears independently of clitics is with the impersonal verb *falloir* 'need'. It has within French unique properties: interpretively akin to psych-unaccusatives like *manquer* 'lack' and sharing with them a dative experiencer, it is formally transitive, with the theme accusative and for its subject the expletive *il* 'it'.³⁶ It exhibits the Person Case Constraint in the way seen with causees: the theme cannot be a [+person] accusative clitic whether the dative experiencer is a clitic or an *à*-phrase. Naturally, there is no repair of the PCC incurred by the clitic cluster, since it would create an *à*-phrase that itself incurs the PCC (the PP restriction).³⁷

- (73) a. Il faut Hervé à Lucille.
it needs Herve to Lucille
Herve needs Lucille.
(Postal 1989)
- b. (Cette fille,) il *la*/**te* < *lui* > faut < à mon ami >.
this girl it her/you him.DAT needs to my friend
This girl, my friend/he needs her / *you.
(Kayne 1975: 241 note 47, + *lui*)
- c. *Cette fille, il *te* < *lui* > faut < à elle / à ELLE >.
this girl, it you.ACC her.DAT needs to her
*This girl, you need her.
{MJ} (cf. Postal 1990: 172)

The dative of *falloir* follows then the pattern of causees, not of lexical datives. Things fall into place if the PCC is sensitive to c-command rather than clitic clusters, as concluded from causatives, and if the dative of *falloir* but not lexical datives c-commands the direct object. Two observations verify this hypothesis. First, Legendre (1989a) demonstrates that dative experiencers of unaccusatives like *manquer* 'lack' and of *falloir* specifically pass the prominence diagnostics discussed above for causees, such as control into *sans* 'without' phrases (cf. Landau 2005: section 8, Roberge and Troberg 2007: 317, Postal 1989: 37-8, Herschensohn 1992, 1999). That places these datives above the theme, as high applicatives in accordance with other research into psych-experiencers (Cuervo 2003). With verbs other than *falloir*, the theme becomes nominative and raises past the dative to [Spec, TP], obligatorily if definite, eliminating the dative > 1st/2nd person configuration of Icelandic PCC in section 1.5.1 (Rezac 2008a: XX). With *falloir*, the theme remains as an accusative c-commanded by the dative, and this accusative is subject to

³⁶ Cf. Faeroese dative subject + accusative unaccusative psych-verbs corresponding to Icelandic dative subject + nominative ones (Barnes 1986), such variation within psych-verbs Tamil (Ura 2000) and Choctaw (Davies 1986: chapter 5), and the Slavic constructions discussed in Lavine and Freidin (2002) and Bailyn (2004). See Rigau (2005) for Catalan analogues to *falloir*.

³⁷ NOTE-140: The *falloir* restriction with *à*-phrases is noted along with restrictions imposed by *à*-phrase causees in Kayne (1975: 241 note 47), and related to the PCC in Anagnostopoulou (2005: 231 note 2). Postal (1990: 172) also notes it and the unavailability of PCC repairs for the clitic cluster, but unlike the other sources attributes a judgment of ? to the *à*-phrase variant (i): *Il vous faut ?à Philippe/*à lui* – **Il vous y faut, à Philippe* 'Philippe/he needs you'. Cf. perhaps the marginal purpose *à*-phrases of Rooryck (1988b).

the Person Case Constraint exactly in causatives. The second observation is the expected consequence of the postulated configuration for the binding theory: while the direct object of ditransitives can bind an anaphor in the lexical dative (74) (cf. (66)), including in the impersonal passive closely resembles *falloir*, the theme of *falloir* cannot bind into its experiencer, indicating it is higher (Postal 1989, 1990, who interprets it as restrictions on 34/35 demotions).

- (74) a. J'ai décrit Philippe à lui-même.
I have described Philippe to him-self
(Postal 1990: 171f., cf. Postal 1989: 9)
- b. *Il faut -- Philippe (à lui-même) / ces handicapés l'un à l'autre
it needs Philippe to him-self / these disabled to.each.other
(Postal 1990: 171f., cf. Postal 1989: 50)
- c. Il a été présenté des nouveaux chercheurs les uns aux autres.
it has been introduced some new researchers to.each.other
{MJ}
- d. Il faut des nouveaux chercheurs les uns ?*aux/√pour les autres.
it needs some new researchers *to.each.other/√for.each.other
{MJ}

Falloir then provides support for the conclusions drawn from causatives: a dative c-commanding an accusative triggers the Person Case Constraint for a [+person] accusative clitic, regardless of whether the dative is a clitic or an *à*-phrase. The constraint is thereby divorced from morphophonology in one direction: co-clitic-clusterhood of the dative and accusative plays no role, and what counts is their c-command relationship over larger domains, a syntactic property.

Against this, one might suppose that all and only the dative *à*-phrases identified by the converging c-command diagnostics and the Person Case Constraint as high are covertly clitic doubled, and it is the doubling invisible dative clitic that triggers the PCC (cf. Anagnostopoulou 2005: 231 note 2 for *falloir*, citing Richard Kayne p.c.). In French overt clitic doubling of datives is restricted to (focused) strong pronouns, as in (75) (Kayne 2000), but covert doubling of all datives in the applicative construction would nicely match its overt distribution in Spanish or Greek and the theoretical conclusions drawn from them (Demonte 1995, Cuervo 2003, Anagnostopoulou 2003). However, it seems possible to disprove the idea by showing that the supposed covert dative clitic is not there for the syntactic diagnostics that make reference to clitics, like quantifier float. Overt dative clitic doubling licenses floating quantifiers, as in (75), and morphophonological deletion of dative clitics does not change this property, as discussed for (36) above. Yet the covert dative clitic doubling supposed for causees and *falloir*-experiencers does not license floating quantifiers, (78), indicating that the syntax underlying clitics is absent.

- (75) Je *leur*_i ai tous_i parlé à EUX_i.
I them.ACC have all spoken to THEM
- (76) a. Elle a ⟨*tous⟩ fait ⟨*tous⟩ manger ⟨*tous⟩ la tarte aux enfants.
she has ⟨*all⟩ made ⟨*all⟩ eat ⟨*all⟩ the cake to.the children
She made all the children eat the cake.
- b. Il *la* ⟨*leur*⟩ a tous fallu ⟨*aux enfants⟩.

it her.ACC them.DAT has all needed to.the children
 They all / *all the children needed her.

{MJ}

1.5.5 ECM

The "high" datives of causatives and *falloir* show that the Person Case Constraint is incurred by a [+person] accusative clitic c-commanded by a dative even when the dative is not itself a clitic. Exceptional Case Marking (ECM) constructions furnish complementary evidence: accusative-dative clitic clusters that are syncretic with those banned by the PCC, but that are good, because they derive from structures where the accusative c-commands the dative. Like ECM are some causatives of unaccusative + dative structures, discussed in the Appendix.

The ECM structures in question involve verbs like *croire* 'believe' with a small clause complement headed by an adjective taking a dative complement.³⁸ The subject of the small clause becomes the accusative object of the ECM verb. Both the accusative and the dative are subject to the Cliticization Requirement that requires them to be clitics if they are unfocussed pronouns, and the ECM verb is the only potential host. If both the accusative and the dative are so forced to be clitics, the results are clitic clusters syncretic with the PCC, but derive from an accusative > dative c-command, rather than the reverse as in other structures. These clusters have only been investigated in any depth by Postal (1983, 1984), who points out their relevance to the proper formulation of the Person Case Constraint as a syntactic constraint, although not in the terms discussed here (see note NOTE-122). They are very revealing indeed: the French variety he studies permits them without permitting the PCC, and while elsewhere they show complex behaviour they also clearly indicate a different status for the two types of clusters.

(77) cl_{ACC}-cl_{DAT} *croire*_{ECM} [SC ACC [AP ADJ DAT]]

Adjectives with dative arguments can be studied independently as complements of raising verbs, including *être* 'be' (Couquaux 1980) and *sembler*, *paraître* 'seem', and as modifiers. In raising, the raising verb is the sole potential cliticization site, as in (78). Adjectival modifiers have no clitic host and are islands to clitic climbing, (79). In both configurations, the dative argument of the adjective is subject to the Cliticization Requirement, and as a strong pronoun it must be focussed, even in adjectival modifiers where a clitic is simply not an option. (The same goes for dative arguments of nouns, Kayne 1975: 185f.)

(78)^o tu <leur> es/parais <*leur> reconnaissant / sympathique <*à eux / à EUX>.
 you them.DAT are/seem them.DAT grateful / sympathetic to them / to THEM
 you are/seem grateful/sympathetic to them/to THEM.

{MJ}

(79)^o il lui_i faudrait une fille redevable/(?)reconnaissant *à elle_i / √à ELLE.
 it her.DAT would.need a girl indebted / grateful to her / to HER
 [For timely help,] she would need a girl sufficiently indebted / (?)grateful to *her/√HER.

{MJ}

³⁸ VP/TP complements of raising and ECM verbs do not generally permit clitic climbing of their internal arguments.

When such small clauses are placed under ECM verbs like *croire* 'believe', the combination of the ECM subject and dative adjective complement would give rise to dative-accusative clitic clusters if both are unfocussed pronouns. For some speakers, the small clause in ECM unlike in raising is opaque to cliticization entirely, and so the dative argument of the adjective cannot be a clitic, whether the small clause subject is an accusative clitic or a DP. Formally, this recalls the impossibility of causativizing of unergative (vs. unaccusative) + dative verbs with an accusative causee subject, discussed above.³⁹ As in that case, the Cliticization Requirement remains in full force, and the dative as a strong pronoun it must be focussed, (80) (Kayne 1975: 305f.; cf. Couquaux 1975: 71 note 12). This is the same as we have just seen for adjectival modifiers, and it is an observation we have seen above for causatives and that will prove of importance in section 1.6: although cliticization of the dative argument is impossible, for presumably syntactic reasons like the opacity of certain domains to cliticization, the Cliticization Requirement cannot be suspended like it can in repairs of the Person Case Constraint.

- (80)^o
- | | | | | | | |
|----|---------------|---------|------------------|---------------------|---------------------|----------------|
| a. | Jean | ⟨t'⟩ | est antipathique | ⟨à Marie / ?à toi⟩. | | |
| | Jean | you.DAT | is unpleasant | to Marie / to you | | |
| | | | | | | |
| b. | Tout le monde | ⟨*te⟩ | croit | Jean antipathique | ⟨à Marie / ?à toi⟩. | |
| | everyone | you.DAT | believes | Jean unpleasant | to Marie / to you | |
| | | | | | | |
| c. | Tout le monde | ⟨*te⟩ | la | croit | infidèle | ⟨à son mari⟩. |
| | everyone | you.DAT | her.ACC | believes | unfaithful | to her husband |
- (Kayne 1975: 305-6; on status of "?", see the Appendix)

The opposite extreme is brought to light and compared to the Person Case Constraint by Postal (1983: 413f., 1984: 153-8, 1990: 177, citing also Morin 1979c). There are speakers who freely permit in ECM the [+person] accusative + dative (*me lui*) clusters though banning them structures like ditransitives. Right dislocation in (81)b ensures that the clitic cluster does contain a [+person] accusative rather than the syncretic dative clitic, as the latter would require the right dislocated phrase to be preceded by the marker *à*.⁴⁰

- (81) 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
 (Postal 1984: 156-7)
- b. Pierre *nous lui* croit fidèle, nous autres communistes.
 Pierre us.ACC him.DAT believes faithful, us other communists
 (Postal 1984: 153)

³⁹ NOTE-150: The opacity is to pronominal, not adverbial clitics: locative *On y croit Jean fidèle, à ses principes* 'One LOC_i believes Jean faithful, to his principles' (Kayne 1975: 306; cf. note NOTE-25). 3rd person dative clitics are better than 1st/2nd person for some speakers (Kayne 1975: 306 note 30, Tasmowski 1985: 259 note 18).

⁴⁰ Like this also behave causatives of certain intransitives (Postal 1983: 413f. vs. 1984: 116, see the Appendix) and *voilà*-complements (Postal 1990: 177 reporting also Morin 1979c), both ECM-like in structure. MJ weakly permits this ECM pattern, in a register far from the colloquial, along with the binding as reported, and in categorial contrast to *me-lui* in causatives. Cf. (i), where with *vous*, *proche* 'close' is better than *reconnaissant* 'grateful' and *sympathique* 'sympathetic' is impossible. WWW and Google Book Search indicate its extreme rarity in writing, with extant examples like *Je tâcherai de me lui rendre utile* 'I will try to make myself useful to him' unacceptable to MJ.

Much remains to be understood about this ECM pattern. Some theories of cliticization of the type that moves dative and accusative (not locative) clitics in French restrict the mechanism to terminate at the accusative, for example by the Specified Subject Condition in the present instance (Kayne 1975: 4.6, Emonds 1999: 345), or by having dative cliticization be driven by the system that assigns structural Case and so stops at the accusative (Anagnostopoulou 2003, Rigau 2005, Rezac 2005; cf. Rivas 1977).⁴¹

Comparison with causatives brings out the full force of this ECM pattern. To the ECM pattern (82)a corresponds the causative (82)b. The latter is and the former is not subject to the Person Case Constraint, but in both the relevant clitics are not coarguments, and both give rise to

⁴¹ NOTE-122: Perhaps to be related is the binding pattern discussed in Postal (1984: 156f.) and indicated in (81): a cluster of two 3rd person dative clitics requires the dative to be disjoint from the matrix subject, as with simple predicates, but if the accusative is 1st/2nd person, the dative can be coreferential. However, the facts are complex. In clitic climbing, nonreflexive clitics must usually be disjoint from the local subject of the clause into which their climb (note NOTE-110). This is exceptionless for accusatives (as causee or ECM subjects, or embedded objects of causatives), and also true of most datives (causees, embedded indirect objects of causatives, dative complements of adjectives in under raising verbs), with two exceptions. First, dative indirect objects in causatives whose causee is itself a dative clitic. As discussed in section 1.5.3, both datives may then cliticize for some speakers provided the first (causee) is [+person]. The second (indirect object) dative then may be coreferential with the matrix subject, (i) (Aoun 1981: 219, citing Richard Kayne, Kayne 2000: 23, 118, Bouchard 1984: 69 note 10, Postal 1983: 401, Tasmowski 1985: 319f. citing Morin 1978: 358).

- (i) a Manon_i *me* <la_i> a fait <la_i> présenter à Jean-Pierre.
 Manon me.DAT her.ACC has made her.ACC introduce to Jean-Pierre
 b Mamie_i, elle *me* <les lui_i> a fait <les lui_i> envoyer, les chocolats
 grandma she me.DAT them.ACC her.DAT has made them.ACC her.DAT send the chocolates

{MJ}

Second, datives may also be coreferential with the local subject in ECM structures like (ii). Here the accusative ECM subject and the dative complement of the adjective both climb, and if the ECM subject is [+person] and not otherwise, the dative may be coreferential with the matrix subject (Postal 1984: 156f.; note that the reflexive *se* can never climb here as a dative complement of the adjective for MJ). However, this generalization is incomplete: coreferentiality becomes possible when the ECM subject is A'-extracted, as in (iii) (this seems robust), with natural examples like *respectueux de ta mère_i qui_i aime un homme_j qu'elle_i lui_i croit fidèle* ____j 'respectful of your mother who likes a man that she believes faithful to her', at http://forum.doctissimo.fr/doctissimo/fidelite-infidelite/pere-tromperie-faire-sujet_146881_1.htm). Perhaps to be compared is Rooryck's (1997: 26f.) observation that some speakers allow English-type ECM infinitives under *croire* only if the subject is A'-extracted.

- (ii) a elle_i *se le / ella le lui_k/_i / elle me lui_{i/k} -- croit attaché
 she SE.DAT him.ACC / she him.ACC her.DAT / me.ACC her.DAT believes attached
 She believes ACC attached to DAT
 b elle_i lui_k/_i/*se_i croit attaché Pierre, Paul, Jacques et les autres / moi, Pierre, et Jacqueline
 she her.DAT/SE believes attached P, P, J, and the others / me, P, and J
 (iii) elle_i aime un homme_j qu'elle_i lui_i/*se_i croit fidèle/redevable ____j
 she likes a man whom she her.DAT/SE believes faithful/indebted

{MJ} (availability of *se* in such structures seems to vary)

I do not know what to make of these facts. It could be stipulated that an embedded subject of climbing structures determines its own binding domain only if [+person] and only for datives; perhaps a related asymmetry is seen in (iv). Cf. Postal (1989: 9f.) for another person-based difference in inverse binding of complex reflexives.

- (iv) (a) *Pierre s'est fidèle. (b) ?Je me suis fidèle.

P SE is very attached I me am faithful (cf. Couquaux 1980: 213ff, 1977: 135, 1983, Morin 1983)

An alternative is to suppose that those datives that can be coreferential with a matrix subject are different from regular dative clitics in some way: see Postal (1984: 133-5), where the dative clitic is an anomalously realized locative (GR 5), which for his consultants allows coreference with the local subject (this is not generally true however, Zribi-Hertz 2003: 209, including for MJ); and Postal (1990: 148f.) who replaces this view by treating it as a special grammatical function, GR 4. That approach requires the same stipulation: the clauses that allow the anomalous dative are only those with [+person] clitic subjects, not non-clitic or clitic [-person] ones.

accusative + dative clitic clusters. Rather, they differ in the in the c-command relationship of the [+person] accusative clitic and the dative clitic. In this difference therefore seems to lie an indispensable part of the proper statement of the Person Case Constraint.

- (82) a. ECM: $cl_{DAT}-cl_{ACC}-V_{ECM}$ [_{SC} ACC [_{AP} ADJ DAT]] no PCC, ACC > DAT
 b. Causative: $cl_{DAT}-cl_{ACC}-V_{faire}$ [_{? DAT_{EA}} [_{VP} V ACC_O]] PCC, DAT > ACC

Intermediate between the two preceding patterns is a grammar that allows dative cliticization, but only for a limited set of clitic combinations: dative and accusative clitics both of which must not be [+person] (*le lui*).⁴² The banned combinations are not only those clitic clusters that are syncretic with the Person Case Constraint, namely [+person] accusative + dative (*me lui*) clusters, but also accusative + [+person] dative (*me le*) clusters. Dative clitic climbing is unrestricted if the small clause subject is a DP rather than an accusative clitic. There is no PCC repair (see at greater length the Appendix).

- (83)^o a. On *vous* < **leur_i* > croit sympathique < **à eux_i* >.
 one you.ACC them.DAT believes sympathetic to them
 (It's because of their_i WORDS) that one believes you sympathetic to them_i.
 b. On *la* < *leur* > croit sympathique < **à eux* >.
 one her.ACC them.DAT believes sympathetic to them
 (It's because of their_i WORDS that) one believes her sympathetic to them_i.
 c. Elle *nous/se* < **la* > croit sympathique < √*Ilse et Xena* >.
 she us/SE.DAT her.ACC believes sympathetic Ilse and Xena
 She believes Ilse and Xena/*her sympathetic to us/to herself.

{MJ}

This pattern should perhaps be decomposed into several factors. One, a limitation imposed by a cliticized ECM accusative subject on dative cliticization from the ECM clause to 3rd person clitics (cf. note NOTE-150). The restriction seems to be found outside ECM. One context is in a causativization pattern discussed in Postal (1983: 409-410). In French, causativized reflexive (di)transitive behaves as an intransitive in having an accusative causee, the *se* stays on the embedded verb. For (only) some speakers, a dative internal argument may climb – but only if it

⁴² NOTE-155: The present pattern seems to me wide-spread, and it is consistent with other reports in the literature (Fauconnier 1983, Legendre 1989b: 113). It is the normal pattern for MJ. It is the only grammar I have myself found, and it is worth noting here that for most even those judged perfectly grammatical like *On (la) leur croit sympathique (Ilse)* "We believe her/Ilse sympathetic to them" are difficult to interpret at first. The reactions recall that described in Higginbotham (1991: 128) to *John is too clever to expect us to catch*, whose only (and clearly) grammatical meaning takes some reflection to establish. A plausible reason is that clitics are routinized for use by the parser as cues to gaps (see the Appendix), and all other (ACC+)DAT clusters cue to gaps where the dative c-commands the accusative. In my experience, grammaticality judgments on these structures are quite stable over speakers and time – and curiously, robust on their quite complex causativization in (i).

(i) On *me la lui* a fait croire fidèle
 one me.DAT her.ACC him.DAT has made believe faithful
 One has made me believe her faithful to him. {MJ with *me* as dative} (Postal 1983: 393 note 25)

is 3rd person, (84) (Postal 1981: 316, 1983: 410).⁴³ For another [+person]-based restrictions on climbing, see Cinque's (2004: note 27) who reports that *sembrare* 'seem' in Italian permits clitic climbing of 3rd but not 1st/2nd/SE ([+person]) clitics, including dative complements of adjectives in structures like *seem faithful to*.

- (84) Je lui ferai / *Pierre me/te/nous/vous fera -- se présenter Jacques.
 I him.DAT will.make P me/you/us/you.DAT will.make SE introduced Jacques
 I will make *P will make J introduce himself to him/her/*me/*you/*us.
 (Postal 1983: 409f.) {*MJ}

This leaves a residue where a 1st/2nd person ECM accusative clitic blocks dative clitic climbing. The residue is suspiciously like the clitic clusters blocked by the Person Case Constraint, but the absence of repair and the preceding ECM pattern suggest otherwise.⁴⁴ One option is that these speakers have a morphophonological *me-lui* clitic cluster gap, that is a gap covering all [+person] accusative + dative clitics, those banned by the syntactic Person Case Constraint and also those not so banned. The PCC leaves virtually no clitic clusters of this form beyond these rare ECM structures, perhaps furnishing ready prey for a morphophonological constraint. A similar development occurs in Basque, where 1st/2nd person absolutive + dative agreement combinations banned by the PCC in one class of unaccusatives, those where the dative c-commands absolutive, are in some dialects variously affected by morphophonological gaps even in other unaccusative, those where the absolutive c-commands dative, up to complete elimination (Rezac 2008a, cf. chapter V section XX). There are other hints for such a morphophonological constraint within French itself: the mediopassive *se* + dative gaps of which are surface-identical to the reflexive accusative *se* + dative clitic combinations banned by the PCC but do not fall under it or its repairs (Rezac 2008d), and the variation in the availability of PCC clusters if the [+person] clitic is forced to be inanimate (Rezac and Joutiteau in prep., cf. chapter VI).

1.5.6 The syntax of the the Person Case Constraint

⁴³ NOTE-158: An extraordinary feature of this example is that climbing avoids the PCC that would be incurred by *se lui* in the embedded clause; on the other hand, the same speaker can affect this *se lui* by the locative repair which with further climbing gives (i). The speaker has another anomalous climbing pattern, q.v. Postal (1990: 168). Another extraordinary aspect is that clitics of the same predicate land in different places, disallowed generally in restructuring and for most clitics and speakers for *se* (see note NOTE-110).

(i) ?On y a fait se décrire Philippe, à Louise/elle/*lui-même.
 one LOC has made SE describe Philippe, to Louise/her/*herself
 We made Philippe describe himself to him/her (Postal 1990: 130)

⁴⁴ However, the Person Case Constraint could be made to operate here. The absence of a repair would follow by exploiting a proposal made in the next chapter, whereby the AP where the dative strong pronoun from the repair would have to surface is in a different phase from the phase where the PCC arises (see chapter V, section XX). The ECM structure could then be brought into the fold of the PCC by supposing that the grammar in question has the dative clitic first move to the edge of the SC above the accusative ECM subject, because the SC is a phase and the dative must move to its edge, (i). The accusative-assigning *v*-probe of the ECM verb then sees a dative c-commanding a [+person] accusative, the canonical PCC configuration. The preceding pattern where *me lui* is fine in ECM configurations could result from a grammar that does not treat the SC as the target of successive-cyclic dative movement, perhaps because it is not a phase.

(i) $v_{ACC} V_{ECM} [SC \text{ DAT } \langle [SC \text{ ACC } [AP \text{ ADJ } t_{DAT}]] \rangle]$ $\langle \rangle$ = phase (grammar of ECM with **me lui*)

The structures considered in this section lead to the conclusions are that the Person Case Constraint is sensitive to the syntactic properties of the two arguments that enter into it, and that it is independent of the information present in the clitic cluster hosting the accusative clitics whose person it restricts: namely (55).

- (55) *The Person Case Constraint*: * [+person] accusative clitic c-commanded by a dative argument

The syntactic property is c-command, whether viewed as a primitive of the constraint, or as a reflection of some other syntactic difference to which the constraint refers, like that between applicative and prepositional datives. Only a dative c-commanding a [+person] accusative within a certain domain triggers the Person Case Constraint. The clitic clusters restricted by the Person Case Constraint exist independently for dative-accusative argument combinations that derive from a different c-command relationship, and the constraint restricts [+person] accusative clitic even if there is a c-commanding dative that is not a clitic. The minimally distinct environments where the constraint does or does not arise involve both the two internal arguments of a monopredicate structure (high applicative vs. prepositional dative *à*-phrases), and the external and internal arguments of a multipredicate structure (causatives vs. ECM).

These properties indicate that the Person Case Constraint is a syntactic constraint, matching the existence of a syntactic repair for it. By contrast, the other clitic cluster gaps discussed in this work lack both a syntactic repair, such as the phrasal PCC repair even if it should fix them, and by their properties and by their other repairs if any they belong to the morphophonology. And so despite the initial resemblance of the two kinds of gaps, a closer look reveals that modularity makes the right predictions: syntax is autonomous of the morphophonology. This conclusion does not – and in minimalism, cannot – preclude the possibility that the PCC itself ultimately resides in syntax-external modules and their operation can affect it; but that question is deferred until chapter V/VI.

The role of c-command in the Person Case Constraint in French reveals a factor that has been identified in its analogues in Icelandic, Greek, Basque, and elsewhere, along with other arguably syntactic factors like structural Case domains (e.g. Taraldsen 1995, Albizu 1997, Ormazabal and Romero 1998, 2003, Anagnostopoulou 2003, Béjar and Rezac 2003, D'Alessandro 2004, Boeckx and Niinuma 2004, Den Dikken 2004, Richards 2005, Adger and Harbour 2007, Rezac 2008a). The rest of this chapter and the next are concerned with how the constraint is repaired, and in them a specific theory of the constraint is adopted. It arises through the *intervention* of the dative between the accusative and its Case licenser for a relationship licensing the [+person] feature of the accusative, (85). This "intervener/Case" idea is one way of working out the relevance of c-command, since only a dative c-commanding but not c-commanded by the accusative can intervene. Other syntactic approaches also seem susceptible to the conclusions that follow, notably tying the PCC to the properties of applicative structures themselves (Adger and Harbour 2007, Postal 1984, 1990, who both tie the PCC to applicatives, and Ormazabal and Romero 2007 who combine this with intervention).

- (85) *Person Case Constraint (Case/Agree approach)*: A [+person] DP Y cannot Agree for person and Case with H if another DP X (with certain properties) intervenes for locality between the two. If Y has no other means of getting Case-licensed, it fails the Case Filter.

- (86)
$$\begin{array}{c} \text{H} > \text{X} > \text{Y: 1}^{\text{st}}/\text{2}^{\text{nd}} \text{ person} \\ \underbrace{\hspace{1.5cm}}_{* \text{Case/Agree}} > \text{is c-command} \end{array}$$

A specific mechanism of the intervener/Case idea is in (87), deriving from Rezac (2008ab), Anagnostopoulou (2003), Béjar and Rezac (2003, 2009), and Taraldsen (1995), which go into more detail.

- (87) The Person Case Constraint (general):
- Locality: * [+person] dependency (Agree) between a [+person]/Case licenser (T, v) across another DP with certain properties, including all datives in French.
 - Case licensing of [+person]: Interpretable [+person] must be licensed either by [+person] Agree with a clausal head or by a DP-internal mechanism (inherent Case, focus) not present in clitics (and some other pronouns).

The mechanism is about transmitting and licensing [+person] features by the syntactic dependency mechanism Agree. The first clause, (87)a, is intended to be a consequence of locality applied to [+person] dependencies, whereby a dative intervenes for them, perhaps because always [+person] in the relevant sense (cf. note NOTE-10, but also section 1.6.3). The second clause, (87)b, is intended as part of the Case Filter, requiring that interpretable [+person] features be licensed by [+person] Agree with a Case licenser; the full Case Filter would extend to other phi-features in a similar way. The Person Case Constraint is intervention in [+person] Agree dependencies as per (87)a, which leads to absence of agreement at the target of the dependency (as Icelandic reveals), and the failure of [+person] nominals to be licensed (like French clitics). Some nominals have their own independent means of Case licensing and do not need clausal phi-Agree, such as those with inherent Case. The Case-licensing of elements without [+person] occurs independently of [+person] licensing, by separate [number/gender] Agree, for which the dative does not intervene.

The choice of Case in the proposal as the mechanism of [+person] licensing is due to a variety of observations, such as the immunity of double-dative clusters to the PCC in section 1.5.2 and cross-linguistically, or the relevance of Case domains as the domains where the PCC applies in Albizu (1997), Anagnostopoulou (2003). In what follows, another factor is added: repairs of the Person Case Constraint either manifestly involve adding Case licensing or can be construed as such. In the Basque, Chinook, and Finnish PCC studied in the next chapter and resumed in (88), an otherwise unavailable "dependent" Case (ergative, accusative) becomes available only to repair the Person Case Constraint. In French a clitic-strong pronoun alternation is involved, but by it an applicative dative comes to stand in the prepositional construction and no longer intervenes between the accusative clitic and its Case licenser, and the mechanism of clitic-strong alternation itself can arguably be construed as adding a Case licenser as below.

- (88) Examples of PCC repairs:
- * notates element banned if [+person] on left-hand side, ok otherwise
underline indicates element affected by the repair

	<i>Person Case Constraint</i>	<i>Repair</i>
a. Basque dial.:	DAT _{Appl} -ABS _S * unacc.	→ <u>ERG</u> *-DAT
b. Finnish:	OBLQ _{Appl} -NOM _S * unacc.	→ OBLQ- <u>ACC</u> *

- c. Chinook: bare_{Appl}-bare_S* unaccusatives → ERG_{Appl}-bare_S*
 d. Arizona Tewa: bare_{EA}-bare_O* transitives → ERG_{EA}(?)-bare_O*

The study of the mechanisms underlying these "repairs" of [+person] licensing is the subject of the last section of this chapter, exploring the options for French PCC repairs, and of the next in a more theoretically and cross-linguistically general setting. The descriptions of the repairs in the preceding paragraph refer to adding Case licensing just when needed for [+person] licensing, which is a global (transderivational) last-resort addition of uninterpretable features. An odd mechanism: but so are the phenomena. The final section of this chapter begins on the exploration of the various options for the syntax of the repairs, settling on such a mechanism. The structures explored in this section play a key role in this, notably the observation made for causatives, adjectival modifiers, and ECM, that the unavailability of cliticization does not in general suspend the Cliticization Requirement, like the Person Case Constraint does. Table XX resumes these structures, noting whether they are subject to the PCC or to other constraints, and if so whether the PCC repair of suspending in the Cliticization Requirement is available to them.

(89) Table XX: The distribution of the PCC and the phrasal repair

Construction	Dative	Structure	Problems	Repair
Simple				
Applic.: benef., poss.	cl, ?àDP	DAT _{BEN/POSS} [V ACC _O]	PCC	no
Applic: lexical	cl, ?àDP	DAT _{LEX} [V ACC _O]	PCC	→
Prepos: lexical	àDP, *cl	V ACC _O àDP _{LEX}	no PCC	--
<i>falloir</i>	àDP, cl	DAT _{EXPER} [falloir ACC _O]	PCC	no
AP modifier		NP [_{AP} ADJ DAT]	*syn	no
Complex – PCC				
Caus. of <i>choisir, voir</i>	àDP, cl	faire [DAT _{EA/EXPER} [V ACC _O]]	PCC	→ for <i>voir</i>
Caus. of inv. <i>voir</i>	àDP, *cl	faire [V [ACC _O àDP _{EA/EXPER}]]	no PCC	--
Complex – other				
ECM	àDP, cl	croire [ACC [ADJ DAT]]	no PCC, %syn (%mplh?)	no
Raising	(?)	paraître DAT ₁ [t ADJ DAT ₂]	%mplh if DAT _{1,2} =cl	no
Caus. of unerg + dat.	àDP, cl	faire [ACC _{EA} ... DAT _{IO}]	no PCC, *sem if DAT = cl	no
Caus. of trans + dat.	àDP, cl	faire [DAT _{EA} ... DAT _{IO}]	no PCC, %mplh if DAT _{EA,IO} = cl *syn if IO = cl & EA = àPP	no

Notes:

*syn, *sem, *mplh means ungrammaticality due to syntax, semantics, morphophonology.

% indicates ungrammaticality varies, in which case repairs refers to * cases.

Repair refers to suspension of the Cliticization Requirement

1.6 PCC repairs

1.6.1 The problematique

The fundamental problematique of PCC repairs is their restriction to PCC contexts. If this descriptive observation is reified as a theoretical claim, it proposes *transderivational comparison*: the well-formedness of one syntactic structure (that of the repair) depends on the impossibility of an another syntactic structure (ruled out by the PCC).

There is good reason to beware of transderivational comparison. It seems a pervasive property of syntax as it is presently understood that failed syntactic structures are not generally repairable and good syntactic structures are not generally defined by the unavailability of others. The licensing of infinitival subject is an easy example (cf. chapter VI, section XX): *Kate showed [one to be a prime]* is good because the subject *one* of the infinitive is licensed by the ECM verb *show*. If *show* licenses an internal argument of its own in this way, the infinitival subject has no Case assigner, in **Kate showed Billy [one to be a prime]*. The failure of *one* to be licensed here can neither be suspended, nor licenses otherwise unavailable structure such as **Kate showed Billy [for one to be a prime]*. Similarly if more controversially, the impossibility of **Kate promised Jane PRO_{Kate} to put themselves_{Kate+Jane} each on the ballot* does not license using *them* for *themselves* in violation of Condition B (cf. note NOTE-75). These observations are systematic, and exceptions like intrusive resumptives only highlight it (cf. Pesetsky 1998). It represents a serious obstacle known as "ineffability" in Optimality Theory for fundamentally transderivational approaches like it. Within the minimalist program, the pervasive invocation of transderivational comparison for core syntactic principles in its early inceptions was shown incorrect (Reinhart 1995, 2006, Chomsky 1995, 2000), and its persuasive residues discussed in the next chapter have a highly constraint character. Moreover, in this program transderivational comparisons almost necessarily have another troubling property: they are *transmodular*, since ill-formedness is the illegibility of a structure to an interfacing component. This is perhaps a fundamental tenet of the program, discussed in the next chapter. So making a structure available just in the case another structure crashes refers at least a bit "outside" syntax, although a clear modular line can and will be drawn here between an interface problem and a problem within an external system.

If transderivationality and transmodularity are troubling for these reasons, phenomena like PCC repairs that either deceptively look or that indeed prove to be such have for the same reasons a great potential in furthering syntactic inquiry. Establishing the existence of a transderivational comparison is relative to assumptions about the scope of non-transderivational syntax. In discussing clitic clusters problems that license and that do not license the phrasal PCC repair, Kayne (1975: 174-6) observes its character of a transderivational condition that suspends the Cliticization Requirement "in certain cases where its application would lead to unacceptable clitic combinations" (p. 174, but qualified on p. 176). However, with a sufficiently rich syntax, it is simply possible to recode the reference of a structure Σ' to the ill-formedness of another structure Σ' by integrating the relevant properties of Σ into the conditions on Σ' , without referring to Σ' at all. For PCC repairs, the licensing of unfocussed dative strong pronouns could be made sensitive to whether there is a [+person] accusative clitic at the next higher cliticization site (as well as to whether the clitic is c-commanded by the dative, and so on). This is Couquaux's (1975) implementation of PCC repairs in (90). Datives are [+dative] and that triggers their obligatory cliticization if unfocussed pronouns, locatives are [-dative], and PCC repairs transform the former into the latter if and only if there is a [+person] clitic on the local verb:

(90) *Règle de Reanalyse*: [+dative] Pro \rightarrow [-dative] Pro / [_V 1/2/SE_{clitic} V] ... __

(Couquaux 1975: 48)

Where \pm dative is the difference between dative and locative complements, and ... is an unbounded chunk of structure subject to the restrictions on syntactic dependencies.

Here the grammar is not comparing one structure to another: there is no *reference* to another structure Σ' in determining the well-formedness of Σ . Rather, the *properties* of the target of comparison are made part of the licensing of Σ . The computation is "local", nontransderivational.

However, the cost in this case is very high; too high. The machinery of a rule like (90) is beyond the scope of current generative syntax for a good reason: it increases the set of possible syntactic dependencies far beyond those that seem to exist, as can be seen by replacing $[\pm dative]$ by $[\pm wh]$ (turning a *wh*-word into an indefinite if there is a c-commanding [+person] clitic). Now, it is evident that PCC repairs do not intuitively fit the character of familiar syntactic dependencies. Yet they do not transgress them without limits either. The PP-restriction is a good illustration. It restricts the PCC repair to suspending the Cliticization Requirement for strong pronouns, but the strong pronoun must, modulo focus, be independently good: have the meaning of the dative it is replacing and not itself cause the Person Case Constraint.

The question to ask, then, is whether there is anything intrinsic to the PCC-barred structure to which PCC repairs seem to refer that would be difficult to formulate using the local mechanisms familiar from other syntactic dependencies. The following discussion argues there is. They are counter-examples to a strict constraint on what information a syntactic dependency make take into account. This *path-dependency* condition is given, descriptively and somewhat vaguely, in (91) (current theoretical implementations normally reduced the last two cases to the first).

- (91) Path-dependency: for a syntactic dependency Δ between a target α and a goal β , and the "path" of nodes c-commanded by [or in the minimal domain of] α and c-commanding β , Δ is sensitive only to:
- a. Criterial dependencies: information that lies on their path, such as intervening islands.
 - b. Successive cyclic movement: whether Δ extends beyond α .
 - c. Parasitic dependencies: whether Δ is within the path of another dependency (parasitic gaps, Kayne 1981, 1983, Pesetsky 1982, dative cliticization, Anagnostopoulou 2003).

PCC repairs seem not to fit path-dependency because the licensing of unfocussed dative strong pronouns is sensitive to the [+person] property of a c-commanding accusative, which is not obviously "on the path" of the property that renders such pronouns legitimate, like being DPs without being FocPs (we return to this). A parallel would be the earlier example in this section: letting the specified subject *the plan* occur in a PP if and only if a higher DP gets Case from the ECM verb, so that beside *John showed (*for) the plan to fail* there would be *John showed Mary *(for) the plan to fail*. If PCC repairs really involve something of this kind, they are simply not to be handled as syntactic dependencies are. However, whatever is put in place must not have the drastic consequences of generally eliminating path-dependency, or increasing the scope of syntactic mechanisms in the way discussed for (90), or allowing PCC repairs too wide a latitude given their narrow limitation by such conditions as the PP-restriction.

The preceding paragraph is very hypothetical. The next section develops what I see as the best shot at a truly local, path-dependent formulation of PCC repairs, starting from the proposal of Ormazabal and Romero (1998). It seems to me to ultimately fail when faced with the PCC and its repairs in French, and to be inapplicable over the wider range of PCC repairs hinted at above and discussed more in the next chapter. That said, it is an elegant and simple alternative, and its exploration sets out the issues that similar proposals must take into account, and the commitments they make: chief among them, the presence of uninterpretable phi in the syntax. The section after explores its opposite number, Minimize Structure, a massively transderivational

mechanism proposed by Cardinaletti and Starke (1999) not for PCC repairs but for other apparent suspensions of the Cliticization Requirement. It immediately derives PCC repairs in PCC contexts, but also everywhere else where syntax or interpretation render cliticization unavailable, and that turns out to be quite incorrect. The eventual mechanism that is proposed in the next chapter is guided by the results arrived at in this section. It will be transderivational along with Minimize Structure, but profoundly limited in what it can do in response to what, being a theory of the introduction of uninterpretable features licensers into the numeration in response to the failure of uninterpretable feature licensing.

There is one option for PCC repairs not considered here, and that is a purely interpretive mechanism at LF, one which does not manipulate syntactic structure at all, but rather the distribution of focus. There are good reasons for eschewing it. In French it could conceivably work for the strong repair, because the syntactic structure of PCC repairs exists independently if focus interpretation is set aside. However, we will see in chapter V, section XX good reasons for why even here it makes quite incorrect predictions, once a better understanding of the place of transderivational computation in the T-model is in place. For the clitic repair in French, and for repairs like the oblique subject of Arizona Tewa, it could not possibly work, simply because the structures that surface to repair [+person] violations do not exist independently.

1.6.2 A local approach to PCC & PCC repairs

Ormazabal and Romero (1998) propose an account of the Person Case Constraint in Spanish that suggests how to derive the existence, distribution, and syntactic properties of the phrasal repair from the familiar properties of ordinary syntactic dependencies. I develop this aspect of it here to see how far it can go in accounting for these phenomena as they exist in French, for it seems to me both the sole proposal with these properties in the literature, and to illustrate the basic problem that a nontransderivational approach faces (cf. also the proposal at the end of chapter III). At the same time, if these problems could be overcome, there is a mechanism for PCC repairs whose necessary properties like reference to uninterpretable phi can then be investigated.

The key premise of the proposal is that a dative, at least the kind that can undergo PCC repair, always starts out in the prepositional construction below the direct object. From this configuration, applicative datives, including dative clitics, undergo A-movement past the direct object, (92). The movement is for [+person] checking by a probe, call it P*, that is optionally present, but that if present, needs a [+person] goal. *All* datives are [person], along with 1st/2nd/SE accusatives. The Person Case Constraint arises because [+person] direct objects interfere in this movement by feature-relativized locality; other direct objects do not. If the movement is blocked, the dative remains in-situ in the prepositional construction. This failure to move, simply and elegantly, *is* both the Person Case Constraint and the phrasal repair. The prepositional construction is restricted to certain meanings, ruling out possessive datives for example.⁴⁵

(92) a. EA v(+P*) V O DAT → by P-DAT [+person] checking if P* present

⁴⁵ I am adapting the Ormazabal and Romero system to the present concerns, skipping details, changing terminology slightly, and directing all to the account of the limitation of PCC repairs to PCC contexts, which they do not discuss. For them, P* is a property of the preposition of the prepositional construction which optionally incorporates to V / v+V, and then attracts the indirect object from the position of v. [+person] substitutes for their [+animate]. I also skip obvious issues that seem to me to be resolvable independently of present concerns, such as the fact that only [+person] accusative *clitics* create the PCC, not [+person] DPs like *et moi et Paula* 'I and Paula'.

- b. EA DAT ν +P* V O t_{DAT} \checkmark iff O is not [+person] by locality

The fundamental genius of the idea is also the grounds of its problems. PCC repairs do not need to be licensed because they are a structure independently available, that of the prepositional construction; the failure of transforming it to the applicative structure simply yields the pre-transformation prepositional structure of the repair. However, unfocussed pronouns in French cannot occur as strong pronouns in the prepositional construction except in PCC contexts, creating the transderivational appearance of the repair in the first place. Therefore, the transformation of the prepositional to the applicative construction must be made *obligatory* if possible for unfocussed pronouns, and only if it fails for syntactic (locality) reasons does the prepositional structure surface emerge. In order for locality to derive when the transformation fails, P* must be located above the [+person] accusative and the dative below it, as in (92). Here is where the problem arises: the variety of structures available for studying the PCC enables us to construct situations where the obligatory property of P* is satisfied, yet the prepositional structure (unfocussed strong pronouns) is still not licensed. This exercise brings out what theories of the Cliticization Requirement generally assume: that the cliticization of the dative is a property of the dative unfocussed pronoun itself, not of the structure where it is inserted, of P* for example. If that is true, we are back to the starting point: the Cliticization Requirement property of the dative and its suspension in PCC repair is sensitive to the [+person] property of the c-commanding accusative, so it not non-path-dependent.

The first step that needs to be taken to try to make the story work is to force unfocussed dative pronouns to occur in the applicative (clitic) construction. The trigger of the transformation is P*; let us suppose that if P* is present it must find a [+person] element. There is nothing about being an unfocussed dative pronoun that would force it to appear in the applicative construction according to the story, since not doing so is the PCC repair, so P* must be stipulated to be obligatory for them. Other datives occur as applicatives (e.g. possessors) or prepositional datives (e.g. indirect objects) according to the meaning of the two constructions, so P* is optional. Selecting P* on ν just when there is a lower unfocussed (dative) pronoun in (92)a stretches the plausible bounds on selection. So let us suppose, with Ormazabal and Romero (1998), that P* is introduced as part of the dative in (92)a and then undergoes raising to ν , from which it attracts the dative (applicatives as preposition incorporation, Baker 1988). We can then stipulate that unfocussed dative pronouns come with P* obligatorily, other datives optionally.

There are three problems in proceeding beyond monopredicate constructions: multiple datives; and failures of clitic climbing; the contrast between causative and ECM structures. The first requires a trivial modification, the other two are grave.

The trivial problem is that P* must obligatorily attract any number of datives. Otherwise once the first dative is found, others could stay in-situ, and this would permit the lower dative to stay in-situ as an unfocussed strong pronoun in structures like raising in (93) or causatives of ditransitives, incorrectly (section 1.3). Obligatory attraction of all potential goals is an independently familiar property from multiple *wh*-movement languages (Richards 2001). Some technical issues arise, such as differentiating the goals of P* as goals-but-not-stoppers (datives) vs. goals-and-stoppers ([+person] accusatives), but they are secondary.

- (93) DP_i sembler 'seem' DAT_{experiencer} [_{SC} t_i [_{AP} fidele DAT]]

This adjustment of P* avoids the prediction that satisfying P* by a dative should lead to suspension of the Cliticization Requirement for other datives. However, the prediction resurfaces when P* is separated from a potential dative goal by a barrier to cliticization. Section 1.4 has noted several situations where syntax or interpretation blocks datives cliticization, (94). An example of syntactic blocking is that of dative-complement adjectives as modifiers, and for some speakers in ECM structures, but not in raising structures; while in causatives syntax blocks cliticization out of transitives (Specified Subject Condition), and interpretation out of unergatives. In all these contexts when cliticization of the dative is impossible, the Cliticization Requirement is not suspended, unlike in PCC repair, and an unfocussed dative pronoun is simply impossible.

- | | | |
|------|--|--|
| | | [Contexts blocking DAT cliticization or not] |
| (94) | a. [NP [_{AP} ADJ DAT]] | (adjectival modifiers: *) |
| | b. croire 'believe' [_{SC} DP _{ACC} [_{AP} ADJ DAT]] | (ECM: %) |
| | c. NP _i sembler 'seem' [_{SC} t _i [_{AP} ADJ DAT]] | (raising: √) |
| | d. faire 'make' [EA _{DAT} [V DAT O]] | (causative of trans.: * iff EA≠clitic) |
| | e. faire 'make' [EA _{ACC} [V DAT]] | (causative of unerg.: *) |

The obvious generalization is that it is an inherent property of datives that they cannot be unfocussed strong pronouns regardless of whether cliticization is permitted or not, but that is difficult to do if the location of P* determines where the dative cliticizes. The contrasts in the behaviour of APs in (94) create a conundrum as to the placement of P*. If placed within the AP/SC, it correctly predicts that an unfocussed dative pronoun cannot surface as a strong pronoun when cliticization out of the AP/SC is impossible, because it is forced to cliticize by P* within the AP/SC, despite there being no cliticization site. However, the AP/SC must not behave like this under raising. The problem gains in acuteness for those speakers in section 1.5.5 that permit dative cliticization in ECM configurations only if it does not lead to a clitic cluster that has a [+person] dative or accusative. This means that whether P* is in the AP/SC or outside it depends partly on the properties of the subject of the SC. Causatives of transitives instantiate a different version of the same problem, since cliticization of the dative and so the presence of P* out or in the infinitive depends on whether the EA cliticizes. In both of these cases, P* must be in the embedded domain if and only if the domain is transparent to clitic climbing. However, the transparency depends on the properties of the subject of the embedded domain, and it is hard to see how to tie whether P* is present to these properties.⁴⁶

This brings us to the third problem and the most intransigent: the contrast between causatives and ECM. Both involve an embedded predicate with an internal and external argument cliticizing into the matrix clause, dative and accusative, but differ in whether the dative c-commands the accusative or not and correspondingly in whether the result is subject to the Person Case Constraint or not, (95). At first, causatives, which do show the PCC, do not fit the mechanism for the PCC schematized in (92). It requires that the [+person] accusative c-command the dative, while in causatives the dative EA is clearly base-generated above O. A trivial fix is to suppose that the accusative O first raises above the dative EA, and then the mechanism applies, (95)a.

⁴⁶ NOTE-160: It cannot easily be supposed that P* is generally in the AP/SC where it forces the dative to cliticize, and raising verbs add other P* that lets the dative clitic move out of the AP/SC. This is because if P* in the AP/SC is a "criterial" probe, it should freeze whatever it moves for further relationships of the same type (Rizzi 2004), as in *wh-movement* C_Q *Kate asked what* C_Q *you saw* → *C_Q *What did Kate ask* ___ C_Q *you saw?*; and if P* in the AP/SC is a successive-cyclic probe, it should need a higher criterial probe to attract whatever it moves, because successive-cyclic probes cannot move elements that do not move further, as Boskovic (2002: 136-8) concludes from the impossibility of **Who thinks who (that) Mary bought* ___ (p. 138).

Here is where ECM comes in: ECM is an independent witness to the configuration where the [+person] accusative c-commands the dative, and shows that in such cases, there is no PCC.⁴⁷

- | | | | |
|------|---------------|---|-------------------------|
| (95) | a. Causative: | $P^* cl_{EA} cl_O faire [t_O DAT_{EA} [V ACC_O]]$ | <i>*me lui</i> (PCC) |
| | b. ECM: | $P^* cl_i cl_j croire [ACC_i [ADJ DAT_j]]$ | <i>✓me lui</i> (no PCC) |

This fact is a problem for the approach in (92) in general, but at its strongest in comparison with causatives, because ECM and causatives are otherwise parallel multipredicate clitic climbing structures. The mechanism is based on the idea that the [+person] attractor P^* , which forces dative cliticization, cannot do so when there is a [+person] accusative intervener, and the resulting noncliticization is the PCC repair. ECM creates an independent configuration where we know that a [+person] accusative is the closest goal of P^* , c-commanding the dative, so the properties of P^* are satisfied. Yet, the lower dative still must cliticize, independently of whether this gives categorically bad results, varyingly good ones, or categorically good ones, which varies according to grammars or speakers. ECM structures again indicate that the need of the dative to cliticize has nothing to do with a P^* at its cliticization site above an intervening [+person] dative; it is about the dative.

The three scenarios in this section all converge on the same conclusion: the Cliticization Requirement reflects a property of the dative, and not solely of something external to it as in (92).⁴⁸ This is also the conclusion of much work on the requirement, discussed next. Moreover, we will see the logic again in chapter V, where other ways of avoiding the Person Case Constraint by (intuitively) using an otherwise impossible more marked form are presented, such as an ergative/accusative for the subject of unaccusatives: these rescue strategies, which could be eventually handled in the type of approach explored here if the more marked form is a consequence of failing to attract its potential bearer, are also never available outside the PCC. If this is so, then the repair of the Person Case Constraint by an unfocussed strong pronoun cannot obey path-dependency, because it suspends this requirement of the dative as function of whether the (c-commanding) accusative clitic is [+person] or not. If the repair is not path-dependent, it is not a regular syntactic dependency. Two roads then lie ahead. One is an enrichment of the power of syntactic dependencies, certainly possible, but doubtful in the measure that the phenomena that would motivate it have the intuitively last-resort repair character of PCC repairs, as they seem to when set out cross-linguistically in the next chapter. The other is theoretical reification of the notion of last-resort repair, pursued in the rest of this chapter and the next.

It remains the case that the approach in this section represents the best attempt at capturing PCC repair through regular means, and if it proves on the right track, it is worth nothing that it is committed to the two theses developed in the foregoing discussion: the autonomy of syntax from morphophonology, and the syntactic visibility of uninterpretable ϕ . If there were no modularity, then the dative should be able to remain a strong pronoun when P^* is satisfied otherwise in the mediopassive *se* + dative clitic gap discussed for ex. (26). For uninterpretable ϕ , the approach relies on the [\pm person] distinction of the accusative in interfering with the cliticization of the

⁴⁷ The causative PCC is not subject to the PCC repair, because the resulting causee \hat{a} -phrase itself causes the PCC, as discussed in section 1.5.3. To fully make the point in the text, it would be desirable to show that the dative complement of adjectives can undergo PCC repair if placed in a context where it would create the PCC, as Postal 1990 argues from data I have not been able to replicate: see note NOTE-158.

⁴⁸ There is a further argument for the last-resort approach that would be quite strong but cannot be made at the present state of knowledge about the data: if the PCC repair could affect the accusative just in case the dative is unaffected, namely an inherent *se*. See the Appendix.

dative, whether construed as driven by the needs of the target (P^*) or goal (the dative) of cliticization. Some constraint, like locality, in governing the behaviour of one DP refers to the phi-features of another, so that the behaviour of the former (clitic vs. strong here) is determined by those of the latter, constituting a form of agreement with it. Uninterpretable phi is, at least in this limited form, in the syntax. The need of P^* as a [+person] probe is a separate, additional role of phi in the specific story here: we return to what motivates it below and in the ensuing chapters.

1.6.3 *Minimize Structure and beyond*

In the opposite direction to the foregoing local mechanism lies the proposal that PCC repairs reflect a transderivational mechanism that enriches structures or suspends requirements when ungrammaticality would result. There exists a body of work focussing on such transderivational mechanisms discussed in the next chapter. Eminently relevant among it, Cardinaletti and Starke (1999) propose for other apparent repairs of cliticization failure the mechanism of *Minimize Structure*, which has by design the requisite effect of licensing an unfocussed strong pronoun for a clitic when a clitic is syntactically impossible. It lends itself admirably to PCC repairs. However, a further inquiry reveals that Minimize Structure systematically makes the wrong predictions about suspending the Cliticization Requirement in French, across all the structures that can be examined except for the Person Case Constraint itself. The results of this section indicate the limited character that the mechanism behind the PCC repair must have, in both the problems it can fix and how it can fix them, carving out hopefully a natural domain in syntactic phenomena: as last-resort Case licensing for Case failure.

PCC repairs introduce induce some property that suspends the Cliticization Requirement for unfocussed dative pronouns. Locative pronouns already have this property. It is plausibly to relate it to Case and phi-features, since locative clitics differ from dative clitics in behaving like adverbs or PPs rather than DPs in a variety of ways (section 1.2). There is a proposal for the Cliticization Requirement in the literature that fits this: that of Cardinaletti and Starke (1999), who reduce it to Case licensing. The relevant aspects of it that make for our starting point are:

(96) Relevant elements of Cardinaletti and Starke (1999):⁴⁹

- Case licensing: N° , including pronouns, must be associated with a feature κ Case.
- N° can be related to κ either if there is a κ -licenser Γ is in the extended projection of N° (the DP/PP), or through moving to a κ -licenser in the clausal functional architecture.
- Clitics differ from strong pronouns in lacking Γ and so must move (cliticize).
- Γ has an interpretive correlate, "range", that i.a. allows reference to new entities.
- Γ is structurally necessary for N° in coordination, modification, and selection by P° .
- An economy of representation principle *Minimize Structure* forces the selection of a pronoun lacking Γ/κ if such a choice does not lead to a crash with respect to a given interpretation.

So the difference between a clitic and a strong pronoun is that the former lacks a DP-internal Case-licensing functional structure Γ , which compels it to move to a clausal Case licenser, and at the same time prevents it from participating in syntactic structures and bearing interpretations

⁴⁹ I adapt as will prove useful below, notably treating clitics as weak pronouns: for Cardinaletti and Starke (1999: section 6), clitics differ further by missing a prosody-related chunk of syntactic structure, the nominal version of Laka's (1990) Σ , which leads to absence of word stress and X^0 formation. Locative and genitive clitics which are not subject to the Cliticization Requirement do not fit into their proposal; we return to them below.

that depend on Γ . A pronoun can be base-generated with or without Γ freely. If Γ is required on a pronoun by structure, such as modification, or by interpretation, such as the introduction of a new discourse referent or focus, the clitic structure will not do, and the strong pronoun structure is forced and legitimate. However, if Γ is not forced by such considerations and either the clitic or strong pronoun structure would do, for example a simple unfocussed pronoun, Minimize Structure chooses the clitic. Minimize Structure thus implements the Cliticization Requirement as a transderivational constraint: the licensing of a strong pronoun with Γ needs to check that an alternative structure using a clitic without Γ fails to meet some syntactic or interpretive requirement. Its conceptual antecedents are the Avoid Pronoun of Chomsky (1981: 65) and Overt Pronoun Constraint of Montalbetti (1984), the effects of which it subsumes. When Minimize Structure licenses an unfocussed strong pronoun because there is no clitic, the result is syntactically and interpretively a strong pronoun, different from a clitic in whatever the syntactic and interpretive correlates of Γ are.

Minimize Structure could account for, indeed nicely predicts, PCC repairs. In a PCC context, a syntactic problem arises with a dative clitic and a [+person] accusative clitic. That structure does not converge. It is therefore not a competitor to a parallel structure with a dative strong pronoun when Minimize Structure checks to ensure the use of the minimal convergent structure possible, and the strong pronoun structure is therefore legitimate. Its use then avoids the PCC, in those cases an independently available strong focussed pronoun or an *à*-phrase would under the PP-restriction, e.g. for lexical datives but not applicatives. The PCC plays the same role that modification, coordination, or focus do. When any of these factors are present, the structure containing the clitic does not converge, and so a strong pronoun is the minimal convergent structure. Each such factor independently licenses a strong pronoun, and so it is not necessary for one forced by the PCC or modification or coordination to be focussed, unless focus were posited to be a correlate of Γ . In PCC contexts something additional needs to be said about why Minimize Structure targets the dative and not the accusative, as discussed more in the next chapter, but that seems reasonable given the general greater markedness of accusative strong pronouns (note NOTE-20). One element is essential to this story: Minimize Structure must apply to structures in which the PCC is already visible when deciding whether a dative strong pronoun is legitimate: at a minimum, the ν P containing both the [+person] accusative clitic and the dative.

However, Minimize Structure turns out to be far too powerful a principle for the Cliticization Requirement of French datives and accusatives anywhere outside PCC repairs, no matter the size of the structures it compares. The foregoing discussion reveals that it is systematically the case that a syntactic or interpretive cliticization failure does not lead to the licensing of unfocussed strong pronouns, as Minimize Structure would predict, just like the morphophonological cliticization problems studied in section 1.3. Such contexts are:

- (97) Large structures: *clitic, *unfocussed dative strong pronoun (section discussed)
- APs as modifiers (and DPs, Kayne 1975: 185-6), where there is no cliticization site (1.5.5).
 - ECM structures in varieties categorically blocking cliticization out of SC/AP (1.5.5)
 - ECM in varieties selectively blocking cliticization out of SC/AP (1.5.5)
 - Causatives of transitives blocking cliticization from infinitives by SSC (1.5.3)
 - Causatives of unergatives barring cliticization out of infinitive interpretively (1.5.3)
 - Overlapping reference unavailable for clitic pronouns or anaphora (1.4.3)

Some of these structures require simply plausible calibration of Minimize Structure. Condition B that bans overlapping reference could be an interpretive constraint which Minimize Structure does not see. The impossibility of clitic climbing in most of the above structures as in the ECM (98) can be rendered invisible to Minimize Structure by restricting it to sufficiently small domains before the failure of clitic climbing is detectable. Clitic climbing might plausibly involve a first step of successful successive-cyclic cliticization to the edge of the infinitival complement of causatives and AP in the complement of ECM verbs, position 2 of *lui* in (98), prior to the movement out of this domain which is blocked by the relevant constraints like the Specified Subject Condition.⁵⁰ If Minimize Structure operates over these small domains like the AP in (98) when deciding whether a strong pronoun is legitimate, there are available for its comparison structures with both a clitic and a strong pronoun for an unfocussed dative, correctly barring the more complex strong pronoun.⁵¹

- [ECM]
- (98) elle ⟨**lui*⟩ croit [SC Paula [AP ⟨**lui*⟩ reconnaissant ⟨à Jacques / *à elle⟩]]
 she her.DAT believes Paula her.DAT grateful to Jacques / to her

For AP modifiers like (99) where no internal cliticization appears possible and the domain is a strong island, internal unfocussed pronouns might in fact be the phonologically null *pro* (for embedded *lui*) rather than a clitic.⁵² This seems reasonable insofar as arguments of adjectives and nouns are only optionally overt, like *reconnaissant* 'grateful'. However, it seems less likely for adjectives like *redevable* 'indebted' that require an overt dative argument.

- [AP modifier]
- (99)^o a. il faudrait une fille [AP redevable *(à Maï) / (?)reconnaissant (à Maï)].
 it would.need a girl indebted to Maï grateful to Maï
- b. il (*lui*_i) faudrait une fille [AP redevable/(?)reconnaissant à ELLE_i/ *à elle_i].
 it her.DAT would.need a girl indebted / grateful to HER/*to her
 [For timely help,] a girl indebted/(?)grateful to Maï/to her/*to HER would be
 necessary.

{MJ }

Finally, Minimize Structure also fails as an account of the Cliticization Requirement in a domain where it cannot be so salvaged and for which it is intended: the DP.⁵³ As it has been stated at the beginning of this chapter, the Cliticization Requirement forces an unfocussed dative or accusative pronoun to be a clitic, period. Cardinaletti and Starke (1999: 163-5) argue that this is incorrect on the grounds that unfocussed strong pronouns are possible when syntactic requirements make a clitic (or a weak pronoun) unavailable: as member of a coordinate structure, when modified, and as complement of a preposition. All three contexts are incompatible with clitics because they introduce barriers to cliticization, and in all three contexts an unfocussed strong pronoun is supposed to surface instead. Minimize Structure derives this because it licenses

⁵⁰ *lui* cannot surface in this position both because *reconnaissant* is not a legitimate cliticization site, and because as Boskovic (2002) points out, partial successive-cyclic movement cannot be spelled out (note NOTE-160).

⁵¹ However, relativization of Minimize Structure to small domains compromises its use to subsume Montalbetti's (1984) ban on quantifier-bound strong pronouns if and only if *pro* is available, one of its core cases.

⁵² A solution suggested by Ruth Kempson, David Adger, p.c.

⁵³ A great thanks to Anna Cardinaletti and to Michal Starke for discussion, with the usual caveats.

strong pronouns by checking them against the unavailability of a clitic in a parallel *convergent* structure, and here parallel structures with clitics do not converge.⁵⁴

However, this seems incorrect for French dative and accusative arguments, as Kayne (1975: 174-9, 2000: 171f.) points out. Strong pronouns can be unfocussed in such structures only when they can be unfocussed independently, as complements of prepositions: as locatives/genitives that alternate with clitics, and as complements of other prepositions where they do not. As accusatives and datives, they do need focus in complex structures where clitics are impossible, apparently quite comparable to the degree necessary when in a context where clitics are possible as well, as well as in other context where clitics are unavailable like the causatives discussed above. By contrast, strong dative pronouns in PCC repair have no such focus need. To establish these observations, properly contextualized examples controlling for focus and level of French are needed. The Appendix is devoted to this matter, taking into account both plain strong pronouns in various contexts where clitics are impossible, and the same contexts under "clitic right dislocation". Below the resume is briefer and ignores clitic right dislocation.

In coordinate structures, an unfocussed strong pronoun is impossible as first conjunct of accusative and dative complements, but perfect as a locative. Focussed, a strong pronoun is fine as a dative or a locative, and with stronger focus as an accusative. Likewise, when a dative or accusative pronoun is modified by an adjectival phrase or a non-restrictive relative clause, it must be focussed (with gradation discussed in the Appendix), while no such constraint is imposed on locatives. This is exactly the same behaviour as that of simple strong pronouns outside coordination / modification, in accordance with the Cliticization Requirement. By contrast, the strong pronoun introduced by PCC repair needs no focus.

[Coordination: dat., acc., loc. resp.]

- (100) a. Elle a vu *toi et Paul / √TOI et Paul.
 she has seen you and P / YOU and Paul
- b. Elle a parlé *à toi et à Paul / √à TOI et à Paul
 she has spoken to you and to P / to YOU and to P
- c. Elle a pensé à toi et Paul.

⁵⁴ Cardinaletti and Starke (1999) discuss languages like Italian where the use of otherwise necessarily focussed strong pronouns for impossible clitics in coordination is fine; in French it crops up with weak subject pronouns for strong ones in French in (i) (cf. their p. 199f. for **lui* when weak *il* is possible). This does not bear on the system developed below, since the content licensing a pronoun in coordination is divorced from that giving it focus: French clitics lack and ordinary strong pronouns have both, while PCC repair strong pronouns have only the content needed for coordination. It is not an isolated fact about French that strong pronouns cannot be used where clitics are impossible due to coordination; such a use of the strong pronoun *jeho* in Czech (ii) for the impossible clitic *ho* seems quite deviant, and (ii) is not even entertained as a translation of the English sentence until constructed (thanks to Kateřina Součková for discussion; there is no PCC repair to compare). Its English translation is fine, *him* is also fine unfocussed (iii), so *him* corresponds to the structure for PCC-repaired pronouns of French. But I tell no story about the *lui/il* (*eux-ils*) competition of (i), save as hinted at the end of chapter V.

(i) [Lui/il et Marie] / **eux* / ils l'avaient fait bien fait avant eux.

him(str/wk) and Marie / they / they(wk) it.ACC done had well before them

(cf. Cardinaletti and Starke 1999: 163)

(ii) (*)Samozřejmě že Pavla znám! TY-s mi přece ⟨jeho a jeho sestru⟩ představila ⟨jeho a jeho sestru⟩.
 of.course that Pavel.ACC know.I YOU-are me.DAT after.all his and his sister introduced

Of course I know him! You yourself introduced him/*m and his sister to me at the meeting.

(iii) Did John_i/anyone_i notice that you were observing him_i/'m_i?

she has thought to you and Paul.

{MJ}

[Adjectival modification: acc., dat., loc. resp.]

- (101) a. Elle a vu *vous/√VOUS deux hier soir.
 she has seen you/YOU two yesterday evening
 She saw YOU/*you two yesterday evening.
- b. Elle en offrira à vous *Ø / ??autres / ?deux.
 she GEN will.offer to you Ø / others / two
 She will offer some *to you / ??to you others / ?to you two.
- c. Elle pense à vous deux.
 she thinks to you two.
 She thinks about you two.

(Kayne 1975: 177-9)

In consequence, it cannot be the case that there is a simple transderivational principle like Minimize Structure which in general considers clitics and strong pronouns in competition, and permits the use of an unfocussed strong pronoun when there is no convergent structure with a clitic. This behaviour is limited to repairs of the Person Case Constraint. This conclusion obtains even if some of the preceding proves wrong, and a given context, like modified strong pronouns, turns out to pattern with the Person Case Constraint in being repairable. The preponderance of evidence reveals an absence of both a general transmodular principle ignoring the syntax-morphophonology divide that makes strong pronouns available when clitics are not, and robust cases where clitics are blocked by syntactic and semantic constraints and still clitics are unavailable. The point extends even more strongly to other "blocking" proposals than Minimize Structure. There has been advocated such a general, across-the-board principle to account in equally for "near unusability" of *the day before yesterday* through blocking by *today* and of *goed* through blocking by *went* (Andrews 1990b, Williams 2007, contrast Embick and Marantz 2008). I share the skepticism of Poser (1992: 123-5), Legate (1999), and Langendoen (2002: 631) of conflating the two kinds of blocking: **goed* is ungrammatical, but *the day before today* seems cumbersome or infelicitous and can be made perfect by context. However that may be, it does not underlie the Cliticization Requirement and the emergence of strong pronouns in PCC repair.

What is needed is a relativization of a principle like Minimize Structure to some natural problem that arises in PCC contexts, and understanding why it is this problem that licenses the suspension of focus interpretation on strong pronouns, and how. Section 1.5 posits that the Person Case Constraint is a problem created by an intervening dative in the Case licensing of [+person] accusative clitics, presenting the French evidence such as the immunity of [+person] datives to the constraint on the hypothesis that these have inherent Case. The section also introduced some of the cross-linguistic evidence including repairs by giving a [+person] element "dependent" Case. Case thereby makes a tempting candidate as the problem that licenses the transderivational mechanism behind PCC repairs. It is a viable candidate if contexts where neither cliticization nor PCC repair is available need not be viewed as incurring Case licensing problems; for example, the impossibility of attaching a modifier to a clitic, and certainly the impossibility of overlapping reference.

This is the idea developed in the next chapter. It can be resumed as Minimize Structure relativized to failure to converge due to Case licensing (or in general, deletion of uninterpretable features), rather than any syntactic or interpretive need in general, and restricted in its effect to adding to a numeration Case licensing (or in general, uninterpretable features). To the extent the mechanism can be developed generally for uninterpretable features, it becomes a source for them in the numeration, and ultimately defines them: *uninterpretable features are the responses of an autonomous syntax to the failure to converge at the interface with external system* – its sole, limited response, uninterpretable, yet driven by Full Interpretation. The proposal converges with and extends similar proposals in the literature for last-resort addition of uninterpretable features as for successive-cyclic movement.

To proceed, I will start with some of the concrete assumptions about the differences between clitics and strong pronouns above, for they let the French PCC repair be naturally formulated in terms of the manipulation of Case:

(102) Clitic-strong pronoun differences in French:

- a. ϕ -bearers must be Case licensed by a syntactic dependency with a Case licenser κ .
- b. κ can be in the clause or on Γ in the extended projection of a phi-bearer.
- c. In French, κ is present if selected by P° (except that of dative arguments) and Foc° .
- d. In French, pronouns with κ are strong, without κ pro-nominal clitics.

French dative and accusative strong pronouns differ from clitics by having an internal Case licenser which renders them autonomous of clausal Case licensing. Strong pronouns have a functional layer Γ with the Case licensing feature (probe) κ , and clitics lack at least κ (perhaps also Γ , perhaps not as below). The discussion of Minimize Structure shows that κ is not licensed by need alone. κ is present on pronouns in just two contexts: when selected by prepositions, including locative but not dative arguments, and when focussed. For the former, selection of κ by P° is the obvious mechanism, and it is one way of working out the intuition that P° -selected pronouns have autonomous, inherent, oblique Case unrelated to clausal Case licensing, in contrast to accusatives and datives. The prepositional status, different landing site, and different climbing options of locative and genitive clitics indicates that they are simply cliticized PPs, perhaps containing pronouns with κ , perhaps with a nominal core impoverished with respect to other pronouns as to lack phi-features and perhaps not need Case (all traditional insights). Selection for κ extends readily to focussed dative and genitive pronouns, if supposed that focussed pronouns have a focus functional layer Foc° and Foc° selects κ .⁵⁵ Unless κ is selected, it is not present. A pronoun lacking its own κ -licenser must be Case-licensed by the clausal Case licensing mechanism. The mechanism of κ -selection seems perfectly parallel to the selection of

⁵⁵ For the link between Case and focus, cf. Simpson and Wu (2002). Related are probably the 1st/2nd-3rd person in the licensing of strong pronouns and other elements, discussed in Kayne (2000); for example, 3rd but not 1st/2nd person strong pronouns can occur as subjects without clitic (weak pronoun) doubling (p. 163). Kayne argues that the asymmetries reflect the availability of null 3rd but not 1st/2nd person clitics (e.g. for doubling). Taking cue from the observation that the 3rd person subject strong pronoun agrees for number (Kayne 1975: 2.4), the idea can be reconstrued as the availability of number but not person agreement with strong pronouns, with failure of person agreement blocking number agreement too (Rezac 2008a, cross-linguistically common), and so barring strong 1st/2nd but not 3rd pronoun from contexts requiring agreement (here subjects of verbs controlling overt agreement but in other contexts he discusses, covert). In turn, their κ can be viewed as the culprit behind the failure of person agreement of strong pronouns, noting that cross-clausal agreement with DPs that have been assigned Case in the lower clause tends to be restricted to number (Artiagoitia 2001, Richards 2005, Etxepare 2005).

T° with different Case-licensing ability (ECM, control, finite) by different kinds of complementizers. In both domains there is some relationship between independent Case licensing and certain phase-like richness, articulated in the next chapter as phasal spell-out upon phi/κ-Agree. In French, κ-less pronouns happen to also be clitics, so that they need a prosodic host, cannot be modified, coordinated, and so on, while pronouns with κ for their phi-features are not clitics, except perhaps as part of the locative and genitive clitics. However, as will be noted below, there is no direct correlation of κ and the deficiency that makes a clitic.

The assumptions (102) combine with the structures adopted for datives in section 1.2 give the first three of the possibilities in (103). Clitics and focussed strong pronouns both may occur as applicative datives (103)a; here the representation assumes that Γ is present whether κ is not (κ:Γ means κ on Γ), and it eschews a separate head for dative case / à, which might well be the realization of Γ. Only strong pronouns may occur in the prepositional construction (103)b for the reasons mentioned in section 1.2, so κ is present in all convergent structures, and thus Foc° as well to select κ. The representation assumes that the preposition of the prepositional construction is the Appl° of the applicative one in line with section 1.2. Finally, locatives (103)c differ from the prepositional construction in having a P° that itself introduces κ independently of Foc°.

- | | | |
|----------|---|----------------------------|
| (103) a. | T ... [ApplP [(Foc°+κ:Γ)+pro] Appl° [VP V O]] | applicative dative |
| b. | T ... [VP O V [ApplP Appl° [* (Foc°+κ:Γ)Γ +pro]]] | prepos. dat. -- *if clitic |
| c. | T ... [VP O V [PP P° [(Foc°+κ:Γ)+pro]]] | locative |
| d. | T ... [VP O V [PP Appl°/P° [κ:Γ+pro]]] | PCC repair |

The effect of PCC repair can now be formulated thusly: it adds the Case licenser κ to a dative clitic. In order not to trigger the PCC, a dative must not c-command a [+person] accusative clitic. Clitics are restricted to the applicative construction, while strong pronouns can occur in the prepositional construction. Outside PCC contexts, only Foc° can select the κ that makes a strong pronoun, so strong pronouns in the prepositional construction are necessarily focussed. PCC repair appears to either license κ on strong pronouns independently of Foc°, or to turn the Appl° of the prepositional construction into a κ-selector like the P° of locatives in line with Couquaux (1975), permitting on either option an unfocussed strong pronoun in the prepositional construction. The issue now is to allow and limit this κ-addition to PCC contexts, which the next chapter explores.⁵⁶

⁵⁶ NOTE-170: The approach articulated above in terms of selection for κ can be recast in other terms that view PCC repairs as a transderivational computation allowing a marked option of the Case/phi system. Consider Adger's (1994: 93-5, 1996) approach to the interpretation of subject positions. Adger observes that when movement to the specifier of a projection associated with agreement, Agr/INFL, is optional, it forces a discourse-familiar interpretation; examples are subjects of unaccusatives in Italian and participle agreement in French *wh*-movement. However, when such a movement is obligatory, the interpretive correlate vanishes: the subjects of Italian unergatives have no in-situ position in which to stay and satisfy Case licensing, and the subjects of French passives must trigger participle agreement, and these need not be interpreted as discourse-familiar.

Adger's proposal starts with the hypothesis that the specifier of an agreement phrase is associated with a discourse-familiar interpretation. Since a DP always moves to it from somewhere else, there is always a chain of two positions, the Spec-AgrP where it gets a discourse familiar interpretation and the lower one where it need not. Hence movement alone cannot force an interpretation. However, reconstruction to the lower position is governed by an economy principle that checks to see whether it is possible to get the non-discourse-familiar reading without reconstruction. The derivation where no movement occurs is in the comparison set for this principle, blocking reconstruction and forcing discourse-familiar reading if such a legitimate derivation without movement exists. The association of Spec-AgrP with discourse familiarity is fixed, but the association of a DP in Spec-AgrP with

These assumptions do not force κ -less pronouns to be more deficient than strong pronouns syntactically, morphologically, or interpretively in other ways than not having κ . So the cliticness of clitics can be independent of their need to be Case-licensed.⁵⁷ This integrates not only locative and genitive clitics, but also various failures of correlation between morphophonological and syntactico-interpretive deficiency. Examples are the Celtic suffix-strong pronoun alternations at the end of chapter II, the systems discussed in Zribi-Hertz and Diagne (2002: 861), and finally directly relevant to the Person Case Constraint, the strong pronouns of languages like Basque that nevertheless need clausal phi-Agree and are affected by the constraint exactly as French clitics (Rezac 2008a: XX).

In consequence, the assumptions also have the flexibility to integrate the delicate nature of dative clitics, a problem familiar to the studies of the Person Case Constraint in section 1.5.6. On the one hand, datives intervene for [+person] phi-Agree and licensing a nominal with structural Case in the PCC configuration cross-linguistically. If the intervention is plain feature-relativized locality, dative clitics should be [+person]. This would suit them as clitics subject to the Cliticization Requirement, since they would have to cliticize to have [+person] Case-licensed, and as [+person] elements according to NOTE-10. However, dative clitics do have inherent dative Case which should license their [+person] if any, their phi-features do not value the [+person] relationship they block in creating the Person Case Constraint, and they are immune to the Person Case Constraint (section 1.5.2) and so do not need clausal [+person] Case licensing.

A set of approaches, initiating with Taraldsen (1995), takes the inherent Case of datives to allow them only partial participation in the [+person] phi-Agree/Case-licensing relationship: they intervene in it and can be affected by it but do not value a [+person] Agree in the same way as accusatives do (Anagnostopoulou 2003, Rezac 2008b). Specifically, we might suppose them to have an internal Case licenser for their [+person] that nevertheless leaves visible to clausal Case-licensing a minimal person phi-specification p , which renders them visible to the Case/phi-Agree system for movement and [+person] interference (Rezac 2008b; cf. Béjar and Rezac 2009: note 6). From here, two possibilities are available. On one, p needs clausal Case licensing, forcing the dative to cliticize for all the same reasons as an accusative but not a locative, but p must be able to be Case licensed even if there is a c-commanding dative intervening in [+person] Case licensing, and in ECM structures, even if there is a c-commanding accusative (section 1.5.5). On the other, p does not need clausal Case licensing, and the need of a dative to cliticize is due to a separate deficiency like that of locative clitics (perhaps one that accusative clitics also have),

discourse familiarity is epiphenomenal: it only arises if the DP can also legitimately surface elsewhere.

Extending this to French clitics can begin by supposing that dative clitics are in an Agr-related position, associated with presuppositionality, and in a chain with strong pronouns in thematic positions, associated with various types of focus (cf. Adger's 1994 approach to the discourse-familiarity of clitic doubling, as well as Sportiche's 1996 link between cliticization and discourse-familiarity-related scrambling into the middle field: the nature of the target as Agr is not essential). Locative pronouns evidently can get presupposed information in-situ; adopting the idea in the text, inherent Case is responsible for this, and they find their presuppositional interpretation in their own PP, either through a PP-internal AGR or through raising to the clausal AGR *covertly*. PCC repairs then consist in inserting (activating) the PP-internal AGR, or allowing *covert* movement to clausal AGR: as in other descendants of Couquaux's proposal, they change dative to locative clitics.

⁵⁷ On Cardinaletti and Starke's (1999) proposal, cliticness (prosodic deficiency) is an absence of a DP-internal Σ , which is also not identical to Case deficiency due to absence of a DP-internal C, but does entail it as ΣP is a suconstituent of CP. It is not clear to me whether their system forbids for a deficient category to contain a non-deficient one, e.g. ΣP -lacking clitic selecting a full CP complement, as suggested here for locatives and below for datives.

which like a Case licensing deficiency is satisfied either by movement due to the clausal Case system or the κ -containing structure provided by a full pronoun in the prepositional construction.

1 Chapter V: Transderivational computation and the source of uninterpretable features

1.1 Uninterpretable features

The formal features of syntactic objects are those features visible to syntax in the formation or licensing of syntactic dependencies. The minimalist program MP poses its object of inquiry the character of syntax in light of the external systems with which it interfaces, and thus whether there are purely syntactic features that have no interpretation in these systems: *uninterpretable* features. It will occupy the first part of this section, and sets up the proposal of the second part and the rest of the chapter: uninterpretable features are the last-resort response of an autonomous syntax to requirements imposed at the interface with external modules. The concept is inherently transderivational and transmodular, but in very weak ways that maintain a strong encapsulation of syntax. Section 1.2 places the idea in the context of other proposals for such devices. The elaboration of the proposal itself takes place in section 1.3, where it is applied to the Case/phi-agreement system, both to a spectrum of repairs of [+person] licensing (instantiated by French, Basque, Chinook, Finnish, and Arizona Tewa) and to "dependent" Case in general (accusative, ergative). Chapter VI concludes on the larger prospects of the mechanism as the source of uninterpretable features in syntax, and the nature of the resulting system.

The uninterpretable character of syntactic features makes sense only within a modular architecture for language. The language faculty consists of systems specifying well-formed objects and of mappings between these systems. The systems are distinct components in virtue of their partly unique symbolic and computational primitives. The analysis of the language faculty into components may proceed at various "grains". The focus here is at the coarsest grain of modules or mental organs – syntax, interpretation, morphophonology – each typed by partly distinctive alphabets and mechanisms, and highly encapsulated of each other. At a finer grain of decomposition, nonmodular subsystems might be uncovered within modules that are isolable by other criteria, perhaps groups of "interlocking" mechanisms or of principles defining a coherent aspect of the objects characterized by the module. The various "theories" of the Government and Binding approach are such subsystems: X-bar, θ , Case, binding, bounding, control, and government theories, potentially visible to each other, together defining different aspects of syntactic objects (Chomsky 1981: 5f., 135ff., 1982: 6ff.).

Much syntax in GB duplicates aspects of the syntax-external modules. The theta criterion is a consequence of interpretation, if argument-predicate interpretation is such that it occurs in local configurations. Only those syntactic structures that meet it can be interpreted. However, GB also reifies the theta criterion within syntax, as a syntactic principle requiring predicates and arguments to occur only in structures where interpretation is possible. This constitutes partial duplication within syntax of the information and the work of the interpretation (Chomsky 1981: 29ff., 1995: 187f.), much as a syntactic ban on vacuous quantification would simply duplicate a need that quantifiers have to be interpreted (Chomsky 1982: 12, 1995: 151f. respectively). It does not matter for these observation how we construe the interpretative component, though that has bearing on what more we attribute to interpretation beyond such bare facts – a "system of use" or the construction of an (internal) model of the truth-and-reference sort, with an autonomous nontrivial syntax of its own or with nought but putting-to-use or composition of syntactically given expressions (see Chomsky 1977, 2000b, Higginbotham 1985, 1991, McGilvray 1998, Fox 2000, Jackendoff 1990, 2002, Pietroski 2003, 2005, Hinzen 2006 for

discussion). By contrast with such properties, the Extended Projection Principle requires that clauses have subjects independently of whether they are interpreted. It has no immediately obvious grounding as a requirement imposed by external modules, and thus is purely syntactic. Case comes in between these two contrasts: while the need to get Case is perhaps attributable to a morphophonological condition on the realization of nominal stems, the mechanism of its assignment and the property of being a Case assigner are syntactic, without any grounding in external modules (see esp. Chomsky 1981: 2.1-2.3, 1986ab, and on the EPP, Lasnik 2001).

The point of departure of the minimalist program is to fully assume the syntax-external character of mechanisms and information like the thematic interpretation at LF and linear order at PF (Chomsky 1995: 170f., 334-340; cf. 1981: 117; Brody 1995; Culicover and Jackendoff 2005). They are eliminated from the syntax, on par with mechanisms that have always been assumed to be only syntax-external, like allomorphy. The potential large-scale success of this enterprise has the resulting *narrow syntax* NS very impoverished with respect to GB: a pared-down X-bar theory as bare phrase structure, along with the basic principles of locality and cyclicity characterizing syntactic dependencies. Its poverty leads to the "strong minimalist thesis": that NS is only that which is minimally, "virtually conceptually" necessary to provide objects that satisfy "basic" interface requirements, those requirements that make syntax useable at all, such as to provide arrangements of lexical items some of which can be interpreted and realized (Chomsky 1995: 220ff., 279ff., 2000a, 2000b: 9-15, 2005). One minimal articulation of syntax sees it as the combinator Merge, supplemented by simple choices of ways of application like no-tampering (cyclicity), blossoming into recursive binary-branching objects with the basic relations suitable to both interpretation and linear order (Chomsky 2000: XX, 2006).

The "basic" interface requirements for which NS is an optimal solution are a matter of discovery, but a core guideline has been that lexical items consist of properties that play a role at the interfaces, like thematic and phonological information, and that the output of syntax is nothing but arrangements of those properties. Chomsky (1995: 225, 2000: 113) formulates the guideline as follows:¹

- (1)
 - a. *Full Interpretation*: objects submitted by syntax to external modules must be fully legible by them, both in content of terminals and in their arrangement.
 - b. *Interpretability Condition*: lexical items have no features other than those that are interpreted at the interfaces.
 - c. *Inclusiveness Condition*: NS does not introduce new features like indices or deletion mark.

The Interpretability Condition would leave nothing on lexical items except those properties used by external systems. If desired, these properties could be invested with the status of syntactic formal features by rendering them visible to syntax, and syntactic mechanism could then operate over them, for example Merge restricted by thematic requirements (Chomsky 2000: 103 ex. (6), 116, 111f.; Adger 2003). However, such proposals are suspect in view of the recognition in MP of the proper role of external systems in manipulating information proper to them like theta-roles. Fully carrying out that programme would leave syntax free of the semantic

¹ Distinct is the issue of how features interpretable in a given external module are made invisible to others under Full Interpretation: by their deletion at spell-out (early insertion, Chomsky 1995), or their late insertion at syntactic nodes after spell-out in their corresponding module (Distributed Morphology, Halle and Marantz 1993).

properties of lexical items as much as of their morphophonological properties, insulated from both by modularity.

Between these two leading ideas of the Interpretability Condition and of leaving to the external systems what is theirs, one road for MP to take leads to a syntax as a simple assembly engine that operates independently of the properties of lexical items: plain Merge (in base-generation and movement). Those aspects of GB that refer to features, like the licensing of selection and movement, or their sensitivity to locality, become part of the external systems. Featural conditions on all syntactic dependencies conditions over interpretable features like *wh*. *Wh*-phrases move to satisfy interpretive requirements of their interpretable [*wh*] feature only as a shorthand for the requirement of a *wh*-phrases to scope over a question in order to be interpreted (Karttunen 1977), and similarly [*wh*]-intervention and [*wh*]-freezing are due to the interpretive properties of these elements (on superiority, see Chomsky 1995: 387 note 69, 2005, Ginzburg and Sag 2000, Beck 2006). The movement chains thus established are submitted to the morphophonological component. Syntax ceases to be the (sole) link between interpretation and realization, and simply builds structure, unrestricted by the featural content of the items that it groups, which is wholly interpretive prior to realization. The 'repair' paradigms explored in this work do have important consequences in this view of syntax, perhaps along the lines discussed and rejected in section 1.2.2, but I will not explore it here further. One way of reading the proposals Brody (1995) and Rizzi (1997, 2004) is as steps towards this view, though without giving up principles like locality for which no independent interpretive motivation is known.

The mainstream development of MP follows a different path (Chomsky 2000a: 119-122, 2000b: 12-15, 2001: 3-5, 2005: § op. note 53; cf. Culicover and Jackendoff 2005: 22). It posits a syntax that licenses syntactic dependencies like movement through features that are not all interpretable in external systems, and so in violation of the guidelines in (1): *uninterpretable features*. The reasons, weighty, fall into two groups. One is that classical syntactic and interpretive dependencies have different properties and use different aspects of interpretable information, suggesting two different modules, just like (if in a weaker way than) for syntax and morphophonology in chapter II. The other is that there are syntactic dependencies that cannot be reduced to interpretation, furnishing direct and striking evidence for the existence and character of "uninterpretable" features.

For the first of these groups, basic contrasts between classically-syntactic and interpretive dependencies are familiar, impressive, and yet presently not as convincing as for the syntax-morphophonology divide, and I will not dwell on them. For mechanisms, chapter I (ex. XX) has already discussed the example of quantifier-variable binding, immune from all the island conditions that constrain the closest "syntactic" parallels like relative clause formation, yet also sharing a condition with them, c-command.² The differences could be indicative of either a syntax-interpretation distinction, or of two interpretive mechanisms, in the same way that binding and coreference must be distinguished. Similarly inconclusive seems the existence of

² I do not see at present how to attribute island sensitivity to PF alone. Suppose LF establishes chains across all these dependencies, and PF determines which ones end in a gap and the island-sensitivity of gaps. However, whether a bound variable is an island-sensitive gap or an island-insensitive pronoun correlates with such properties as whether the binder has a separate theta-role and whether reconstruction is permitted, suggesting rather two different types of chains: one with binding and one with movement properties, classically LF vs. syntactic chains, alternatively two types of LF chains, but not a single type of LF chain with a single set of properties. I am indebted to Boban Arsenijević for much discussion.

(i) a The group included two people_i that we asked every participant to pick _____i (every > two)
b The group included two people_i that asked every participant to pick them_i (*every > two)

information to which interpretation but not syntax is sensitive. Chomsky (2001: 32) remarks a propos (2) that the raising of *the men* binds but surely is not motivated by binding *each other*: raising and indeed all overt movement takes or cannot take place regardless of whether it does, can, or cannot bind a variable. Interpretation does care about this type of information, in ruling out quantifiers that have no variable to bind. (Still, as we will see in section 1.2.1, covert syntactic movement possibly does care about it as well.)

- (2) The men seem to each other to be intelligent.

However, a variant of the raising argument has also been a source of evidence far more unequivocal, and pivotal in the motivation of a syntactic component autonomous of interpretation and of its uninterpretable features: the A-movement for idiom chunks, expletives, and the associated phenomena of structural Case and phi-agreement.³ A-movement patterns with other classical syntactic movements in being unbounded, island-bound, and affecting interpretation in creating new positions for scope, binding, and Condition C effects. Yet it need have no interpretive effects and so no interpretive motivation. The most striking evidence for this is the movement of idiom chunks of the kind that cannot enter into even the most permissive type of A'-dependencies and pronominal anaphora, (3)b. The idiom chunk *much* in *make much of* or *the ice* in *break the ice* does not refer to seem to be an independent interpretive object: it cannot participate in relative clause formation (3)c, or serve as the antecedent of a pronoun or PRO, (3)d (vs. the purely syntactic pronominalization in tags), even if the movement gap or pronoun or PRO would be interpreted as the very same idiom chunk. Little interpretive content is required to participate in these phenomena, and it is available to idiom chunks like *headway* in *make headway*; yet not to *much* or *the ice* and many others like it.⁴ The A-movement in (3) is

³ See Rizzi (1997: 282) for the explicit observation that the LF (criterial) approach to syntactic dependencies is naturally suggested by *wh*-type rather than A-movement. Perhaps the same argument can be made from c-selection, but it seems less clear. The extreme case is c-selection in idiom chunks: *keep tabs on*, *make much of*, *kick the bucket* involve elements that on the one hand seem to be built up by the syntax by their regularity, but whose necessary collocation cannot be motivated by the meaning of the elements. However, the alternative is simply to force the collocation by treating idiom chunks as lexical or encyclopedic units, if one permits units with holes (*put X in X's (damned) place*, *X's got Y where X wants Y*). Of more import are idioms that are not syntactically regular yet seem to consist of independently assembled syntactic elements, like *by and large*: either syntax assembles elements fully freely with no regard for their meaning, so it can construct *by and large*, or it sees the c-selectional properties of the elements involved that collocate them. For both classes, there are collocations spanning elements across a domain outside the traditional bounds of c-selection, "constructions": (*You drink one more beer and I'm leaving* "If you have one more beer, I'll leave". See Culicover and Jackendoff 1997, 1999, 2005, Jackendoff 2002, Yuasa and Sadock 2002. Perhaps relevant to the last group are coreference/control relationships such as *The shit looks (to me) like it's gonna hit the fan* (Rogers 1974: 82), *Birds of a feather may decide PRO to flock together* (Postal 2003: 257).

⁴ Cf. (i). Idioms vary greatly (Nunberg et al. 1994, Jackendoff 1997, Schenk 1995, Sailer 2003: chapter 6, Horn 2003), but for a given speaker there clearly are idioms like *make much of*, *take the rap*, *break the ice* whose NP can undergo A-movement, unlike *kick the bucket*, but which unlike *make headway* cannot participate in even the most semantically permissive kind of relative clause formation (on which see esp. Schachter 1973: 31-2, Vergnaud 1974: 154, Bianchi 1999: 43-5, 50f.), pronominalization, control (even of PRO referring to itself), or A'-movement (HNPS, Postal 2003: 52, 127ff.): 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), and esp. Horn (2003: 261f.).

(i) a The ice seemed to be broken. *We couldn't break the ice that Fred broke. (Horn 2003; ok non-idiomatic)
 b They said she threw cold water on his head/*idea and she did throw it on his head/*idea. (Postal 2003: 131)
 c *He kept ___ on her movements very close tabs (Postal 2003: 131)

not driven by any plausible syntax-independent interpretive requirement on either the part of the idiom chunk, or on a part of functional structure of the sentence to relate to the idiom chunk.

- (3) a. Kate made much of the inscription.
 b. Much seems to have been made of the inscription.
 c. *The other archaeologists made (the) much of the inscription that Kate made.
 d. Much seems to have been made of the inscription, hasn't it, (without much/*it/*its/*PRO being made of the surrounding design).

Consonant with this result is the possibility of filling the terminal site of A-movement by the extraposition expletive *it* and the expletive *there*, both of which seem to lack all interpretive content, as revealed by their contrast on control and pronominalization with minimally referring expletives like the pro-CP *it* and weather expletives.⁵

- (4) a. It rained without it/PRO snowing.
 b. It was likely, without it/%PRO being obvious, that S. [cf. *S was likely*]
 c. It seemed, without it/%*PRO being obvious, that S. [cf. **S seemed*]
 d. There seemed to emerge a boat out of the mists, without there/*PRO appearing to be anyone at the helm.

Therefore, the features that must be posited to license and constrain A-movement do not belong to the interpretive component.⁶ This conclusion from A-movement of uninterpretable

⁵ For details, see esp. Burzio 1981, Chomsky 1981: 234, Rizzi 1986a: 528 note 28, Abney 1987: 209 note, Williams 1994: 91, Potsdam and Runner 2002, with a very limited exception for *there* in Postal 2003: 127.

⁶ The argument for the uninterpretability of Case, phi-agreement, and A-movement is as always a balance of plausibility guided by the minimalist guidelines to remove technology that merely redescribes. One can (reasonably) posit that Case is a pre-condition for theta-assignment (Chomsky 1986a: XX, Baker 1988: 41, 105-129), and (stipulatively) that A-moveable DPs in idiom chunks and nonreferential expletives get a designated theta-role; such devices have been proposed to ensure the working of principles like the theta-criterion, not for any empirical or conceptual reason, and accordingly have disappeared in the minimalist inquiry (Chomsky 1995).

An alternative would be to put just that A-movement that has no interpretive consequences into a part of syntax outside the mapping to LF. This is the proposal of Sauerland and Elbourne (2002) for different data, such the narrow scope in (i) and (ii). In (i) with singular agreement and narrow scope of *a northern team*, and (ii-a) with narrow scope of *an Austrian*, the DP in bold is supposed to move out of t_i at PF, and this accounts for its failure to be interpreted with wide scope, unlike in (i) with plural agreement, (ii-b), and (iii) where the Proper Binding Condition requires syntactic movement of *an Austrian* prior to *wh*-movement.

(i) **A northern team**_i is/are **likely** t_i to be in the final. (*is*: $a < \text{likely}$; *are*: $a > \text{likely}$, **likely* > a)
 (ii) [How **likely**]_j is **an Austrian**_i t_i to win (*a*: *likely* > *an*; *b*: *an* > *likely*)
 (iii) [How **likely** t_i to win]_j is **an Austrian**_i t_j (*an* > *likely*, **likely* > *an*)

However, I am deeply skeptical of positing a separate chunk of syntax that is otherwise fully like the syntax that feeds LF in character -- unbounded phrasal movement sensitive to syntactic conditions -- which is quite a different matter than positing that the syntactic computational system operating over a different type of information with different properties may underlie another module, like morphophonology (Embick and Noyer 2001). There are other accounts for such data. To account for plural agreement in (i) freezing scope of the goal *a northern team* with respect to *likely*, one could suppose that the plural agreement of nouns like *a northern team* is due to a plural *pro* with *a northern team* in apposition and so wide-scope (cf. Den Dikken 2001, who points out that "agreement attraction" like *a key to the doors is/are...* has the same properties), or that the special "mereological" plurality involved must scope over a clausal plurality operator above *likely*. Similarly, failure to reconstruct in (iii) need not

elements is independent of, though congruent with, the syntactic reference to uninterpretable phi demonstrated in chapters IV and III. The latter have shown that (the syntactic mechanisms governing the distribution of) a given structure like an unfocussed dative strong pronoun must refer to [+person] phi-features not interpretable on it, creating a covariation or "agreement" between the two. This reference also is not plausibly interpretive: there may be good interpretive reasons for a [+person] element to end up in a certain position, though chapter VI points out problems for this view, but there are not such interpretive reasons for this to block dative cliticization or license a dative strong pronoun. For this, autonomous syntactic reasons like syntactic reasons like locality have been invoked. In a syntax wholly grounded in properties of the interpretive component, such constraints should follow wholly from principles of interpretation, just like the theta-criterion: thus for *wh*-superiority in Chomsky 1995: 387 note 69, 2005, Ginzburg and Sag 2000, Beck 2006, vs. Rizzi 1990, Chomsky 1995, Starke 2001.

Returning to A-movement, GB and MP posit that the feature driving A-movement is the need of DPs to bear structural Case, and/or the associated need of Case assigners to Agree for phi-features, on the grounds that Case, phi-agreement, and A-movement seem to share the same conditions (see chapter I). For exploration, let us take Case as an example of the features licensing A-movement, including of idiom chunks. What is Case – the need of nominals to bear Case – if not a property of the interpretive component?

Case had originally and insightfully been attributed to the morphophonological need of nominal stems to be realized with inflectional morphology (Chomsky 1980b, 1981: 2.3, Vergnaud 1982, Rouveret and Vergnaud 1980). Suppose it is so, to explore the various options. As a morphophonological requirement, it can be construed as either legible to morphophonology or not. If it is legible there, then it is a requirement that could in principle be satisfied in morphophonology as well, by adjacency, incorporation, or default Case (Baker 1988: 105-129, Neeleman and Weerman 1999, Schütze 2001). In this limited sense, it is "interpretable" in the morphophonology: legible as a requirement (deficiency) that its systems can potentially know about and rectify, like the Obligatory Countour Principle. The Stray Affix Filter is a good potential parallel: a morphophonological need motivating syntactic head-movement but also plausibly satisfied in the morphophonology by the devices of that domain. If on the other hand Case is not legible to the morphophonology, then it is a condition imposed by it on the objects submitted to it, and failure to satisfy it makes for an uninterpretable input to the module.⁷ On both scenarios, Case is rendered syntactic in some manner to which we return directly, unlike the other requirements of morphophonology, if it plays the role of driving A-movement. The resulting syntactic occurrence of Case must be eliminated by syntax, because it is at a minimum uninterpretable to the LF component (Chomsky 1995: 278, 2000a: 118-121).

be interpreted as hallmark of syntactic movement and so of its absence in (ii-a) as a hallmark of PF movement. Instead, the failure of c-command relationship between *an Austrian* and t_j in (iii) create LF or PF problems if t_j is a copy of *an Austrian* for the realization and copy-spellout of the resulting chain, and so requires a empty pronoun at t_j like Lasnik and Saito's (1992) PRO (cf. Abels 2002, Boeckx 2001, Bobaljik and Wurmbrand 2006 for discussion). Very local phrasal movement under essentially phonological adjacency (Holmberg 2000, 2005, Joutteau 2005) seems much less objectionable to the extent it is not invoking the core distinguishing properties of syntactic movement like unbounded island-sensitive dependency.

⁷ This is the same if Case is a pure syntactic diacritic with no eventual "grounding" in morphophonological requirements at all: then also it is uninterpretable to it and must be eliminated. One might instead seek conceptual or teleological motivation in external requirements for the existence of a Case feature type rather than of individual occurrences of Case on lexical items, from the "need" of interfaces to get sufficiently complex objects, i.e. ones with movement chains (cf. Chomsky 1995: 316f., 2000: 120f.), or the need to keep down memory load by creating phases as units of spell-out upon valuation (Chomsky 2005).

The same options as for Case obtain for other features involved in A-movement like the phi-features of T that assign Case in Chomsky (2000, 2001). The elimination of uninterpretable features is therefore the response of syntax to the requirement of legible input to the external systems, whether these are ultimately motivated within them or simply a "device" by which syntax is forced to operate. We may ask next how uninterpretable features *enter* into syntax so as to be eliminated. One option is that they are features of lexical items or features, say [Case:] on [+noun] or n° or D° elements.⁸ This is the standard view, for Case and Case licensers (phi-probes) alike. The foregoing two chapters suggest a starkly different view, specifically for a subset of Case-licensors (phi-probes) though eventually perhaps generalizable to all Case-licensors and to all uninterpretable features: they themselves arise as needed to meet the requirements imposed by the interfacing systems. Although uninterpretable in themselves, at their particular occurrence on a lexical item, they are nevertheless necessary to permit the larger structure in which they are contained to converge, and so motivated by external requirements.

The last chapter has concluded that the syntactic structure underlying unfocussed dative strong pronouns in French is licensed only "as necessary", when a simpler syntactic structure would run afoul of the Person Case Constraint. Specifically, the constraint is a restriction on the Case-licensing of [+person] phi-features on DPs due to an intervening DP, and the last-resort strong pronouns involve last-resort DP-internal Case licensing for the features. Striking fit to this construal are the repairs of the same or related [+person] constraints elsewhere, in (5), discussed below. French and Georgian aside, a DP shows up with a structural Case that is anomalous for it and not available to out outside the problematic [+person] licensing context. An uninterpretable Case licensing feature becomes available only as last resort, in order to meet the licensing (Case) requirements of [+person] nominal, and so permit convergence.

(5) [+person] licensing repairs:

* notates element banned if [+person] on left-hand side, ok otherwise
underline indicates element affected by the repair

	<i>Person Case Constraint</i>	<i>Repair</i>
a. Basque dial.:	DAT _{Appl} -ABS _S * unacc.	→ <u>ERG</u> *-DAT
b. Finnish:	OBLQ _{Appl} -NOM _S * unacc.	→ OBLQ- <u>ACC</u> *
c. Chinook:	bare _{Appl} -bare _S * unaccusatives	→ <u>ERG</u> _{Appl} -bare _S *
d. Arizona Tewa:	bare _{EA} -bare _O * transitives	→ <u>ERG</u> _{EA} (?)-bare _O *
e. French:	(EA-)DAT _{Appl} -ACC _O * trans.	→ ACC*- <u>DAT</u> _{pp}
	≡ [Γ _{DAT} +D ^o +N ^o]-ACC _O *	→ ACC*-[Γ _{DAT} + <u>Case</u> D ^o +N ^o]
f. Georgian:	(EA-)DAT _{Appl} -ABS/ACC _O * trans.	→ DAT _{Appl} - <u>O's self</u> .ABS/ACC*
	≡ DAT _{Appl} -[Γ+D ^o +N ^o] _O *	→ DAT _{Appl} -[Γ+ <u>Case</u> +D ^o N ^o] _O *

This view of the repairs is a proposal for a transderivational or reference-set computation in the Case and phi-agreement system. The discussion of Minimize Structure in the last chapter showed the perils of too general a mechanism. In a fully last-resort transderivational comparison system like Optimality Theory, a given input inevitably converges to some output, both when there is one satisfying all of a given set of constraints, and also when there is not, in which case

⁸ If Case is also a morphophonologically legible feature and if we are in a late-insertion system, this is tantamount to its early insertion; cf. Embick (2000), Chomsky (2001) for such partial early insertion.

the winner is the optimal output violating a "faithfulness" constraint that blocks adding or deleting structure, or a "markedness" one that implements other syntactic conditions like island constraints. Syntax does not seem to work like that.⁹ The discussion of French has shown that structures with unfocussed dative and accusative pronouns fail all over the place for a variety of reasons like the Specified Subject Condition and modification, with no repair. Syntactic inputs regularly fail to converge for syntactic reasons and so be "ineffable". The task for modelling the repairs of [+person] licensing is to find a transderivational mechanism that is sufficiently restricted to give the right results and general enough to carve out a plausible natural domain of linguistic phenomena.

To formulate a last-resort transderivational computation is to specify what kind of changes a structure or derivation can undergo in response to what kind of problem with what other structure or derivation: a *reference-set* of structures ordered by a *markedness metric*:

- (6) **Last-resort computation** (Chomsky 1995, Fox 2000, Reinhart 2006)
- a. Reference set of structures, e.g. convergent ones with same meaning.
 - b. A markedness metric, e.g. least structure.
 - c. Principle: Pick least marked structure out of reference-set.

The last-resort Case/phi phenomena discussed in this chapter all have a very narrow and well-defined profile: a non-obligatory Case licensing / phi-agreement capacity shows only if a structure or derivation would otherwise fail to converge due to a failure to Case-license phi-features. A transderivational computation that lends itself well to this has been proposed for other syntactic licensing like successive-cyclic movement in Chomsky (1995: 294, 377, 2000: 109-110, 2001: 34). I will adopt it as a starting point. In a scheme of economy conditions, it is the restriction of Minimize Structure to uninterpretable features:

- (7) Λ (preliminary formulation): An uninterpretable feature may enter the numeration only if it has an effect on output.

Λ leaves many details that need closer understanding, and they are taken up below. What counts as a numeration -- an entire syntactic structure as in Chomsky 1995, or a chunk of it, a phase as in Chomsky 2000, 2001? Where does the uninterpretable feature enter the numeration -- anywhere or at the phase head? What counts as an effect on output -- any PF or LF effect, or failure to converge, or only a Case crash? Can Λ supply one or more uninterpretable features at a time? How is Λ parametrized, if it can be?

First though, consider the inherent limitation of Λ to manipulating uninterpretable features, in terms of what it does and what it repairs. In what it does, Λ is ineliminably transderivational: convergent structures differing in uninterpretable features are compared to each other and the most impoverished one wins. In the use to which Λ is put here, this cannot be restated as a nontransderivational constraint over the distribution uninterpretable features in the numeration in function of its interpretable features (along the lines of Heck and Müller 2007), because whether an uninterpretable feature is added depends both on the other features in a numeration and on how they are assembled by the syntax. However, Λ is an extremely restrictive view of

⁹ The point here is, not an invective against OT syntax. OT models the absolute ungrammaticality of an input by ranking the empty output (null parse) higher than all constraints desired to be inviolable (Heck and Müller 2007). Nevertheless, this property of OT has been held against it (Chomsky 1995: XX, Reinhart 2006: XX).

transderivationality. The reference set of structures compared to each other is made up of structures that are identical up to uninterpretable features, or put differently, transderivational computation is limited to adding uninterpretable features. A multitude of known alternatives is thereby precluded: interpretable material cannot be added or deleted, and constraints like locality cannot be suspended. In this, Λ differs radically from "fewest steps" or "shortest chain links" (Chomsky 1995: chapter 2), and from a generalized Minimize Structure that can freely affect interpretable material. Λ conserves principles and interpretable content.¹⁰

As for what it repairs, modularity indicates that Λ should be encapsulated from syntax-external systems. In quest of a minimalist syntax, transderivational computation is almost necessarily transmodular, because convergence is determined with respect to interfacing modules. Narrow syntax produces a derivation, and whether it converges or not is a question only of being legible input to the external systems, not of meeting any syntax-internal requirements like the theta-theory of GB. However, we may distinguish *weak* transmodularity involving reference to the *interface* with an external system, from *strong* transmodularity referring to the internal operations or output of an external system. Strong transmodularity is clearly incorrect in the general case and arguably impossible, as has been discussed for morphophonology (chapters I, II). Under weak transmodularity, the "effect on output" in Λ refers only to the output to syntax to the interfacing systems, not to their own output. Considerations such as word order or scope seem inaccessible to Λ by this view *to the extent* that they are available only without or at the output of external systems. Effect on output reduces to *convergence* at the interfaces with external systems. What the interfaces demand for convergence is to be uncovered: the deletion of features they cannot interpret is the minimum.

Λ is even more modular than that. As put above, it localizes the addition of an uninterpretable feature to the construction of the numeration, rather than to narrow syntax "proper" where structure building and the formation of syntactic dependencies occur. So only the construction of the numeration – the input to narrow syntax – is sensitive to whether its output is legible to external systems, and involves transderivational comparison. There is a feedback that reconfigures the input to a system based on its output, but does not breach the encapsulation of the system itself. On this view, Λ is an *interface algorithm* external to narrow-syntax, taking as arguments a triple of the numeration and the LF and PF input that narrow syntax constructs from it, and modifying the former. The transderivational comparison is a part of the interfaces of narrow syntax with external systems, of which the numeration can be viewed as one. This conclusion would mesh with the existence of such computation not involving narrow syntax at all, as we will see in the next section, suggesting that the mechanism is an aspect of the human language faculty outside it. Working from such reference-set computation outside or "at the edges" of syntax, Reinhart (2006: 1.3, 2.7) proposes that reference-set computation is a "repair" mechanism triggered by syntax-external systems *if the output of syntax does not converge* with respect to those systems (with concomitant increase in computational load).

These considerations lead to the reconstrual of Λ as follows:

- (8) Λ : An uninterpretable feature may enter the numeration only if needed for convergence.

¹⁰ A narrow, consistent exception would be possible if there are certain interpretable terminals correlate with uninterpretable features in such a way that insertion of the latter entails that of the former (cf. section 1.3.2.1). Not pursued here, this would permit proposals like the insertion of a covert complementizer if needed for covert *wh*-checking (cf. Chomsky 1995: 294 (76)), or of the "complementizer" layer of pronouns if both the locus of their Case licensing and of certain interpretable properties (Cardinaletti and Starke 1999).

The empirical cases motivating Λ are "repairs" like [+person] licensing and "dependent Case" below. However, Λ has an interesting consequence in the domain of "regular" syntactic dependencies. Suppose α is a *wh*-word that has an interpretive requirement (for example scope) to move to the specifier of C_Q and that failure to do so constitutes an illegitimate input to the interpretive module. Then we have the consequence (9) that *all* numerations containing a *wh*-word will have a corresponding uninterpretable feature to drive the *wh*-movement (e.g. the categorical, EPP, or edge feature, Chomsky 1995: 289ff., 2000: 109, 128ff., 149 note 91, 2001: 34, 2005). This lemma casts into relief the role of Λ as the projection onto the syntax of the requirements imposed by interfacing systems. Chapter VI turns to the possibilities and limits of this view of uninterpretable features in general, including those off A-movement.

- (9) Λ (lemma): If an element α requires the presence of an uninterpretable feature F in all numerations where it finds itself, Λ licenses F in *all* numerations.

The study of Λ proper in last-resort Case/phi-agreement phenomena is undertaken in 1.3. The next section sets up the perspective necessary for investigating transderivational computation through an overview of some of the convincing examples revealed in current work. They revealing the analytical options and their commitments; and they reveal also the scope of the phenomenon in syntax and its adjacent modules in lieu of an eventual over-arching theory. We return briefly to the nature of Λ as a potentially extra-syntactic device involved in a variety of domains that put syntax to use, like interpretation and the parser, in chapter VI.

1.2 Transderivational computation in the syntax and out of it

1.2.1 *Quantifier raising*

Among the most persuasive paradigms of reference-set computation is the scope and binding paradigms uncovered in Fox (2000). This section introduces the phenomena and the analytical option, which narrow down what repairs of the Person Case Constraint could be.

In simple contexts, quantifier raising QR can be detected only if it has an effect on scope and variable binding. Fox develops ellipsis (and destressing) as tool showing that QR applies only then, and not vacuously. Ellipsis is subject to a *Paralellism* requirement whereby sentences hosting the antecedent and the elided constituent must be structurally parallel in certain ways; one is structural isomorphism, (10)a, of which a consequence is parallel scopal relations in the two sentences, (10)b. Paralellism thus requires that (non-)application of QR in the elided sentence match the (non-)application of QR of the same quantifier in the antecedent. Through parallelism, the *Scope Economy* principle (11) can be uncovered, because only together they predict a generalization illustrated by the paradigm (12) discussed next. Scope Economy is a transderivational condition on the syntactic operation of QR that permits QR only if the same meaning would not be given by a syntactic structure without QR, that is, the preferred alternative in the reference-set containing a given structure with and without QR.

- (10) Parallelism (consequences of):

- a. Direct Parallelism: Phonological reduction or deletion is licensed if the LF of a sentence that contains the elided/downstrassed material, β_E , is structurally isomorphic to a sentence that contains the antecedent, β_A .
 - b. Consequence: The scopal relationship among the elements in β_A must be identical to the scopal relationship among the parallel elements in β_E .
(cf. Fox 2000: 32, 85, 91)
- (11) Scope Economy: QR must have a semantic effect [evaluated at each application of QR as constrained by Shortest Move, i.e. to the closest proposition-denoting node].
(cf. Fox 2000: 23, 26)

Let us see how Parallelism and Scope Economy predict (12). Consider the sentences hosting the ellipsis in each example. For one choice of subject (*a girl*, *the person who produced it*), scoping the object of the elided VP over the subject produces a new reading where the object scopes over or binds into the subject. For the other choice of subject (*every girl* / *Mary*, *the person who produced the film*), no such new reading is produced because the result is equivalent to the subject scoping over the object. By Scope Economy, QR can in fact occur only in the first choice of subject. By Parallelism, if the object QRs in the ellipsis sentence, it must do so in the antecedent sentence, giving inverse scope there. Accordingly Parallelism lets the antecedent sentence have inverse scope of the object over the subject only for the ellipsis sentences with the first but not the second choice of subject, despite the within the antecedent sentence itself QR of the object would always have a semantic effect. This prediction is correct, as shown by the possible readings for the antecedent sentence indicated beside the ellipsis sentences.¹¹

- (12) a. A boy admires every teacher.
A girl does, too ~~admire every teacher~~. (*a boy* > *every*, *every* > *a boy*)
Every girl / Mary does too, ~~admire every teacher~~. (*a boy* > *every*, **every* > *a boy*)
- b. One of the film reviewers admires every movie.
The person who produced it, does ~~too admire every movie~~. (*one* > *every*, *every* > *one*)
The person who produced the film festival does too ~~admire every movie~~. (*one* > *every*, **every* > *one*)
(Fox 2000: 32-7)

The information that enters into Scope Economy is clearly beyond the pale of narrow syntax, and it probably cannot be recoded in it. (12)b makes the point acutely. For scope commutativity with *every movie*, the DP *the person* differs depending on whether it contains a bound variable or not (*the person who produced it/the film festival*). Syntactic dependencies are not sensitive to information arbitrarily embedded in the objects they link or cross: selection by *rely* requires an *on-PP*, not an *on-PP* contained in a larger constituent, A-movement is blocked by a DP and not by one contained in an adverbial, and so on.¹² Fox (1995: notes 9, 10, 64, 2000: 70-74) pegs

¹¹ In order for this to work, Scope Economy must be stated in such a way that QR in a neighbouring sentence or derivation does not count to license locally vacuous QR, e.g. if Scope Economy operates over sentences like scope and binding, and unlike phi-feature-compatibility in cross-clausal anaphora for example.

¹² The insight is shared across frameworks (cf. Sag 2005). Heck and Müller (2007), Müller (2004) argues that *wh* embedded in DPs cannot be crossed by *wh*-movement, so we get contrasts like *Who₂ did [_{NP} friends of Kate/?*whom₁] meet t₂*. However, their mechanism does not make the intervention status of the DP headed by *friends* depend on what is embedded in it; it involves visibility of the *wh*-word in the subject to the matrix *wh*-probe,

down the component where Scope Economy applies as a 'logical syntax', with access to the meaning of quantifiers and connectors and to inference, but blind to more 'encyclopedic' knowledge even if it affects scope commutativity, like the meaning of 'odd number'. So if QR is narrow-syntactic, it is transmodular. Chomsky proposes to use a version of Λ that adds a feature to trigger QR iff it has an "effect on output", including scope commutativity (Chomsky 1995: 377, 2000: 109, Fox 2000: 75 note 64). This is strongly transmodular, since syntax sees into the external system of logical syntax. However, Reinhart (2006: 1.3, 2.7) proposes a formulation in terms of the input requirements on that system: QR is forced by *convergence requirements at the contextual interface*. The details are sketchy, but one can perhaps proceed as follows: the relevant external system has an input requirement such that if there is submitted to it a syntactic object in which by logical syntax quantifier scope is not commutative, there be submitted to it one that represents it syntactically. Only objects with potentially noncommutative scope fail to converge, and so meet the conditions on Λ which adds the feature to drive QR, producing an object with non-surface scope as well.

However, are there grounds for placing QR as constrained by Scope Economy in narrow syntax? Scope shifting operations can be analysed in a variety of ways in language, of which movement is only one (Szabolcsi 2007). Fox views QR as syntactic movement for two persuasive reasons: it provides a new structural position for the elements in the syntactic constituent containing a quantifier by diagnostics like Conditions A and C (Fox 2000: 74 note 63, chapter 6), and it is restricted by locality (Fox 2000: 62-4). Yet these considerations only show that there is syntactic movement of which QR makes use, not that QR as restricted by Scope Economy is that movement.¹³ The point is brought out by Miyagawa's (2006) demonstration that long-distance scrambling in Japanese alters quantifier scope according to Scope Economy but is not itself restricted by this principle. Long-distance scrambling overtly moves a quantifier without paying attention to its interpretation, but it allows it to be interpreted in its scrambled position only if the local, clause-bounded step of the scrambling is scope commutative, as when crossing another quantifier but not an R-expression in (13). It seems then that it is the interpretation of the quantifier in independently available movement that is restricted by Scope Economy, not the movement itself. One option is that scrambling – and QR – occurs independently of Scope Economy and obligatorily reconstructs, unless interpreting a higher one would have an interpretive effect (see Miyagawa 2005, 2006 for alternatives).¹⁴

- (13) Daremo-ni_i dareka-ga [John-ga / futari-no kodomo-ga t_i kisu_{sita} to] omotteiru
 everyone-DAT someone-NOM John-NOM / 2-GEN kids-NOM kissed COMP thinks
 Everyone, someone thinks that John / two kids kissed.
 ($\sqrt{\text{someone}} > \text{everyone}$; $\text{everyone} > \text{someone}$ $\sqrt{??}$ with *two kids*, * with *John*)
 (Miyagawa 2006: 615)

This proposal would put the transderivational computation of Scope Economy wholly outside narrow syntax. Other transderivational computations akin to Scope Economy do arguably or clearly lie outside syntax, such as stress shift at PF (Reinhart 2006, Szendrői 2005) and

satisfying it in preference to the *wh*-word in the ν P. The data also seem amenable to treatment through the recent attribution of Superiority violations to the need of *wh*-in-situ to associate with focus (Chomsky 1995: 387 note 69, 2006, Ginzburg and Sag 2000: 6.6.2).

¹³ I am indebted to Danny Fox, pc, for pointing me to both the relevant work and providing the analytic options.

¹⁴ Danny Fox, pc, citing Michael Brody, pc.

coreference and non-local variable binding at LF (Reinhart 2006: chapter 4, Heim 1993, Fox 2000: chapter 4). A look at the last clarifies one criterion that puts a transderivational computation into narrow syntax and why the French paradigm of chapter IV is there.

1.2.2 Variable binding and post-syntactic transderivational computation

Just like Scope Economy restricts the application of QR, Heim's (1993) Rule H in (15) allows non-local λ -binding of a variable only if it yields an interpretation distinct from binding by the most local λ (Fox 2000: chapter 4).¹⁵ In (15)a, the binding of *his* by *he* and by *John* is not interpretively distinct and Rule H allows only *John* as the binder. In (15)b, binding of *his* by *John* and by *only he* are distinct as the entailments in (i) and (ii) indicate, and so Rule H allows both.

- (14) *Rule H*: A pronoun, α , can be bound by an antecedent β , only if there is no closer antecedent γ , such that it is possible to bind α by γ and *get the same semantic interpretation*. (Fox 2000: 115).
- (15) a. John_i thought that he_i likes his_i mother.
 John λx x thought that he_x λy likes y/*x's mother. (* by Rule H)
- b. John_i thought that only he_i likes his_i mother.
 John λx x thought that [only he]_x λy likes x/y's mother.
 (i) his=x \rightarrow John thought that nobody else likes his, that is John's, mother.
 (ii) his=y \rightarrow John thought that nobody_i else likes their_i mother.

The effect of Rule H is not not available to introspection, but it can be tested in ellipsis using Parallelism again, in particular another consequence of it in (16).

- (16) *NP Parallelism*: NPs in the antecedent and elided VPs must either
- have the same referential value (Referential Parallelism) or
 - be linked by identical dependencies (Structural Parallelism). (Fox 2000: 117)

The antecedent of the ellipsis sentence in (17) is restricted by Rule H to have the representation in (18)a, not in (18)b, because the latter one involves non-local binding without a meaning difference. Parallelism of the elided VP with it restricts the dependencies of variables in that VP, and thereby the availability of strict and sloppy readings in (21). A strict reading is one where a pronoun in the elided VP refers to the subject of the antecedent, and it is achieved by coreference. A sloppy reading is one where it refers to the subject of the sentence containing the ellipsis, and it is achieved because the variable is also bound by the λ -binder for the subject trace of the elided VP. The unavailable (21)d is not parallel to the antecedent *John λx x said that he_x λy likes y's mother*, because the *y* of *y's mother* neither has the same referential value as in the antecedent, that is *John*, nor is bound by the same λ -operator as the subject of *likes* as in the antecedent, so it fails both Referential and Structural Parallelism. It would be parallel to **John λx*

¹⁵ For a different formulation that makes the same point, see Reinhart's (2006: chapter 4) *Rule I*. It extends to coreference, and so the skeptical reader wishing to put quantifier-variable binding into syntax can take coreference as illustration, subject to no syntactic restrictions.

x said that $he_x \lambda y$ likes x 's mother, but that antecedent is ruled out by Rule H. Other combinations of strict and sloppy readings possibilities like (19)a obey either referential or structural parallelism with *John λx x said that $he_x \lambda y$ likes y 's mother.*

(17) John said that he likes his mother. Bill did [_{elided} λt t say that he likes his mother] too.

- (18) a. John₁ said that he₁ likes his₁ mother.
 b. John λx x said that he _{x} λy likes y 's mother.
 c. *John λx x said that he _{x} λy likes x 's mother. (Rule H)

- (19) a. Bill said that Bill likes John's mother. (sloppy, strict)
 Bill λx x said that he _{x} λy y likes x_{John} 's mother.
 b. *Bill said that John likes Bill's mother. (strict, sloppy)
 Bill λx x said that he_{John} λy y likes x 's mother.

(Fox 2000: 112, cf. 118)

Rule H belongs clearly outside narrow syntax to LF, since it restricts variable binding, a phenomenon immune syntactic conditions like strong islands (cf. Fox 2000: 111). As an LF phenomenon, it permits us to indentify and use one quintessential property of transderivational computation applying after syntax:

- (20) Transderivational computation after syntax does not see impossible or illegible syntactic structures.

Post-syntactic transderivational computation selects the optimal candidate among a reference-set of LF structures, say those that are logically equivalent. LF structures are those structures that narrow syntax has successfully constructed and shipped off to LF and that LF has found legible. Structures that narrow syntax cannot construct, like those that violate islands, and those that are not legible, like those violating the theta-criterion, are not visible. Fox (2000: 130-133) illustrates the last scenario, slightly adapted here. Suppose that the structures produced by movement in narrow syntax are converted to LF structures by having the top of the chain λ -bind a variable at the bottom of the chain, as in Heim and Kratzer (1998). It follows that in (21)a, all possible LF structures (from the same numeration) are based on (21)b, and none on (21)c since the mapping from syntax to LF fails to yield it. Therefore, structures based on (21)c are excluded from the reference set for Rule H, and binding of x by *himself* is not an alternative to the binding of x by *John*. Accordingly, Rule H must permit the latter, since there is no more local alternative in the legitimate structures, although if there were in fact LF structures where *himself* could bind x , they would block it. This prediction, Fox demonstrates to be correct. In minimal contrast with (21)a, in (21)d there is no movement and so *he* is free to be bound by either *himself* or *John*, and Rule H operating over LF structures based on both alternatives only permits the former.¹⁶

- (21) a. John₁ seems to himself t_1 to be a genius
 b. John λx seems to himself x to be a genius

¹⁶ In the same way are accounted for Higginbotham's (1985) objections to the antecedent of Rule H from object-control structures like *They _{j} told each other _{i} PRO _{ij} to leave* \neq *They _{j} told each other _{i} that they _{ij} would leave*, assuming that there is a syntactically-established linking between the controller and PRO.

- c. John seems to himself λx x to be a genius
- d. John seems to himself that he is a genius

The foregoing prediction follows from the basic architecture of the Y-model: transderivational computation at LF operates over structures given to it by syntax, so it does not consider failed or illegible syntactic structures, just like it is on the other hand insensitive to crash at PF. It suffices to demonstrate that the reference-set of a transderivational computation includes structures that narrow syntax does not submit to LF or that are not legible to it to show that the computation is not at LF.

This result is of major interest for the study of the French repair of the Person Case Constraint discussed in the last chapter. The repair consists in realizing an unfocused dative pronoun as a strong pronoun rather than as a clitic when the former would crash due to the Person Case Constraint (a transderivational computation). Dative strong pronouns exist independently of the repair, but they must bear focus. Given this, it might be supposed that the focus is due to an LF algorithm, and it is this algorithm that is affected at LF by the PCC, much as the QR paradigm above might be about the interpretation of movement rather than about movement (Rezac 2007: 126; David Adger, pc). The outline of such a story is easy to imagine. For datives that can move, there is the in-situ VP-internal position, spelled out as a strong pronoun, and a potential movement-derived, Agr-related position, spelled out as a clitic (wher Agr perhaps = ν). Suppose that the focus algorithm sees the potential movement chain (i.e. the derived as well as the in-situ position), assigns a presupposed, backgrounded interpretation to the Agr-related position, and any remaining interpretations to the VP-internal position, including new and contrastive focus. Locatives can be taken to differ from datives by lacking a potential Agr-related position, with the locative clitic attaching elsewhere, so the VP-internal strong pronoun gets all interpretations by the algorithm. The Person Case Constraint has the effect of giving dative chains the interpretation of locative chains by making unavailable the Agr-related clitic, so the focus algorithm does not see it as an alternative, and as for locatives, it assigns all interpretations to the VP-internal position, which surfaces as a strong pronoun.

However, the foregoing discussion reveals the test that shows the repair of the constraint in question to be syntactic, not post-syntactic. A post-syntactic transderivational computation does not see any syntactic structures that fail to be built, submitted to, or interpreted by an external system like LF. In the present case, the LF focus-distribution algorithm would not see any structures where a dative (or accusative) clitic is ungrammatical because of a problem in the syntax or at the interface with LF, and in consequence, these problems should be just like the Person Case Constraint in permitting a strong dative pronoun to be unfocused. This, as we have seen in the discussion of Minimize Structure in the last chapter, is incorrect. Dative and accusative clitics are impossible due to syntactic or interface problems with clitic climbing (islandhood), modification, coordinate structures, and so on, yet in none of these cases can a dative or accusative strong pronoun be unfocused. It follows that the transderivational computation underlying the PCC repair must differentiate the problem that gives rise to the PCC from these other problems, and that cannot be done within a component external to syntax where they all have the same non-existent status.

We may note as a weaker point that there are interpretive problems that do not license PCC repair, as discussed for overlapping reference in chapter 3. This follows from modularity if syntax is encapsulated from such problems and the PCC repair is syntactic. If the repair belonged to the same system as these problems, the focus-distribution algorithm would have to be

stipulated to be blind to them but not to the Person Case Constraint. We return to this briefly in chapter VI, with other evidence for this position.

1.2.3 *Truly syntactic reference-set computation in syntax*

An inherent limitation of transderivational computation within a given extra-syntactic component like LF is that it cannot build syntactic structures. The French repair of the Person Case Constraint could be approached as an LF phenomenon only because the syntactic structures that it licenses, those underlying clitics and strong pronouns, might exist independently of it (modulo any structure relevant to focus), albeit with the wrong interpretation. None of the other PCC repairs discussed below (or the clitic repair in French) can be treated at LF, since they create unique surface structures, although there is not yet available evidence for them that they affect interpretation. Between them, the French and other PCC repairs indicate a narrow syntactic mechanism, insofar as the cross-linguistic restriction of the diverse repairs to the single PCC context indicates a coherent phenomenon with a single mechanism. Syntactic is necessarily the repair of the similar [+person] licensing condition discussed in chapter II for Arizona Tewa, where the external argument surfaces as an oblique if the object is [+person], but as a syntactically distinct bare DP elsewhere.

The touchstone of syntactic transderivational computation is the same as for all syntactic computation: an effect on interpretation and realization alike. A phenomenon that affects one or the other only is susceptible of belonging to a syntax-external component, modulo independent diagnostics like that just discussed, but one affecting both must be in narrow syntax on the Y-model. The phenomena with this property that have been proposed to have a transderivational character are fewer and sometimes less convincing: Krifka (1998) for scrambling in German; Fox (2000: 76) for extraposition in English (but Fox 2002: 75 as a parsing preference, and cf. Sportiche 2005 ex. 135f.); Chomsky (2001: 34ff.) for Object Shift (but see Fox and Pesetsky 2004); Cardinaletti and Starke (1999) Minimize Structure (see the last chapter). Consider extraposition as a simple example. Extraposition in the following example avoids Condition C (LF) and affects word order (PF), so it must belong to syntax. Condition C is present in (22)b, which is unexpected if extraposition were allowed to occur in it string-vacuously. Fox (op.cit.) proposes that extraposition can occur only if it has an effect on word order, so it is conditioned by whether an alternative derivation without extraposition (transderivationality).

- (22) 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)

The repairs of [+person] restrictions in Arizona Tewa and French studied are syntactic and transderivational, if the foregoing is right. Together with other [+person] licensing repairs that appear to reflect the same mechanism, they open a new window on the nature of transderivational computation in narrow syntax, explored in the next section for the algorithm Λ .

1.3 Transderivational computation in the Case/phi system

1.3.1 Introduction

In this section the [+person] licensing repairs of the preceding chapters are unified with similar repairs by last-resort dependent Case, and ultimately with dependent Case in general, as instances of the operation of Λ . While not a logically necessary path to follow, the last-resort character of dependent Case in various contexts carves out a natural domain for a theoretical treatment. The section begins by a detailed application of Λ to the repair of the Person Case Constraint in French from the last chapter. Λ really comes into its own afterwards when applied to [+person] repairs by dependent Case and to dependent Case generally, in Basque, Finnish, and Chinook, and finally in the different Case/phi architecture of Arizona Tewa.

The transderivational algorithm Λ is repeated below. It is followed by discussion of the various open choices in its formulation, which will play a role in the investigation to follow.

- (8) Λ : An uninterpretable feature may enter the numeration only if needed for convergence.

Convergence: What counts as "needed for convergence"? In MP, convergence requirements are generally coded as the elimination of uninterpretable features, an interface requirement (sections 1.1, chapter VI). The need of DPs to be Case licensed is thus coded as the need to eliminate an uninterpretable Case feature, which we assume to occur via Agree with another uninterpretable feature, the phi-probe of a locus of phi-agreement (Chomsky 2000, Schütze 1997, George and Kornfilt 1981). One can imagine proceeding in quite different ways, as an alternative or in addition, if uninterpretable features are ultimately grounded in properties of an interfacing component like Case in the spell-out requirements of nominal stems. Instead of an uninterpretable Case feature, an interface could simply reject DPs that are bare, without a syntactically assigned Case, or DPs not in a specified configuration like the specifier of the Case-assigners v , T. Λ operates straightforwardly on this alternative, since a syntactic object submitted to an interfacing system fails to converge. We proceed using a Case requirement, returning to these options in chapter VI.

Numeration and phases: In the model of Chomsky (1995), a syntactic structure is submitted to each interfacing system or *spelled-out* once only, at the end of the construction. In the model advanced in Chomsky (2000 et seq.), spell-out in certain units, *phases*, and each phase is assembled from a separate, independent numeration. Specific choices are important to Λ , for they determine the domain of convergence and of uninterpretable feature addition, and so the information that is visible to it and the numeration that can be affected by it.

The definition of a phase has varied from an extrinsic formulation, where certain lexical items count as phase-heads and their presence in the numeration defines a phase (Chomsky 2000, 2001), and an intrinsic one, where criteria like convergence at spell-out determine which syntactic objects are phases (Uriagereka 1999ab). I will assume the proposal that a phase is defined intrinsically by the requirement that spell-out delete uninterpretable phi-features valued upon Agree, which must occur in the same timing-unit or step of the derivation as Agree itself since it is not subsequently recoverable which features are uninterpretable but valued and which are interpretable (Chomsky 2000: 131, 2005, Epstein and Seely 2002). A *numeration* consists of all the all the building blocks of a given spell-out unit, including earlier-assembled phases that form a part of it as atomic elements and their edges, what is also sometimes called a *workspace* (cf. Collins 1997, 2002, Frampton and Gutmann 1999, Chomsky 2000, Heck and Müller 2007).

Choices about the spell-out mechanism determine how much of a phase has not yet been shipped off to spell-out and thus remains accessible to potential modification by Λ at a given point. In the model of Chomsky (2000) and used below, only the "edge" of a phase is visible to the phase containing it, (23)a: a phase-head spells out its complement upon Merging with it and triggering movements from it. In Chomsky (2001) the interior of a phase is also visible up to the edge of the next higher phase, (23)b. Nonconvergence at Z/ZP would on either proposal let only Z, α , β , H be visible for feature addition, γ and all below it having been already spelled out and inaccessible. Λ as formulated lets the added feature be potentially added to any element of the numeration of the phase being ZP spelled out and failing to converge, with the new numeration re-submitted to syntactic computation. In Chomsky (2000, 2001), Λ is proposed to add features only to only the phase-head Z of phase ZP, and all syntactic structure built up to Z is immutable. To the extent that the syntactic structure inside a phase is built up at the same time as the phase-head is added, on a single timing-unit or cycle (Chomsky 2005), these alternatives are but one.

- (23) $[_{ZP} Z \alpha [_{HP} \beta [H \gamma [_{QP} Q \delta]]]]$, Z, H, Q phase-heads, and α , β , γ , δ intervening structure
 a. Chomsky 2000: α , Z see only β , H (*immediate spell-out*)
 b. Chomsky 2001: α sees $\beta \dots Q$; Z sees only β , H (*delayed spell-out*)

Uninterpretable features: What uninterpretable features can be added, to where, and is there a relationships between that and how a structure fails to converge?

One issue is the relationship between convergence failure and the feature added by Λ . A feature that cannot eliminate Case like the one that drives *wh*-movement cannot rectify Case failure. Among the alternatives are: the cause of nonconvergence may be linked to the choice of feature added (a simple but stipulative approach); the choice of the added feature may be at hazard (and fail to repair the convergence if not a Case licenser); phases may be sufficiently small to uniquely determine which feature is added (Case feature for phases defined by TP, vP, others for the heads that make their A'-periphery; cf. Riemsdijk and Williams 1981, Williams 2003); there may only be one or a very restricted number of uninterpretable features (edge and phi-features in Chomsky 2006, noting the pervasive connection of A' and phi unexpected in current models: Kimball and Aissen 1971, Passamaquoddy, Bruening 2001, Basque, Oyharçabal 2004, Bantu, Carstens 2005).

Related to both the nature of the features inserted by Λ and the locus of their insertion is the question of parametrizing Λ . The ensuing discussion of the role of Λ in non-obligatory Case reveals both an obvious need to parametrize Λ , so that languages like Finnish and Icelandic can differ fairly minimally in their ability to repair the Person Case Constraint, and the availability of options beside a brute force parametrization of phase-heads for susceptibility to Λ . To take a clear example from the domain of successive-cyclic *wh*-movement to phase-edges for which Λ has been used in Chomsky (2000), many languages do not allow any cross-clausal extraction, but beside parametrizing the phase-head C to allow a feature added by Λ , one may suppose the CPs of the language to have a structure that bars successive-cyclic movement for other reasons like being adjuncts to pro-CP pronouns (Stepanov 2001: chapter 5). One minimal starting point in parametrization is to correlate uninterpretable features of a given type with appropriate lexical items: a phi-probe/Case licenser with v , T, and a DP-internal functional category called Γ below, and continue further to differentiating flavours of v .

1.3.2 *Λ* for PCC repair in French

1.3.2.1 Applying Λ

The issues in formulating Λ become concrete in applying Λ to the French repair of the Person Case Constraint, assumed now to have the following properties:¹⁷

- (24) Assumptions about the PCC and the French PCC repair.
- The PCC is a problem in structural Case-licensing a [+person] nominal when a dative in the applicative construction intervenes between it and its clausal Case-licenser.
 - Clitics differ from strong pronouns in lacking the Case licenser κ on an internal head Γ , making them participate in clausal Case licensing. For dative and accusative pronouns, κ is absent unless selected by Foc° , making such strong pronouns focussed and independent of clausal Case licensing at the same time.
 - Dative clitics are base-generated in the applicative construction above the direct object, dative strong pronouns can be base-generated in the prepositional construction below it (with restrictions on available meanings).
 - The PCC repair turns dative clitics into strong pronouns, i.e. adds κ without adding Foc° , which accordingly surface in the prepositional construction (PP-restriction).

The relevant structures are in (25) (chapter IV, section XX). The prepositional structure is fine because there is no intervener between the [+person] clitic and its accusative Case-licensors. The applicative structure does not converge because the dative intervenes -- here a clitic without κ , but equally any applicative dative including nonclitic ones with κ (but cf. NOTE-3). The repair lets a pronoun without Foc° (focus) appear in as the dative strong pronoun of the prepositional structure by licensing the Case licenser κ on it independently of Foc° , whereas outside PCC contexts, a Foc° -less pronoun is κ -less and a clitic and so restricted to the prepositional structure.

- (25) a. v_{acc} [VP [+person]_{clitic} [V [ApplP $\text{P}^\circ/\text{Appl}^\circ$ dative_{strong}]]]] [prepositional structure]
- b. v_{acc} [ApplP dative_{clitic} [$\text{P}^\circ/\text{Appl}^\circ$ [VP V [+person]_{clitic}]]] [applicative/double object structure]

This last-resort κ -licensing can be construed as an operation of Λ in (26). The construal affects the numeration underlying the applicative structure by adding κ to it, and the new numeration can assemble as the convergent prepositional structure. In predictions, it differs considerably from transderivational or local alternatives that have the power to transform the syntactic structure of the applicative to the prepositional construction, as in Couquaux's (1975) proposal discussed in the last chapter (section XX). A distinctive and correct prediction of Λ is that repair has the very limited character of extra Case licensing and conserves all other contents of the numeration and all principles of syntax. Among the consequences is that the prepositional construction keeps its syntactic and semantic restrictions, like opacity to cliticization or restrictions on interpretation which make it unavailable to possessor datives.

¹⁷ Under the supposition discussed in chapter IV, section XX that datives are, due to their internal structure, minimal-phi 3SG-like elements, not [+person] even if internally [+person].

- (26) Λ : A Case-licensing uninterpretable feature (probe) κ may enter the numeration only if it is needed for convergence [here: for Case-licensing].

In order for this to work as intended, the two prepositional and applicative structure must be composed of the same elements except for κ , as proposed in the last chapter. More precisely, it is necessary that underlying both structures is the same set of lexical choices. It may be that in constructing the numeration, there are syntactic elements that are added automatically to furnish the functional scaffolding of lexical items or to host features present in the numeration, according to UG and language-specific options, as Chomsky (1995: 4.2.2) proposes for various interpretable and uninterpretable features.

The convergence of the underlying numerations must be checked no earlier than the level of the ν P. If Λ were allowed to apply earlier at say the VP level, it would add a Case licenser to the dative simply because the accusative has no Case licenser at that level. More generally, Λ can apply no earlier than the structure containing the minimal canonical Case-licenser for a given DP. This restriction emerges naturally in a phase-based approach to numerations, particularly if spell-out is viewed as the reflex of the valuation of uninterpretable phi-features acting as Case licensers, Chomsky (2000, esp. p. 131, 2001: 5, 2005). In that model, the syntactic coding of the distinctive character of uninterpretable features is as unvalued attributes, which become indistinguishable from interpretable features once valued. Accordingly, spell-out must occur on the same cycle or timing-unit as the valuation, making the ν P here the domain of spell-out.

Although Λ accordingly operates at the ν P level, it must be possible for the added κ feature to land on an element in the maximal projection of the dative pronoun, to Case-license the "nominal core" of the pronoun, say D° . This is natural on the construal of Λ as an interface algorithm governing the construction of the numeration, as in Chomsky (1995), rather than as an algorithm adding features to the head of the current phase, Chomsky (2000, 2001). However, Γ and D° must belong to the numeration of the ν P phase, in the specific sense of not having been spelled out and thus inaccessible. For accusative clitics, it is necessarily the case that their D° is part of the ν P phase, since it is Case-licensed by ν and so must be accessible to ν -Agree. The same goes for all DPs Case-licensed by a clausal element. Therefore, nominal core of DPs is spelled out in a phase separate of its containing ν /T-phase if and only if the DP has an internal, independent Case-licenser κ , Agree by which triggers spell-out. DPs/PPs with inherent Case are then phases, converging with independent conclusions about the phasehood of PPs (Abels 2003, Rezac 2008b). Dative and accusative clitics, by contrast, are not phases since they lack an internal Case licenser κ . The addition of κ by Λ to the numeration of the ν P phase that contains them allows κ to land on the Γ element of the dative clitic. Computation from the new numeration with κ on Γ generates a strong pronoun, internally to which its own Case-licensing by κ on Γ takes place, and which is therefore a phase, unlike the corresponding clitic pronoun in the derivation without κ .¹⁸

There is an interesting consequence to defining nominal and verbal phases alike as the units where Agree values uninterpretable features: only strong pronouns, with $(\Gamma+)\kappa$, and not clitics, can be manipulated by mechanisms that operate over independent spell-out units. Chomsky

¹⁸ If all nominals including pronouns turn out to be phases independently of having a Case licenser, the logic of Case-licensing still requires that the nominal core to be Case licensed not be spelled out. We can make use of the fact that the edge including the phase-head of the next lower phase is spelled out only as part of the containing phase. Γ and D° would then be viewed as part of the edge of the pronoun phase by head-movement or base-generation as a complex head containing the phase-head x , $[\Gamma+D^\circ+x\dots]$, making Γ visible for κ -adding and D° for Case-licensing when the containing ν P phase fails to converge. The rest of a DP is spelled out at the DP level, say the NP complement of D° .

(2004) places adjunction among these mechanisms, including modification, and arguably coordination. If so, there is a natural reconstruction in phase theory of Cardinaletti and Starke's (1999) proposal that clitics lack the syntactic structure necessary to engage in modification and coordination. For them it is a complementizer-like DP-internal head, linked to Case licensing (cf. Travis and Lamontagne 1992, Bittner and Hale 1996). Here it would correspond to $\Gamma + \kappa$, where Agree by κ forces spell-out, and thus allows adjunction to the strong pronoun.

Still underived remains the exclusivity of the dative as the target of Λ -licensed κ -addition; the accusative clitic cannot be turned into a strong pronoun in French (with unclarities discussed in Appendix ACC if the dative clitic cannot be either). One should like to connect this to the other major differences setting apart the accusative from dative pronouns in French: accusatives are bare DPs while datives are marked by the case-marker *à* or dative case, and accusatives need a considerably greater degree of focus as strong pronouns (chapter IV, note NOTE-20). Cardinaletti and Starke (1999) identify *à* as the realization of $\Gamma + \kappa$ (in present terms). The structural parallelism between *à* and dative case suggests that dative case on the clitic is a realization bare Γ , without κ (chapter IV, section XX: BACKGROUND). Accusatives end up missing Γ entirely and so truly bare DPs. Γ is the locus of the greater structural complexity of datives, revealed in their invariable dative case morphology, and plausibly of their marked person-like interpretation (see chapter IV, note NOTE-10). Since Γ is missing on accusatives, it must be introduced through selection by $\text{Appl}^\circ/\text{P}^\circ$. Γ thus reconstructs the concept of inherent Case, while divorcing it from κ and letting dative clitics participate in clausal Case-licensing.¹⁹ Accusatives then cannot have κ added to them by Λ at all, and Foc° cannot simply select a complement with $(\Gamma + \kappa)$ as with datives, ruling out regularly focussed strong pronouns.²⁰ Some speakers having an alternative, more marked way of introducing focussed strong accusatives.²¹

By assuming a last-resort crash-driven algorithm for repairs of [+person] licensing, the repairs themselves no longer refer to uninterpretable phi-features qua phi-features. [+person] fails to get licensed on the nominal where it is interpretable, and that adds a licenser to another element, one where the former nominal's [+person] is not interpretable, without a direct reference to it. Therefore, this reference to uninterpretable phi by narrow syntax is liminal, straddling the boundaries of syntax and external systems, and the reference to uninterpretable phi is no longer individuated by the content of what is referred to as phi-features, but rather as an uninterpretable

¹⁹ Cf. the distinction between P° and $\text{P}^\circ + \text{phi-probe}$ in Rezac (2008b).

²⁰ The accusatives of Italian varieties pattern with French (and Italian) datives both in focus and (at least as a tendency across different structures and varieties) *a*-marking, as discussed in these references. One would expect then both to be accessible to PCC repair as strong pronouns if the present supposition is correct. Similarly for Spanish *a*-marked DPs and *leísmo* pronouns; the Spanish PCC repair at least partly supports the hypothesis that the accusative can be targeted by it (see chapter IV, note NOTE-50).

²¹ NOTE-3: Perhaps, mechanically, Foc° selecting both $\Gamma + \kappa$. However, suppose the focus is introduced in some way unrelated to κ . This suggests a line of inquiry. As shown in the last chapter, in French all applicative datives create the PCC, as in Basque or Finnish below, not just clitics without κ . Since these datives like causees and the psych-experiencers of *falloir* 'need' can be strong pronouns and full DPs, they are expected to have κ . However, the legitimacy of strong pronouns and of focus here varies among French speakers as noted in the last chapter (notes NOTE-100, NOTE-90). Suppose they do not in fact have κ and need clausal Case-licensing, so if legitimate they make use of alternative licensing, leading to the variability noted (one would expect these to be the same as allow focussed accusatives, which is true for MJ). Then absence of κ can be taken as the property of a dative intervener that triggers the PCC, and PPs that intervene without creating the PCC like English *to*-experiencers of *seem* (Chomsky 1995: XX, Torrego 1996, 2002, McGinnis 1998, Boeckx 1999) simply have κ . The details are tied with how to have a dative intervener in the PCC block [+person] but not 3rd person licensing (chapter IV, section XX). See Rezac (2008b) for a proposal that makes the necessary distinction as opaque and partly transparent PPs, though in partly incompatible terms. Cf. also note NOTE-300.

feature pure and simple – unless all uninterpretable features turn out to be (species of) phi-features. However, the reference to uninterpretable phi in the statement of the relevant constraints blocking [+person] licensing in the configurations we have looked at, like the Person Case Constraint, seem to ineliminably involve explicit reference to uninterpretable phi, preventing for example a [+person] accusative from crossing a (person-like) dative pronoun or vice versa by locality. The argument that has put uninterpretable phi into syntax has had to be made from the repairs, not from the constraints, but once the former are in the syntax, the former are by modularity, and so is their reference to uninterpretable phi-features.

1.3.2.2 Restricting Λ

The theoretical choices made in the preceding paragraphs seem simple and plausible, and they ensure that Λ works as intended to turn a clitic into a strong pronoun to avoid the Person Case Constraint. We can now turn to the other side of the coin, ensuring that Λ does not overapply to rescue other configurations where a clitic is impossible. Here shines through the empirical gain of whittling down a very general transderivational constraint like Minimize Structure or the "effect-on-output" formulation of Λ , sensitive to any syntactic or interpretive problem, to a mechanism sensitive only to convergence failures, that is, uninterpretable feature licensing.

To begin with, Λ as now formulated excludes from considerations for repair all problems that arise within or at the output of external systems because it is triggered by non-convergence, unlike its more liberal original reference to an "effect on output". Correctly so: morphophonological clitic cluster problems (section XX of the last chapter) and interpretive problems like the ban on overlapping reference (section XX), or conflicting topichood (in causatives of unergatives section XX) do not license unfocussed strong pronouns.

Remaining configurations where clitics are problematic fall into two groups: contexts requiring strong pronouns, and contexts preventing cliticization. Modification belongs to the first group.²² On one view, modification involves a type of composition of syntactic objects distinct from that of head-argument composition: adjunction. Chomsky (1995, 2000) treats adjunction as a special type of Merge, pair Merge, and extends this line of thought in Chomsky (2004) to posit that it occurs during spell-out and joins spelled-out units. The proposal naturally derives the basic properties justifying adjunction as a distinct mechanism, such as optionality and strong opacity to extraction. Because adjunction operates over spelled-out units whose numerations have converged, it follows that Λ triggered at the level of the adjunction cannot break upon the spelled-out, converged phases of its constituents. Consequently, failure of adjunction to a pronoun would not license Λ adding κ to the pronoun.

Independently, failure of adjunction results in two unjoined objects being submitted to the interfacing systems, rather than one, and there is no reason to suppose that is illegitimate input to them. If problems arise, it is in the interpretation or linearization of the resulting multiple unconnected objects, perhaps leading simply to apposition or parataxis. This consideration seems to transfer to the alternative view of modification as argument selection (Cinque 1999).

The second group of problems where dative clitics and Λ -derived unfocussed dative strong pronouns are alike unavailable is constituted of environments where a clitic lacks a host in-situ or in a position reachable by its movement, and potential hosts are separated from it by islands. Table XX repeats the distribution of repairs and non-repairs in the structures studied in chapter

²² Coordination may as well, or to the second group as an island constraint on cliticization and failure to provide a host for the clitic in-situ. This is also a possible analysis of modification, eschewed to discuss the alternative.

IV, retaining now only those where the failure of cliticization seems syntactic. The goal is to find a difference between their failure to converge and the failure of v Ps where the PCC arises, which do not converge because a [+person] clitic is not Case-licensed.

(27) Table XX: Syntactic cliticization failures irreparable by PCC repair

Construction	Dative	Structure	Syntactic problems
AP modifier		NP [_{AP} ADJ DAT]	no host, *extraction
ECM	àDP, cl	croire [ACC [ADJ DAT]]	no host, *clitic climbing
Caus. of trans + dat.	àDP, cl	faire [DAT _{EA} ... DAT _{IO}]	* oblig. clitic climbing if IO = cl & EA = àPP

APs modifiers lack verbal material, and they are absolute barriers to extraction, so they can host no clitics, yet unfocussed dative strong pronoun cannot be used for the complement dative-selecting adjective. Among such modifiers are to be distinguished plain adjectives like *redevable* 'indebted to', and participial modifiers like *envoyé* 'sent (to)', with the same syntax as gerunds and infinitives, and in Italian the ability to host clitics unlike adjectives (Monachesi 1995). Failure to cliticize in participial clauses might be due to an arbitrary morphophonological attachment restriction, and as such it would be invisible to Λ .²³ Failure to cliticize in plain adjectival modifiers may involve a syntactic deficiency of the AP, in particular, the absence of a Case licensing mechanism for dative clitics, in which case the failure of Λ to apply must be explained otherwise. Parametrization of Λ is one option, making v° but not A° phase heads susceptible to its application. It is tempting to seek to derive the parameter from the fact that v° is a Case-licenser and A° is not, although the addition of κ is not affecting v° but a member of the numeration of its phase. The same analytical options are available to AP complements of ECM verbs, which may however join the next paradigm.

This paradigm is the last in Table XX: infinitival complements of causatives with obligatory clitic climbing that run into something like the Specified Subject Condition. Here too, failure to cliticize does not lead to the licensing of an unfocussed dative strong pronoun within the infinitive by Λ . Suppose that the relevant syntactic problem is an intervention effect of the unmoved subject at the edge of a phase headed by α on successive-cyclic cliticization out of it, since it is eliminated by cliticizing the subject (cf. Richards 2001: 76-9, Anagnostopoulou 2003: 42f. for a close A-movement parallel). The dative must first pass through the edge of the α -phase, the position X in (28), since if it remains in-situ it is trapped within the phase regardless of whether the dative subject stays in-situ or moves out.

(28) T causer [v /CAUS [DAT_{EA} ___X α [_{INF} V DAT]]]

Consider now the application of Λ to this derivation. Spell-out of the phase α submits the infinitive to the interface, but that infinitive does not contain the dative clitic which is at the edge of α . Therefore, spell-out is fine and the infinitive converges. This is merely the general property of all successive-cyclic movement, removing elements in need of Case or A'-licensing from a phase and allowing it to converge. Further movement of the dative to cliticize to T/ v and be Case-licensed by the matrix v° is fine if the dative EA cliticizes first and does not intervene, but blocked if the EA stays in-situ. In the latter situation, spell-out of the matrix v -phase fails

²³ See Zribi-Hertz and Diagne (2002) for a recent development of the position and overview of the literature. In Romance, particularly striking is the conditioning of pro- vs. en-cliticization by whether an infinitive ends in a stressed vowel in the Franco-Provençal dialects studied in Ratel (1958: 32) and reported in Morin (1979a: 304-5).

because it contains a dative pronoun with no Case licensing. Λ can apply to this numeration, add the Case licenser κ to the dative clitic, and so allow the numeration to reassemble with a strong dative pronoun. However, this strong pronoun cannot be "reinserted" back into the infinitive, which has already been spelled out. It is part of the vP phase, and the only position where it can be inserted is at the edge of α in position X. However, X is a successive-cyclic position. One of the basic if ill-understood properties of such positions is that they are reserved to elements that move out of them as in (29), as Boskovic (2002: 136-8) demonstrates. The position X in (28) can only host a clitic that cliticizes out of it, not a strong pronoun that cannot move further, and there are no other positions for a strong pronoun in the v -phase. The result of the application of Λ fails.

(29) Who said $\langle *what \rangle$ that $\langle *what \rangle$ Mary bought $\langle what \rangle$.

This way of differentiating clitic climbing and [+person] licensing failures illustrates a general point about Λ , whether on the right track or not. Λ is only sensitive to convergence failures detectable within the unit submitted to spell-out. The Person Case Constraint fits this description, because a c-commanding dative prevents a [+person] accusative from being Case-licensed within the complement of v . By contrast, convergence problems not detectable within a given phase because incurred by material evacuated to its edge, or caused by phase-external considerations like the impossibility of attachment, cannot be repaired within a phase. Along with blindness to problems beyond the input to external systems, Λ is restricted to the repair by very restricted means of a very narrow class of problems: the non-convergence of a spell-out unit at the interface, by adding to it uninterpretable features.

Here concludes the discussion of the application of Λ to the French PCC repair, bringing up the basic features and scope of the mechanism. The following sections take the last-resort Case introduce of Λ in (26) and extend it to "dependent" Case in [+person] repairs in particular and to dependent Case in general, long a thorn in the theory of Case.

1.3.3 The problem of dependent Case

The problem of dependent Case arises in theories of the difference between morphologically accusative and ergative languages. Accusative languages, like French or Finnish, treat the subject of transitives in the same way as the subject of intransitives for case and agreement, nominative, and set the object of transitives apart, accusative. Ergative languages, like Basque, treat the object of transitives and the subject of unaccusatives in the same way, absolutive, and set the subject of transitives apart, ergative. The languages are "morphologically" ergative or accusative because save for Case and agreement, they seem to have the same syntax for the core arguments.

(30) a. Accusative languages: $\boxed{EA} S_{T-nom} O_{v-cc}$ b. Ergative languages: $EA_{T-erg} \boxed{S} O_{v-abs}$

The distribution of these four cases on a DP α is independent of the local selection of α , unlike inherent Case. The intransitive subject *villa* in (31) is accusative when embedded under an accusative-assigning configuration, and becomes nominative when that configuration is passivized to assign nominative, all without changing position. In contrast, the dative *Olafi* in the same circumstances remains dative as determined by its selection, (32). In the morphologically ergative languages in question like Basque, ergative and absolutive participate in similar alternations (raising-to-ergative, Artiagoitia 2001ab, Rezac 2006).

- (31) a. Ég tel vera villu í þessu handriti
 I believe to.be error.ACC in this manuscript
 I believe there to be an error in this manuscript.
- b. Það er talin vera villa í þessu handriti
 there is believed to.be error.NOM in this manuscript
 There is believed to be an error in this manuscript.
- (Icelandic, Jonas 1996: 74-5)
- (32) a. Við töldum Ólafi hafa leiðst
 we believed Olaf.DAT to.have bored
 We believed Olaf to have been bored.
- b. Ólafi var talið hafa leiðst
 Olaf.DAT was believed to.have bored
 Olaf was believed to have been bored.
- (Icelandic, Sigurðsson 2002: 699)

Much work builds on the following conclusions about non-inherent cases (Marantz 1991, Bobaljik 1993, Laka 1993a, 2000, Bittner and Hale 1996, Harley 1995, Rezac 2007):

- (33) Ergative vs. accusative systems:
- (i) The c-command relationships of EA and O, and of their Case assigners, are the same across ergative and accusative languages.
 - (ii) All four cases (NOM, ACC, ERG, ABS) are noninherent.
 - (iii) The nominative and absolutive are "obligatory" and unmarked cases that are present by default and so assigned to a DP if there is one.
 - (iv) The accusative and ergative are "dependent" cases: their assignment to a DP depends on the existence of a "case-competitor" DP that gets the obligatory case, or viewed differently, the assignment of the obligatory Case itself, and/or on the existence of a DP that requires Case and cannot get one otherwise.

(i) is unanimously assented to for morphologically ergative languages like Basque (Ortiz de Urbina 1989, Oyharçabal 1993), and (ii) appears to hold in them as well as noted. The heart to the system is (iii) and (iv). These two hypotheses encode the mysterious property that ergative and accusative share: the fact that they cannot be assigned unless the absolutive/nominative assigned (Burzio's Generalization in accusative systems). The generalization groups the ergative and accusative as a class, and it is good grounds to do so insofar as such dependency of one syntactic phenomenon on another is uncommon: the logic is the same as grouping adjunct and subject-contained parasitic gaps, for example. Striking confirmation of the grouping is the invocation of ergative and accusative in parallel repairs of the Person Case Constraint in the two types of languages, just when the obligatory case is unavailable for the subject of an intransitive; it will be discussed presently.²⁴

²⁴ NOTE-45: The system needs some way to deal with unaccusative and passive structures that only assign the unexpected marked case (ergative, accusative), as in Irish, Icelandic, French, and Slavic accusative-only assigning unaccusatives and impersonal passives (see e.g. Lavine and Freidin 2002 for Slavic). To take Basque, we get

The assumptions in (33) can be articulated in a syntactic or morphological approach to case and agreement. On the syntactic view, each case comes from a specific Case assigner, whose choice is made in such a way that the coupling of a Case assigner and a DP falls out from standard assumptions about syntactic dependencies. Under the assumption that a dependency is formed with the closest goal in the c-command domain of the target (Case licenser), there is some head above the EA, say T, as the case assigner for the EA, thus nominative and ergative, and some head below EA but above O, say v , as the case assigner for the O, thus accusative and absolutive, as in (34). Since within each system only two cases are distinguished, let us suppose that there are only two Case assigners available, T and v ; then calling the T-Case nominative or ergative is just saying that it is also assigned to S or not. This choice is coded as a parameter, the *Obligatory Case Parameter* (35), which says whether it is T or v Case that must be assigned when there is only one DP available, S.

- (34) a. T_{NOM} EA v_{ACC} O/S b. T_{ERG} EA v_{ABS} O/S

- (35) Obligatory Case Parameter: If there is only one active Case locus, it must be:
 (A) v ($= v_{\text{ABS}}$), for ergative languages;
 (B) T ($= T_{\text{NOM}}$), for accusative languages.

The last step needed is a statement of the intuition in (iv). The Case assigner not forced by the Obligatory Case Parameter may but need not assign its Case, that is, it does so as needed, making it available for and only for the DP that to which the obligatory Case assigner has not assigned Case, (36). This is basically the proposal of Bobaljik (1993), Laka (1993b, 2000), with somewhat different choices of Case assigner names and conditions on syntactic dependencies.

- (36) (obligatory locus relations superscripted ¹, dependent locus ²)
 a. T v^1_{ABS} S^1 (unaccusatives -- erg. system)
 T^1_{NOM} v S^1 (unaccusatives -- acc. system)

raising-to-ergative and ergative expletive + CP intransitives like *irudi* 'seem', as well as intransitives with ergative themes like *iraun* 'last', along with intransitives with absolutive agents, e.g. *borrokatu* 'fight' (cf. *borroka egin* 'fight', lit. 'do (a) fight'): see Oyharçabal (1992, 2000), Artiagoitia (2001ab). See Baker (1996: 211-218) for an extensive discussion of such mismatches in Mohawk, and Artiagoitia (2001a), Albizu and Fernández (2006: 89), Oyharçabal (op. cit.) for accounts of some of the Basque structures. Extending Laka's approach to unergatives to e.g. *irudi*, one might stipulate a null argument or "case competitor" to discharge the obligatory Case, similar to the *it* in English *I find (*it) interesting here* (Bošković 2002: 171 note 4) or the antipassive D of Bittner and Hale (1996). This kind of explanation often mirrors the diachronic origin of these exceptions: the Basque raising-to-ergative verbs *irudi* and *eman* originates from the transitive locution "have image" and from "give" (cf. English "give out that") respectively, while the ergative-subject unaccusatives *irakin* 'boil' or *iraun* 'last' are old, synchronically fossilized causatives.

These contexts where dependent Case is found without obligatory Case evident on the surface might seem to cast doubt on the reality of the generalization for these languages and recalls on the one hand active languages with semantically determined (inherent) case marking and on the other arbitrary c-selection (David Pesetsky, pc). However, a strong argument for the reality of dependent Case, namely its use and unity in PCC repairs, extends to languages like Basque, which also has such things as raising-to-ergative and ergative expletives (Artiagoitia 2001ab, Albizu and Fernández 2006), but which is subject to the exceptions of the preceding paragraph. Basque also patterns unexpectedly for the addition of an applied object without inherent Case to a passive or unaccusative construction: some languages have one of the two DPs then show up with dependent Case (Kichaga, Marantz 1991, Inuit, Bittner and Hale 1996, Chuckhi, Bobaljik and Branigan 2006), others end up with obligatory Cases (Basque, Albizu 2000, Nieuwen, Massam 2006, Georgian, Legate 2008; cf. Katzir 2007 for discussion). Similar variation exists in copular constructions (Maling and Sprouse 1996). See section 1.4.

- b. T_{ERG}^2 EA^2 $v_{\text{ABS/ACC}}^1$ O^1 (transitives -- erg. system)
 T_{NOM}^1 EA^1 $v_{\text{ABS/ACC}}^2$ O^2 (transitives -- acc. system)

Unfortunately, current theory of syntactic dependencies does not easily lend itself to stating this intuition. Obligatory Case may be coded as the requirement that a Case-licenser (phi-probe) if present must have a goal; this is the Inverse Case Filter of Lasnik (1999), Boskovic (1997) and a basic property of (phi-)probes in Chomsky (2000). By the same token, the Case locus responsible for dependent Case assignment must not have this property. Rather, it must depend on the obligatory probe having found a goal or there being a goal beside the one of the obligatory probe. However, such a *parasitic* dependency on an obligatory probe is difficult to arrange. Syntactic dependencies have the path-dependent character discussed in the previous chapter for the PCC: they are not sensitive to information c-commanding their target or c-commanded by their goal, except to being contained in another dependency in which case they are parasitic on it:

- (37) Path-dependency: for a syntactic dependency Δ between a target α and a goal β , and the "path" of nodes c-commanded by [or in the minimal domain of] α and c-commanding β , Δ is sensitive only to:
- Criteria dependencies: information that lies on the path, such as intervening islands.
 - Successive cyclic movement: whether Δ extends beyond α .
 - Parasitic dependencies: whether Δ is within the path of another dependency (parasitic gaps, Kayne 1981, 1983, Pesetsky 1982, dative cliticization, Anagnostopoulou 2003).

The dependent character of dependent Case recalls that of parasitic dependencies, but only one of ergative and accusative can be articulated as one. Bobaljik and Branigan (2006) propose that the ergative of Chukchi is parasitic on absolutive assignment. It is reminiscent of Anagnostopoulou's (2003) proposal for dative cliticization in Greek as parasitic on nominative and accusative assignment. In (38), an inherent dative between the nominative assigner T and S cliticizes to T as a partial goal of the nominative phi-probe of T, which continues after moving it to the next DP with no inherent Case and assigns it nominative. For Bobaljik and Branigan in (39), the Case-assigner T responsible for absolutive assignment to S/O (and their movement), and if there is an argument that needs Case licensing on the way, namely EA between T and O, is also gets Case from T (and moves). The non-final Case assigned by T is distinguished as the more marked, dependent ergative. Such a system can only be made to work for one dependent Case: the other, accusative, is not on the path between the nominative and its assigner, and so must be handled as on par with the T-assigned nominative. Bobaljik and Branigan do opt for the accusative case being just a regular Case assigned by v . It ceases to be a dependent Case that is barred from the subject of intransitives for a principled reason, as the ergative is in their system.

- (38) $[S_{\text{nom}<T} [\text{DAT}_{\text{cl}} + T [\text{ApplP } t_{\text{DAT}} [\text{Appl} [\text{VP } V \ t_S]]]]]$
 (Greek dative cliticization, Anagnostopoulou 2003)
- (39) $[_{\text{TP}} EA_{\text{erg}<T} [O_{\text{nom}<T} [T [\text{VP } EA [v [\text{VP } [V \ \Theta]]]]]]]$
 (Chukchi ergative, Bobaljik and Branigan 2006)

This conundrum of dependent Case has engendered a variety of responses. One is to abandon the notion of dependent Case. It is then an accident that ergative and accusative alike are not assigned to the subject of intransitives. Accusative-assigning v might be one that selects a non-

oblique external argument (Chomsky 1995: XX), and ergative-assigning T one selecting such a transitive v (Albizu and Fernández 2006). Nothing prevents other selectional relationships like an unaccusative accusative-assigning v . These proposals abandon a theoretical status of "dependent" for ergative and accusative and their grouping, and for both these reasons they will prove unsuitable to the use of these cases for repairs of the Person Case Constraint.

Another response is to accept the entire foundation (33) on which the above syntactic work has been built, but jettison the assumption that case assignment reflects a syntactic process and that therefore the distribution of dependent Case should be constraint by the same properties as parasitic dependencies. This view is developed as a morphological algorithm by Marantz (1991) in (40)-(42).²⁵ Its commitment is the great enrichment of the syntax→PF mapping, with potentially unbounded dependencies across A-movement domains and with c-command-like hierarchical relationships among phrases (see also chapter I).²⁶ The reason why the proposal can side-step the syntactic path-dependency problem is because very little is known about the supposed post-syntactic hierarchical unbounded dependencies among phrases, and so nothing like path-dependency is known to restrict them. It is therefore possible to simply posit that the algorithm refers to the notion of a competitor anywhere in an A-movement domain, (42). One great promise of the algorithm is in deriving the encapsulation of syntax from phi-agreement and structural Case assignment, but this has now been shown to be incorrect, particularly in the domain of PCC repairs which will be of interest for dependent Case here.

- (40) CASE features are assigned/realized based on what governs the chain of the NP headed by N+CASE [according to the hierarchy in (41)].
- (41) Case realization disjunctive hierarchy: (1) lexically governed case; (2) "dependent" case (accusative and ergative); (3) unmarked case (environment-sensitive); (4) default case.
- (42) Dependent Case: assigned by V+I to a position governed by V+I when a distinct position governed by V+I is
 - a. not "marked" (not part of a chain governed by a lexical case determiner)
 - b. distinct from the chain being assigned dependent case.

Dependent case assigned up to subject: ergative.

Dependent case assigned down to object: accusative.

(Marantz 1991)

If dependent Case is to be kept in narrow syntax, narrow syntax must be enriched to allow reference to competitors. Bittner and Hale (1996) propose just that. A review of the details would take us too far afield, but the essence lies in letting Case assignment to or *Case binding* of β by a head α refer to a *Case competitor* γ which has unmarked Case anywhere in the A-movement

²⁵ Whether empirically the algorithm makes the right predictions is a matter of debate, particularly in what happens when there are multiple DPs in need of Case in the c-command domain of INFL (Legate 2008 vs. Katzir 2007), but it is orthogonal to the present concerns – the algorithm could be suitably modified.

²⁶ It is important to observe that Marantz's proposal does not simply situate Case and agreement in the syntactic computation after the mapping to LF, as proposals for uninterpreted syntactic operations like those of Embick and Noyer (2001) or Sauerland and Elbourne (2002). The very principles posited are radically not those of syntax.

domain for β , on or off the path α - β . Markedness is coded structurally: DPs with unmarked Case are DP/NP, those Case-bound are KPs containing DPs.

- (43) Types of Case:
- a. Inherent Case: KP: K filled at base-generation by selection.
 - b. Unmarked structural Case: K-less nominals (DP, NP) governed by (K or) C.
 - c. Marked structural Case: KPs with empty K that is Case-bound by I°/D° (ergative) or V°/P° with an adjoined D° (accusative).
- (44) a. Case-binding: Let α be a head which delimits a small clause, and let β be an argument. Then α *Case-binds* β , and β 's head, iff
- (i) α locally c-commands β ;
 - (ii) α governs a Case-competitor for β .
- [where a small clause is a lexical predicate M and its MP-adjoined subject, delimited from below by the lexical head M and from above by the closest governing functional head]
- b. Case competitor: γ is a *Case-competitor* for an argument β , if γ is a K-less nominal which is in a chain with a co-argument [or a pseudo co-argument, ignored here] of β .
- c. γ is a co-argument of β , iff (i) locality: some head which governs or A-projects γ also governs or A-projects β , and (ii) independence: γ excludes β and is not in a chain with β . [where a head A-projects all of its arguments]

(Bittner and Hale 1996)

The Bittner and Hale proposal abandons the path-dependency of syntactic dependencies. By letting the dependency between a Case assigner and its assignee be sensitive to an element not on its path, the Case Competitor, it opens the door to A-movement that refers to the presence of a DP or a PP below its path, to *wh*-movement referring to a path-external *wh*-word. The move is legitimate since the existence of dependent Case and its syntactic character do indeed call for an enrichment of syntax, and relativized to features, it could be extended to the role of dependent Case in repairs of the Person Case Constraint. However, it seems unnatural to model dependent Case by weakening path-dependency to allow reference to an external competitor. It is only one conceptually arbitrary weakening of the underlying principles, among others like sensitivity to a competitor embedded in a competitor, the present choice being made to fit the data. The descriptively important properties of dependent Case are not thereby reified as syntactically significant: its dependence on (a competitor DP which gets) obligatory Case and its occurrence as a last-resort only if a DP needs Case.

These properties suggest different ways of looking at dependent Case. One is as a *last-resort* mechanism that occurs in response to the need to Case-license a DP when there is no other Case-licensing available to it, for example because the obligatory Case licenser has been taken by another DP. The other is as an independently available mechanism that only happens to *emerge* when the needs of an obligatory Case licenser are met by Case competitor DP, and there is another DP that needs Case. These alternatives make different predictions and repairs of the Person Case Constraint suggest that the former is right, as discussed in the next section.

1.3.4 *Dependent Case as last-resort or emergent*

One way to describe the phenomenon of dependent Case is as Case that occurs only if there is a DP that cannot be licensed by the obligatory Case licenser: in accusative languages the transitive object, because T license the transitive subject (nominative), in ergative languages the transitive subject, because v because license the transitive object (absolutive). One theoretical possibility for dependent Case is to theoretically reify this description to say that it is assigned as last-resort. It falls then directly under the purview of Λ (8) as applied in (26), repeated:

- (26) Λ : A Case-licensing uninterpretable feature (probe) κ may enter the numeration only if it is needed for convergence [here: for Case-licensing].

Applying Λ to dependent Case leads to conclusions about it that dovetail with those reached on the basis of the PCC repair in French: Λ operates over numerations of phases, not just over phase-heads at the edge of a phase, and the spell-out of a phase is triggered by Agree for uninterpretable features. Consider the structures where obligatory and dependent Case operates in (34), repeated below. The ergative system is trivial. Spell-out of O/S must naturally be delayed at least until the phase headed by v_{ABS} , for otherwise Λ could illegitimately provide O/S with its own autonomous Case licenser. v_{ABS} has the obligatory Case locus and so has its own Case licenser (phi-probe) without the need for Λ ; Agree with O/S leads to uninterpretable feature valuation and spell-out. Higher up, there is no Case licenser for the EA at all, so its spell-out at some point, say C, fails to converge. Λ adds κ to some head that is in an appropriate structural relationship to the EA to Agree with it and thus Case licenses, say T_{ERG} (or C, Fin, etc.).

- (34) a. T_{NOM} EA v_{ACC} O/S b. T_{ERG} EA v_{ABS} O/S

The accusative system is more interesting because of its intuitive counter-cyclicity: the locus of dependent Case for O is v_{ACC} , but the need for a dependent Case can only be established once the derivation knows that there is an EA in need of Case higher up. In conjunction with the phase-theoretic proposal that spell-out is triggered by the valuation of uninterpretable features, the Λ approach to dependent Case derives this property. v_{ACC} is not the locus of obligatory Case and so has no phi-probe for O/S, and so it is not a phase head and does not trigger spell-out. Higher up, the EA is Case-licensed by the obligatory Case licenser T_{NOM} which leads to spell-out (whether viewed as including C or not). Spell-out fails however because O has not been Case-licensed. Λ adds a Case-licenser κ to the numeration underlying the spelled-out phase. If and only if κ lands on some head capable of entering into a syntactic dependency with O will the derivation from the new numeration converge. By locality, this head must be below EA, which would otherwise intervene, that is v – now v_{ACC} with Λ -added κ . The use of Λ requires that not just any v with an external argument causes the spell-out of its complement, only v with a Case-licenser (phi-probe), as expected on conceptual grounds.

There is quite a different significant description of dependent Case that one may choose to reify theoretically: its dependency on obligatory Case, its secondary character. One way to approach this is to suppose that dependent Case is always around as an option, not last-resort, but obligatory Case trumps it if there is only one DP because obligatory Case must be discharged. Dependent Case then emerges as soon as that need is controlled for – by adding another DP. The theory reifies neither the notion of a competitor, as in the approaches of the preceding section,

nor last-resort, as above. It views dependence as the blocking or emergence of an ever-present option in the face of an inviolable requirement whose nonsatisfaction causes nonconvergence, cast specifically in the terms of *obligatory* and *optional* Case-checking. Let us call it the *emergent* approach to dependent Case. The obligatory-optional distinction often makes the same cuts as the obligatory-last resort distinction, but not always.

This is the proposal put forward in Laka (2000: 109-113). The normal probes of the minimalist program are responsible for assigning obligatory Case (on T of accusative languages, *v* of ergative ones), and they have their standard property that they must Agree (check) with a goal. However, this property is proposed not to hold of all probes, and those of which it holds are distinguished as [+active]. The probes that assign dependent Case are [-active] (*v* of accusative languages, T of ergative ones): they can Agree but need not.²⁷ Under the assumption that a goal cannot be assigned Case twice, it follows that if a goal needing Case is in a situation to with either a [+active] or a [-active] probe that has not yet Agreed, it must Agree with the [+active] probe. Otherwise the [+active] probe has no goal and the derivation crashes. Since a [-active] (say accusative *v*) need find no goal, it is happy in such cases without Agree. If however a [+active] probe has a goal, a [-active] probe may Agree with one too. Dependent Case qua [-active] probes is therefore always optionally available, but using assigning it when there is a [+active] probe that has not assigned obligatory Case crashes. Thus crash due to unsatisfied [+active] probes filters the possible derivation to restrict dependent Case to contexts where obligatory Case has been assigned:²⁸

- (45) a. T_{ERG}

V _{ABS}

 S_{ABS} √
 b. T_{ERG}

V _{ABS}

 S_{ERG} *(active feature unchecked)
 c. T_{ERG} EA_{ERG}

V _{ABS}

 O_{ABS} √
- (46) a. T_{NOM}

V _{ACC}

 S_{NOM} √
 b. T_{NOM}

V _{ACC}

 S_{ACC} *(active feature unchecked)
 c. T_{NOM} EA_{NOM}

V _{ABS}

 O_{ACC} √

The optional character of [-active] probes is evidently closely similar to that of last-resort probes, but the former are not dependent on convergence for insertion. They are rather "hidden" by nonconvergence when they would interfere with the satisfaction of a [+active] probe. Eliminating that overlay of nonconvergence should reveal them in their full optionality, independent of last-resort. This is the touchstone that empirically differentiates the emergent and last-resort conceptions of dependent Case, and the evidence points towards the necessity of last-resort probes for Case licensing. An independent that could not be handled by optional probes

²⁷ This does not reduce to the distinction between strong -- weak features (pre -- post spellout): the characterization of [-active] features is that they do not need a goal, while [+active] ones do.

²⁸ Although Laka's proposal introduces a split in the types of uninterpretable features within narrow syntax, this is inessential. Bearing a probe is a property of a functional item in the lexicon. The [±active] property of probes can be recast as a [±active] property of lexical items such that [+active] lexical items are obligatorily endowed with a probe upon the construction of the numeration and [-active] ones only optionally so. Alternative without increasing the inventory of syntactic primitives at all, the [±active] distinction can be eschewed by the theory by assuming that probes are present on functional items in the lexicon, and those that correspond to [-active] probe hosts come in two varieties, with and without a probe.

are syntactic dependencies that are clearly legitimized only by interface requirements, as was the case in quantifier raising.

A DP that can Agree with a [-active] Case licenser cannot fail to be Case licensed for any reason whatsoever, while licensed by a Case licenser added as last-resort under certain conditions fails to get Case when those conditions are not met. We have already met the relevant type of problem in chapter IV (section XX) for the Person Case Constraint, where it arises for the impossibility of an uncliticized dative pronoun in French when cliticization is impossible, even when all the potential requirements of an attractor for the dative would be satisfied. The theoretical apparatus at that point predicted that a nominal should survive as a strong pronoun if it fails to move, simply because a strong pronoun is its realization if not moved. Transferring the hypothesis to dependent Case, the ergative/accusative would be simply the unconditional realization of unmoved nominals. However, this proposal seems to massively incur the problem of the French dative on a more massive scale: too many scenarios suggest that a nominal needs Case licensing in a given configuration and that such licensing may be parametrically absent, as in the classical unergative-unaccusative difference *The rocks thundered* / **fell their way into the ravine* discussed in section 1.4 and other configuration there, or those of note NOTE-45. The point is of all the more poignant because we will see the subject of applicative unaccusatives assume dependent Case as necessary. More distantly, we observe that when arguably Case-motivated movements like cliticization are blocked as in coordinate structures (Cardinaletti and Starke 1999), the result is not generally rescued by dependent accusative or ergative. Dependent Case simply does not surface generally when obligatory Case is unavailable. With either a [-active] or Λ -added as a Case assigner, we are in a position to parametrize constructions by stipulating that a relevant lexical item, like the unaccusative *v* of English, cannot be a locus for a [-active] or Λ -added Case licenser. However, the [-active] probe account fares as badly as the one without any special licensing requirement for the original problem, the unavailability of strong form for datives: the [-active] probe that licenses an unfocussed dative strong pronoun would have to be present only in function of an external [+person] accusative. Last-resort dependent Case insertion can be modulated as we have seen for the dative in section 1.3.2.2.²⁹

Therefore, I will proceed to explore the idea that all nonobligatory Case is to be modeled as a last-resort rather than optional mechanism. The conclusion is tentative. It imports the results from one domain, repairs of the Person Case Constraint by clitic-strong pronoun alternation which cannot be modeled as an optional probe, to one that does not superficially need to be analyzed alike, its repairs by dependent Case below and so to dependent Case generally here. Yet the empirical unity of the responses to the same well-delineated problem suggests their unification. Independently, the last-resort mechanism for dependent Case is worth considering as a theoretical development of the empirically striking last-resort character of a phenomenon that

²⁹ One way to construe the scenario in this paragraph where a dependent Case is the realization of an unmoved DP is along the lines suggested in chapter III for Arizona Tewa, where the ergative is the VP-internal Case of the external argument unless it is attracted out, and more generally in the "peeling" theory of Case of Michal Starke p.c., Caha 2007, Medová 2008. I am grateful to Tarald Taraldsen for discussion of this point. An analogous problem as in the text arises for a somewhat different interpretation obligatory Case stacks on and thus over-writes dependent Case under normal circumstances and dependent Case surfaces when this fails to occur: for proposals with the relevant tools, see Richards 2007 on Case stacking, Rezac 2004: chapter 5 for some of the constructions discussed here. Counter-examples where dependent Case does seem to arise in contexts of unavailable structural Case are, I think, only apparent: the default accusative of English, a mechanism by all accounts outside the dependent Case system and not using the accusative in other languages or (ever?) the ergative (Schütze 2001, Quinn 2005; cf. also the language-specific oblique Case of Bittner and Hale's 1996).

lies beyond the pale of ordinary syntactic dependencies. So far, that character has only been seen in intransitive-transitive alternations; in the following subsections it finally appears in the starring role of a repair to [+person] licensing problems independently of transitivity.

1.3.5 *Ergative repair: Basque*

The theoretical concept of dependent Case reflects the empirical unity of ergative and accusative as cases assigned the "left-over" argument of a transitive that does not get the same case as the subject of an intransitive. This and the following section adduce a new phenomenon that requires the concept: the appearance of dependent Case in intransitives to repair the Person Case Constraint. The emergence of dependent Case in this context also highlights its last-resort character and informs the theory of its introduction by the last-resort mechanism Λ . Basque and Chinook illustrate two different ways of PCC repair by the ergative and Finnish is the reflection of Basque through the accusative-ergative mirror.³⁰

Basque is a paradigm example of the dependent Case approach to ergativity. It has as accusative a syntax as French, so that EA c-commands O, and EA and S but not O pass subjecthood diagnostics. However, case and agreement morphology mark EA ergative and O and S absolutive. Examples and very partial structures are in (47). Throughout all these structures, the movement of the argument that becomes the subject to the locus of subjecthood is represented as the doubling of the relevant argument by D° , one way of working out subjecthood in a pro-drop language; supported by subtle evidence, this detail plays no decisive role here.

- (47) a. Zuk ni poliziarengana eraman n-au-zu
 you.ERG me.ABS police.the.to bring 1sA-AUX-2sE
 You brought me to the police.

a.' [D°_{EA} T_{ERG} [EA.ERG [v_{ABS} O.ABS]]]

- b. Berarengana joaten n-aiz
 her.to going 1sA-AUX
 I am going to her.

b.' [D°_S T [v_{ABS} S.ABS]]

The structures of interest elaborate on (34) by the addition of an applicative dative to transitives and intransitives alike, and they are given in (48). Their important properties are the base-generation of the dative indirect object above O and S alike, established by diagnostics sensitive to base-generation and A-movement positions, and the subsequent movement of some interpretable part of S (not O) above the dative to become the subject of intransitives, established by subjecthood diagnostics. Besides applicative unaccusatives with these properties, there are also datives in the prepositional construction which appear in unaccusatives; these datives are base-generated below S and remain there. Both datives in Basque have the same distinctive dative morphology and a partly unique agreement series; it can be left open here whether one or both have just Γ or $\Gamma+\kappa$ in terms of section 1.3.2.1 (cf. note NOTE-3, Rezac 2008b).

³⁰ The section on Basque summarizes Rezac (2007, 2008a), to which and to Arregi and Nevins (2008) the reader is referred to much greater empirical detail and the analysis of neighbouring issues.

- (48) a. Applic. trans: $[_{TP} D^{\circ}_{EA} T_{ERG} [_{VP} EA_{ERG} v_{ABS} [_{AppIP} IO Appl [_{VP} V O_{ABS}]]]]]$
 b. Applic. unacc: $[_{TP} D^{\circ}_S T [_{VP} v_{ABS} [_{AppIP} IO Appl [_{VP} V S_{ABS}]]]]]$
 c. Prepos. unacc: $[_{TP} D^{\circ}_S T [_{VP} v_{ABS} [_{VP} V S_{ABS} [DAT]]]]]$

The presence of an applicative dative prevents the agreement and licensing of [+person] absolutes, as is shown below.³¹ By contrast, unaccusatives with a prepositional dative rather than an applicative do not run into this problem and instantiate the expected case and agreement morphology banned by it (Albizu 1997).

- (49) a. Zu- k_i polizi-a- r_{ij} haiek $_k$ eraman di-zki $_k$ -o $_j$ -zu $_i$. [PCC in appl. transitive]
 you-ERG police-the-DAT them.ABS brought AUX-3pA-3sD-2sE
 You brought them to the police.

- b. *Zu- k_i polizi-a- r_{ij} ni $_k$ eraman n $_k$ -(a)i-o $_j$ -zu $_i$.
 you-ERG police-the-DAT me.ABS brought 1sA-AUX-3sD-2sE
 You brought me to the police.

- (50) a. */??Ni $_i$ Miren- i_j gustatzen ni-atzai-o $_j$. [PCC in appl. unaccusatives]
 I.ABS Miren-DAT liking 1-AUX-3sD
 Miren likes me.

- b. Miren- i_j gozoki-ak $_i$ gustatzen zai-zki $_i$ -o $_j$.
 Miren-DAT sweets-the.ABS liking AUX-3pA-3sD
 Miren likes candies.

- (51) Ni $_i$ Peru- r_{ij} hurbildu ni-atzai-o $_j$ [No PCC in prepos. unaccusatives]
 I.ABS Peru-DAT approached 1sA-AUX-3sD
 I approached Peru.

The paradigm corresponds to the behaviour of the Person Case Constraint in Icelandic and French discussed in chapter IV, section XX. I adopt the Case/Agree approach to the Person Case Constraint discussed there, with the basic proposal repeated below. Applied to the structures for dative-containing transitives and unaccusatives above, it correctly predicts the distribution of the ban on [+person] agreement and Case-licensing. Only in the v_{ABS} -S/O Case/agreement relationship is there an intervening dative and only there is [+person] agreement and absolute assignment blocked, not for the ergative, and not for the absolute of the prepositional construction.

- (52) *Person Case Constraint (Case/Agree approach)*: A [+person] DP Y cannot Agree for person and Case with H if another DP X (with certain properties) intervenes for locality between the two. If Y has no other means of getting Case-licensed, it fails the Case Filter.

- (53) H > $\underbrace{X}_{*Case/Agree}$ > Y: 1st/2nd person > is c-command

³¹ 1st, 2nd person; Basque lacks the *se* reflexive and animacy or gender distinctions in 3rd person.

However, this is not the end of the story for applicative unaccusatives. It has been discussed for Icelandic in the chapter IV, section XX, that if movement changes c-command relationship so a [+person] element by-passes its intervener while staying in the domain of a Case-licenser, agreement with it becomes available; see the repeated (54).

- (54) a. Hverjum_i mundi/*mundum_j *t*'_i þá *t*_i virðast **við_j** vera hæfir?
 who.DAT would.3SG/1PL then seem we.NOM be competent
 To whom would we then seem to be competent?

[*person agr: DATwh ... *t*DAT > NOM]

a.' [TP T ... [*t*_{DAT} ... NOM]]

- b. Hverjum_i mundum_j/*mundi **við_j** þá *t*_i virðast *t*_j vera hæfir?
 who.DAT would.1PL/3SG we.NOM then seem be competent
 To whom would we then seem to be competent?

[√person agr: DATwh ... NOM > *t*DAT > *t*NOM]

b.' [TP NOM T ... [*t*_{DAT} ... *t*_{NOM}]]

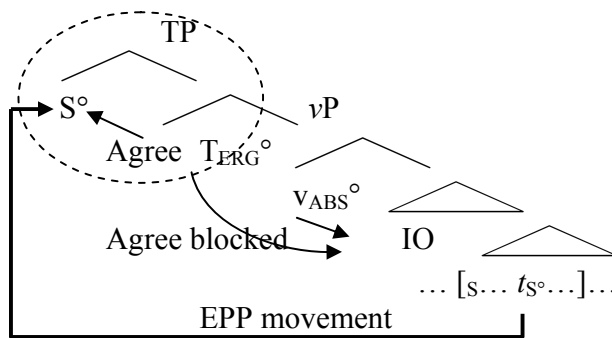
(Icelandic, Sigurðsson and Holmberg 2008)

In Basque unaccusatives, S – or its D° head containing its phi-set – has raised past the applicative dative to become the subject, as shown in (48)b. Here it is plausibly in the domain of a Case licenser and no intervener is between them – but the Case licenser is not *v*_{ABS}, which too is by-passed by the movement of S, but rather of T_{ERG}, assuming that the movement leaves S in some domain like the TP where T_{ERG} can Agree with it, Figure XX.³² Accordingly, Basque should be able to avoid the Person Case Constraint predicted for absolutive S simply having it enter into a Case/Agree relationship with the ergative locus T. In the relevant varieties, this is indeed true, as (56) shows – but remarkably, S can be ergative *only* to avoid the Person Case Constraint, and not when it is fine as an absolutive, namely as 3rd person or in construction with a prepositional dative.³³ Naturally, the 'ergativization' or *absolutive displacement* of S is unavailable to the O of transitives, where T_{ERG} is already used up by the EA.

³² The options are discussed in Rezac (2008a: XX): general spec-head agreement (Chomsky 1995), or the more limited kind in Rezac (2003), or by supposing that the target of subjecthood T is in fact below the locus of ergative Case which is Fin or Agr as in Bobaljik (1993).

³³ NOTE-50: See Rezac (2008a: XX) for the relevant parametric variation across Basque dialects that determines whether a dialect allows this, and variation across idiolects and contexts as to whether it affects agreement alone (always ergative) or both case and agreement of S (for some speakers ergative, for some absolutive, often oscillating between the two). It is proposed there that the variation comes down to if and how S tolerates the multiple case it gets from Case/Agree for number with *v*_{ABS} (not blocked by the PCC) and for person with T_{ERG}. Note that, as discussed in Rezac (2008a, 2006) and literature cited there, independently of the present phenomenon there is no ban in Basque on a DP controlling both ergative and absolutive person agreement at the same time, though it only shows up bearing one of the two cases.

(55) Figure XX: T_{ERG} - S Agree in applicative unaccusatives (from Rezac 2008a: XX)



- (56) a. Itxaso-ri_i liburu-ak/*ek_j gustatzen zai-zki_j-o_i / *di-o_i-te_j [DAT > ABS verb, no PCC]
 Itxaso-DAT books-the.ABS/ERG liking AUX-3pA-3sD /
 *AUX-3sD-3pE
 Itxaso likes the books.
- b. Itxaso-ri_i zu_j-%(%k) gustatzen di-o_i-zu_j / *z_j-atzai-o_i [DAT > ABS verb, PCC, ABS→ERG repair]
 Itxaso-DAT you-%(%ERG) liking AUX-3sD-2sE
 *2sA-AUX-3sD
 Itxaso likes you. (NB: no agreement form at all available with *zu*)
- c. Zu_i-(*k) Itxaso-ri_k etortzen *di-o_k-zu_i / %z-a-tzai-o [ABS > DAT verb, no PCC, some speakers have gap, no repair]
 you-(*ERG) Itxaso-DAT coming *AUX-3sD-2sE /
 %2sA-AUX-3sD
 You are coming to Itxaso.
 (Basque, Tolosa, Rezac 2008a: XXa)

The ergativity of S to avoid the Person Case Constraint is predicted from the structures and assumptions about the constraint and Case/Agree above, except for its restriction to PCC contexts. In all applicative unaccusatives as in all unaccusatives, S raises to pass subjecthood diagnostics and so to the domain of T. Yet only an S that cannot get Case by the Person Case Constraint is allowed to enter into a Case/Agree relationship with the ergative locus T_{ERG}. The ergative dependent Case is available to the subjects of intransitives under one characterization of the conditions that make it available to the object of transitives: as last-resort when there is a DP that cannot get Case otherwise, (57), giving the pattern (58). The ergativity of S in PCC contexts therefore supports the last-resort characterization of dependent Case.

- (57) A dependent Case locus is active if and only if its activation provides Case for a DP that would not receive Case otherwise.
- (58) Pattern of ergative activation:
- | | | | | |
|----|---------------------|------------------|--------------------|-----------------|
| a. | $T_{(*\text{ERG})}$ | v_{ABS} | $t_{\text{S-ABS}}$ | (unaccusatives) |
|----|---------------------|------------------|--------------------|-----------------|

b.	$T_{*(ERG)}$	EA-ERG	v_{ABS}	O-ABS	(transitives)
c.	3:S	$T_{(*ERG)}$	v_{ABS}	DAT t_S -ABS	(appl. unacc.)
d.	1/2:S-ERG	$T_{*(ERG)}$	v_{ABS}	DAT t_S -(*ABS)	(PCC and repair)

The generalization governing the distribution of the dependent ergative is the same as that for unfocused dative strong pronouns in French: last-resort in Person Case Constraint contexts. Unlike in French, there is no evidence (perhaps even potentially) that the last-resort ergative in Basque must be syntactic rather than morphophonological. However, the parallelism pleads for the same treatment, and it is abetted by the observation that the Basque last-resort ergative does not rescue morphophonological gaps just like the French strong pronoun does not. Independently of the PCC, some varieties have morphophonological gaps of varying extent in agreement combinations for 1st/2nd person absolutive + dative like (51). These gaps cannot be repaired by using ergative agreement for S although those very speakers can do so for exactly the same agreement combination that is missing due to the PCC, as in (56)c. This is a convergence in the conditions on two superficially disparate phenomena, absolutive-ergative and clitic-strong pronoun alternations, that have yet quite independently been each analyzed as the presence of an extra Case licenser on the right hand side. Repairs of the Person Case Constraint reveal that both instances of extra case can come from last-resort Case addition, as implemented by Λ .

Application of the Λ to Basque seems to be straightforward and require no parameterization of Λ itself. The Person Case Constraint prevents a 1st/2nd person S and O from being Case-licensed by v_{ABS} because of the intervention of the dative. Adding a Case licenser κ to the v -phase of transitives and unaccusatives would not help if κ lands anywhere above the dative, which would continue to intervene in Case licensing. Below the dative, only the [+person] S or O itself is a potential hosts κ , to become DPs with its own autonomous Case licensing, but this is not permitted in Basque just as in French; we return to the reasons below. It would be of no help to add κ to the dative as in French, since the Basque construction in question are those where a dative must be applicative, such as psych-verbs, as in the case of French causees, possessors, and the psych-verb *falloir* 'need' (chapter IV, section XX).³⁴ Therefore the v -phase in Basque simply cannot converge at all if it contains S or O, because they cannot be Case-licensed with or without the addition of κ . Unlike O, S then raises to become the subject, moving prior to spell-out of the v -phase to its edge.³⁵ The v -phase itself therefore does not contain S and does not crash due to failure of Case-licensing in a PCC context at all.

Beyond the v -phase lies the C/T-phase with its potential Case locus T. Here the non-convergence of an unaccusative PCC context is detectable, for there is a [+person] S in the local neighbourhood of T that has not been Case-licensed. Λ adds a Case licenser κ which can land on T, turning it into a Case assigner and assigning Case to S: the dependent ergative. The only potentially useful scope for parametrization is to differentiate Basque varieties that do and that do not permit the 'absolutive displacement' of S in question, or potentially among ergative languages with similar properties. However, at present at any rate, the differences among Basque

³⁴ Unaccusatives and transitives that do not have to be applicative would in Basque simply appear to be immune to the Person Case Constraint, since the prepositional and applicative datives control the same morphology.

³⁵ See Rezac (2008a: XX) for independent evidence from the interaction of raising and "ergative displacement" in Basque. A-movement even out of unaccusative v Ps in English seems to pass through their edge (Sauerland 2003). More complex alternatives are easily imaginable, such as delayed spell-out of the v P phase so S is accessible in-situ to T (Chomsky 2001), but unnecessary.

varieties in the availability of the phenomenon can be localized in whether its result can be spelled-out rather than in whether it occurs (see Rezac 2008a: XX, and note NOTE-50 here).³⁶

1.3.6 Excursus on Georgian

A strand left loose in the foregoing discussion is the impossibility of adding κ to the [+person] O and S in PCC contexts, turning them into DPs with Case licensing autonomous of that of the clause. It holds in Basque and in French.³⁷ Section 1.3.2.1 proposes that that the relevant difference in French is the richer structure of datives (reflected also as dative morphology): datives are selected with a functional structure Γ that may serve as host to the added Case licenser κ in French, whereas direct objects are bare nominals lacking Γ . The proposal is perfectly transferable to Basque S and O, and to other languages where [+person] pronouns cannot survive in PCC contexts (Rezac 2008a: Appendix).³⁸

Georgian however may instantiate a legitimate application of this option, through the availability of Γ on O(/S) where Basque and French lack it. The Person Case Constraint in it bars a [+person] O in applicative transitives, (59)a.³⁹ The response of the language is *Object Camouflage*, whereby the [+person] O is realized as a corresponding pronominal possessor of the noun *tav-* 'head, source, self', (59)b (Harris 1981: chapter 3, 80). Outside PCC contexts pronouns cannot have this realization.⁴⁰ As in French and Basque, the PCC and its repair occur in more complex structures with a single Case domain, here causatives (Harris 1981: 80, Bonet 1991: 194).

- (59) a. *vanom šen šegadara givis
Vano.ERG you.ABS he.compared.him.you.C1.S1 Givi.DAT
Inteded: Vano is comparing you to Givi.
- b. vanom anzori / [šeni tavi] šeadara givis
Vano.NOM Anzor.ABS your self.ABS he.compared.him.him.C1.S1 Givi.DAT
Vano is comparing Anzor/you to Givi.
- (Georgian, Harris 1981: 48-9, with ABS for her NOM)

³⁶ Other languages that might show Basque absolutive displacement are Ainu (Shibatani 1990: 65) and Mayali (Baker 1996: 443-4) – but in Ainu at least, it would simply not be possible to determine whether an applicative unaccusatives acquires a transitive-like expression only when is 1st/2nd person or also when 3rd. Λ would supply extra Case licensing, if possible, when S is 3rd person if without Λ a Case failure would result. Cf. Baker's (op. cit.) proposal: applicative unaccusatives restricting S to 3rd person like Mohawk have only one Case licenser for S and the applied object, so S incorporates (covertly or overtly), a process limited to 3rd persons; Ainu and Mayali applicative unaccusatives get an extra Case licenser from the applicative.

³⁷ In French S is not affected by the PCC because it always raises past the dative to [Spec, TP] and gets nominative from the obligatory Case licenser T_{NOM} (Rezac 2008a). There are various other cases exemplifying the correlation between being a oblique (not necessarily dative) subject and [+person] restriction on the object, like Finnish and Chinook below, as well as Tamil, Choctaw, Gujarati, Breton (Rezac 2007, 2008ab).

³⁸ Notably, the absence of Γ does not correlate with clitichood as in Basque the affected [+person] pronouns are strong, consistent with the proposal to take Γ to be reflected both as the case marker *à* and the dative case of clitics.

³⁹ S is unaffected, as in French, because it seems to raise, at least to vP periphery; see Rezac (2008a: note XX).

⁴⁰ The same possessed *tav-* is used as a subject-oriented reflexive (Harris 1981: 23-7), but not as a logophor, so this is unconnected to Object Camouflage where the reflexive has no binder (Amiridze 2006: chapter 5).

Rezac (2007: 125-6) proposes to treat Object Camouflage as the application of Λ that adds a Case-licenser to the direct object O itself, licensing its [+person] content within it and autonomously of the clause. The odd realization as a possessed *tav*- 'self'-noun makes sense under a decomposition of pronouns into a nominal lexical core N° and an interpretable ϕ -set on a higher element like D° (cf. Déchaine and Wiltschko 2002). Ordinarily, D° and N° are amalgamated into pronoun such as *šen* 'you', by head movement or other affixation, (60)a. However, suppose that a Case-licenser κ is added to the pronoun and there is a potential host Γ for it above D° . Agree between κ and D° licenses D° or allows D° to attach to $\Gamma+\kappa$, and eliminates its need to attach to N° , so that D° and N° are realized separately, (60)b. The bare lexical core N° is naturally realized as *tav* 'head, source, self', and the ϕ -set D attached to $\Gamma+\kappa$ is spelled out as a possessor pronoun.⁴¹

- (60) a. Ordinary pronoun: $[\text{Max(N)P} \dots \Gamma \dots [\text{DP } [D \ \phi] \ + \ N]]$
 b. κ added to Γ : $[\text{Max(N)P} \dots \Gamma+\kappa+[D \ \phi] \dots [\text{DP } t_D \quad [N \ \textit{tav}]]]$

One would expect a language that uses an otherwise unavailable unfocussed accusative strong pronoun to repair the PCC, but in the cases familiar to me might allow the pronoun independently, as in Greek (Anagnostopoulou 2003: 314f., 349 note 92), or Jaru (Simpson 1983:194 note 62). These strategies might thus fall under paraphrase.

1.3.7 Ergative repair: Chinook

We will turn presently to the mirror image of the Basque ergative repair, accusative repair in Finnish. This subsection very briefly considers a cousin of the Basque repair in Chinook. It is extraordinarily close to Basque, with a difference that seems to follow from an independent one between the two languages. The repair in Chinook 'ergativizes' the dative intervener, not S, and that is because the dative intervener in fact is not dative, but a bare DP for which the theory predicts all the syntactic behavior corresponding to Basque S.⁴²

Chinook cross-references the EA, O, S, and IO on the verb using pronominal affixes of two series: a *basic* one for S, O, IO, and one dedicated to the EA and so *ergative* and glossed E,

⁴¹ NOTE-198: Rosen (1990: 692-7) extends Object Camouflage to an apparent PCC-avoidance in Southern Tiwa (where I use the PCC as a surrogate for the Person Hierarchy applying in this language also between EA-O, arguably an instantiation of the same mechanism in a slightly different clausal architecture: see section 1.3.9, Béjar and Rezac 2009). Reflexivization of a transitive identifying subject and object normally uses what looks like an intransitive with a single reflexive prefix for the phi-features of the two arguments. When an indirect object is added in the applicative construction, the PCC would block reflexives for 1st/2nd person, as it does in all PCC languages. Just then, a different reflexivization strategy steps in, which Rosen analyses as the use of a 3rd person noun 'self' for the direct object, with the 1st/2nd person transitive subject coded as in regular transitive sentences. The phenomenon would be parallel to Georgian if it can be stipulated that the only noun that can be affected by Λ is one that irrevocably means 'self' rather than substituting for the nominal core of all pronominals, restricting the phenomenon to reflexives. French might instantiate a similar phenomenon. Kayne (1975: 372) and Postal (1989: 132 note 15, 1990: 195 note 62) observe that whereas the direct object complex reflexive *lui/elle-même* 'him/her-self' requires clitic-doubling by the accusative reflexive clitic *se* ordinarily, this requirement is suspended precisely when the indirect object is coded by the dative reflexive clitic *se* (the possibility of participle agreement, possible only with accusatives, identifies a given instance of *se* as accusative or dative).

(i-a) Lucille s'est décrit(*e) elle-même

Lucielle SE.DAT is described(FEM) her-self (Postal 1989: 132 note 15)

⁴² The Chinook analogue of absolutive displacement was pointed out to me by Daniel Harbour, p.c. The source of the data and the fundamental generalizations is Silverstein (1985 [1976]). The proposal here is quite tentative.

arranged in the order E-O/S-IO.⁴³ The Person Case Constraint in Chinook blocks a transitive with an IO from having a 1st/2nd person O, (62).

- (61) a. (i-kala) ga-č-l-(a)š-l-u-√łada ((i)ł-šq^wa) ((i)š-Gagilak) [Transitive + IO]
 3SGM-man_i RPT-3SGM.E_i-3NT_j-3DU_k-Appl-DIR-threw 3NT-water_j 3DU-woman_k
 He (the man) threw it (the water) at the two of them (at the two women).
 b. *č-n-a-l-u-√i-amit [Transitive + IO: PCC]
 3SGM.E-1SG-3SGF-[?]Appl-[?]DIR-√[?]take-?
 He is taking me for her. (Silverstein 1985: 190)
 (Silverstein 1985: 185, 190)

Intransitives split. Some like 'go' are immune to the PCC, (62), and by this behaviour and by their meaning they correspond to Basque unaccusatives with a dative in the prepositional construction below S. Others like 'smell' are constrained by it. Silverstein (1985: 191) characterizes the latter class as those whose IO is "a kind of dativised agent", and gives an example with an experiencer, both good candidates for applicative unaccusatives.⁴⁴ They are good with 3rd but not 1st/2nd person S, (63)a-(63)b. The missing forms however are replaced by what Silverstein (1985: 191-4) calls *thematisation*: the IO is coded by the ergative series, rather than by the basic series common to S/O/IO that it uses elsewhere: the expected basic *i* of (63)b (cf. (63)a) appears as the ergative *č* in (63)c.⁴⁵

- (62) ga-nš-i-gl-u-√ya [Intransitives + prep. IO: no PCC]
 RPT-1PL-3SGM-?-[?]DIR-√go
 'we (excl pl) went toward him' (Silverstein 1985: 191)
 (63) a. i-n-l-√ła [Intransitive + appl. IO]
 3SGM-1SG-Appl-√stink
 He wafts towards me, es shtinkt mir, I smell him.
 b. *nš-i-l-√ła [Intransitive + appl. IO: PCC]
 1PL-3SGM-Appl-√stink
 He smells us (excl).
 c. č-nš-l-√ła [Intransitive + appl. IO: thematisation]
 3SGM.E-1PL-Appl-√stink

⁴³ NOTE-200: Often the ergative series = the default series + *k*, but there are opaque forms like 3SGM.E *č*; some forms are syncretic for the two series and so I do not gloss them as E; and there are some interactions between adjacent morphemes discussed as necessary. For 3DU and 3PL, S has an extra suffix compared with the O/IO morpheme. For a similar situation in Itelmen, cf. Bobaljik (2000, note 10), Bobaljik and Wurmbrand (2002, note 12); taking cue from the former, the suffix might somehow reflect the absence of O.

⁴⁴ I am deducing correspondences on the basis of two examples. Both types of verbs look to me like they have applicative morphology in them (Silverstein only comments that the *stink*-type has it obligatorily, p. 190), but this is probably also true of Basque and simply indicates that Appl^o/P^o incorporates whether an applicative head above V or a P-like element below it (Rezac 2006).

⁴⁵ NOTE-202: In fact, PCC and thematisation extend to 3SG.M S if animate (Silverstein 1985: 193-4), which is an independent parameter of the PCC – see chapter IV, note NOTE-45, and Finnish in section XX below – but much is unclear: Silverstein states it as a tendency and in the context of a 3rd person dative, with no comments about O.

He smells us (excl).

(Silverstein 1985: 192)

Chinook is hauntingly similar to Basque: the Person Case Constraint affects O and S alike, but only in intransitives with applicative and not prepositional IO, and a repair gives one of the arguments of an intransitive an unavailable ergative. Unlike in Basque, the 'ergativized' argument is the IO rather than the S of intransitives. It is tempting to correlate this difference with another: the IO in Chinook uses the same morphological series as O(/S), not a distinct one that in Basque goes with the IO's dative case.⁴⁶ Chinook belongs to the class of languages discussed in Baker (1996: 194-5), Rezac (2008c) like Wichita, Nahuatl, and Southern Tiwa, and more generally of the English true double-object type (Anagnostopoulou 2003). In them the IO is treated by the Case/phi-agreement system like the O/S is in plain (in)transitives. The left-over O/S also agrees with the verb, provided it is 3rd person, but only secondarily to the IO which has usurped canonical O/S agreement. This O/S-like behaviour of the IO is the key. Basque has only S as the target of ergativization, because it is S that raises past the dative IO to the local neighbourhood of T, (64)a.⁴⁷ In languages of the Chinook type, the applicative IO is not dative and indistinguishable for the Case/phi-agreement system from S, and it c-commands S. The theory predicts that it should be treated like the S of plain intransitives for A-movement just like it is for Case/phi-agreement: raise to T to become the subject, (64)b.

- (64) a. [S T_(ERG) [v_{ABS} IO_{DAT} t_S]] (Basque: IO = Γ P, S = DP)
 b. [IO T_(ERG) [v_{ABS} t_{IO} S]] (Chinook: IO, S = DP)

So the difference between Basque and Chinook comes down to what is in the local neighbourhood of T in applicative unaccusatives: S in Basque, IO in Chinook. This element establishes a relationship with T if T has Case by Λ , giving the difference between the repair strategies in the two languages. Otherwise the two languages may work in the same way. At the vP level, both IO and S are Case-licensed unless S is 1st/2nd person, when only one is (we need not determine which one). One argument leaves the vP then to become the subject, S in Basque and IO in Chinook. It is Case-licensed by T_{ERG} if it has not gotten Case in the vP, by Λ .

1.3.8 Accusative repair: Finnish

Finnish is an accusative language, so its dependent Case is the mirror-image of the Basque ergative, reflected through the Obligatory Case Parameter. It goes on the object of transitives, not on their subject, and so it is the v rather than T-Case: the accusative. With that difference, it seems to have the same additional deployment of dependent Case that we have seen for Basque, leading to the same conclusions. The S subject of unaccusatives bears it in all and only contexts where the Person Case Constraint would leave it without Case licensing.⁴⁸

⁴⁶ The identity of IO/O marking extends beyond simply identity of exponents to their contextual transformations that look like person hierarchy effects or contextual allomorphy. The normal exponence of 1st person EA and S undergoes various transformation in the context of 2nd person O and IO alike: the regular exponent 1SG *n* disappears and the regular exponents 2DU *nš* and 2PL *nt* change to the impersonal *q* when there is a 2nd person O or IO (whose affix is not necessarily contiguous to it, in the case of EA+IO where O may intervene).

⁴⁷ Also, independently and not certainly, because its dative already has κ (a matter left open above).

⁴⁸ See Rezac (2007) for a more detailed exposition of the following analysis, which is less persuasive than that of Basque for the reasons of note NOTE-100. The proposal for the accusative of pronominal objects in nominative-

It is worth first recalling the basic Person Case Constraint in Icelandic from the last chapter, exemplified below. In an unaccusative configuration with applicative dative originating above S and raising to [Spec, TP] to become the subject, agreement with [+person] S is blocked and S itself is ruled out because it does not get Case. Number agreement with 3rd person S is fine. In the prepositional construction the nominative is base-generated higher than the dative and becomes the subject, incurring no constraint.⁴⁹

- (65) a. *Honum var/varst gefinn t_{honum} þú.
 him.DAT was.3SG/ 2SG given you(2SG)
 He was given you. (Schütze 1997: 117 < Thráinsson pc) [DAT > NOM: *person agr]
- b. Honum voru gefnir t_{honum} peningarnir.
 him.DAT were.3PL given the.money.NOM.PL
 He was given the money. (Schütze 1997: 122 < Andrews 1990a: 211) [DAT > NOM: $\sqrt{\text{number agr}}$]
- c. Þú varst gefinn $t_{\text{þú}}$ honum.
 you.NOM were.2SG given him.DAT
 You were given to him. (Schütze 1997: 117 < Thráinsson pc) [NOM > DAT: $\sqrt{\text{person agr}}$]

The same restriction holds of nominative S in applicative unaccusatives in Finnish. The canonical nominatives are either subjects of transitives EA or of unaccusatives S, in (66). The nominative EA must pass through [Spec, TP] and surface as agreeing nominatives. The nominative S can be either pre-verbal agreeing nominatives in [Spec, TP] or post-verbal non-agreeing nominatives when an oblique or an adverb fills [Spec, TP] (recalling English "locative inversion", Bresnan 1994, Culicover and Levine 2001). Beyond this system further A'-fronting and V-raising may transform word order in ways not relevant here (see also Vainikka 1989, Holmberg and Nikanne 2002, Holmberg 2005).

- (66) a. Maija katki se-n
 Maija.NOM hid it-ACC
 Maija hit it. (Vainikka 1989: 178) [transitive: EA=NOM+Agr, O=ACC]
- b. Uutise-t jatku-vat.
 new-PL.NOM continue-3PL
 The news will continue. (Kiparsky 2001: 345) [intransitive with preverbal subject: S=NOM+Agr]
- c. Nyt tule-e uutise-t.
 now come-3SG new-PL.NOM
 Now there comes the news. (Kiparsky 2001: 345) [intransitive with postverbal subject: S=NOM+3SG]

object constructions there is new. Most other aspects derive from Kiparsky's (2001) extensive analysis of the Case, agreement, EPP, and infinitival structures of Finnish, save the conclusion that the case of non-pronominal canonical direct object is genitive, rather than the accusative of pronouns. The basic insight about nominative objects there and here are closely similar to those of Maling (1993), Toivainen (1993), Taraldsen (1986) and others.

⁴⁹ The difference with Basque above is that the dative rather than S raises to become the subject in Icelandic, its "quirky subject" property, and T_{NOM} rather than v_{ABS} as the obligatory Case assigner. In Icelandic, S can be rescued by moving it over the trace of the dative to [Spec, TP] if the dative has A'-extracted, (54), not available (so far as I know) in Finnish.

However, nominative assignment more generally falls on the highest DP without inherent Case in a Case-assignment domain. EA and S are such, but if the EA is syntactically absent, the object of transitives, O, gets nominative. An example is reduced infinitival complement of the 'necessive construction', (67). The EA of the infinitive is interpreted via an oblique argument of the matrix verb and arguably syntactically absent. The infinitive falls into the binding and Case domain of the matrix verb, and so the object gets nominative. The matrix oblique argument raises to [Spec, TP] to become the oblique subject. Other structures with a nominative object are the oblique-subject possessive *be* (exemplified below), and imperatives and impersonal passives whose EA is obligatorily null.

- (67) Häne- n_i täyty-y/ *täyty-vät t_i [kirjoitta-a kirje(-et)].
 him-GEN must-3SG must-3PL write-INF letter.NOM(-PL.NOM)
 He must write the letter(s). (Timberlake 1975: 205)

The construction in (67) shares the relevant syntactic properties with the Icelandic dative-subject construction: there is an oblique intervener between a nominative and its Case assigner, in Finnish the oblique being a genitive descending by merger from an older dative. Icelandic suggests that the Person Case Constraint should affect [+person] nominative pronouns. This is so: they are barred. However, in their place accusative [+person] pronouns show up, (68)a, whereas everywhere the nominative object constructions, [+person] pronouns and other nominals always have the same case (nominative when S). The same structure as in (67) and the same treatment of [+person] pronouns occur in the possessive construction, which is simply unaccusative *be* with S as the possessum and an oblique subject as the possessor, (68). It can be extended to the other nominative-object constructions, impersonal passives and imperatives, on the assumption that their special, silent EA plays the same role in blocking Agree with [+person] O as the obliques and that, as independently clear from the nominative object, v is not an accusative assigner.⁵⁰ The structures are in (69). A difference from Icelandic is that Finnish treats animate 3rd person pronouns as [+person], *hän* vs. *se* in (68)b, a parameter of variation in the Person Case Constraint known from other languages (chapter IV, note NOTE-45).

- (68) a. Minu-n täyty-y t [kutsu-a häne-t]
 me-GEN must-3SG invite-INF him-ACC
 I must invite him. (Timberlake 1975: 210)
- b. Minu-lla on t Matti / sinu-t / hän*(et) / se(*n).
 me-ADESS is Matti.NOM you-ACC him*(-ACC) it(*-ACC)
 I have Matti/you. (Kiparsky 2001: 354, Pylkkänen 1997)
- (69) a. [GEN T_{NOM} [v [t_{GEN} Appl° [V [V_{INF} O_{NOM} , [+person]ACC]]]]]]] (necessive)
 b. [ADESS T_{NOM} [v [t_{ADESS} Appl° [V S_{NOM} , [+person]ACC]]]]] (possessive)
 c. [T_{NOM} [EA(null) v [V O_{NOM} , [+person]ACC]]] (imperative, impersonal)

⁵⁰ The impersonal passives are comparable to mediopassive *se* constructions in Romance, which also have nominative objects subject to the Person Case Constraint; see D'Alessandro (2004).

The possessive construction lends itself to an easy demonstration of the role of syntactic structure in the constraint and its repair, as in French, Icelandic, and Basque, (70). To express *have*, the allative possessor raises to [Spec, TP] presumably from the applicative construction, satisfying subjecthood diagnostics like controlling the subject of adjuncts, (70)a. A superficially similar construction is available where S raises to [Spec, TP] and the allative stays in-situ, (70)b. However, the allative is then not a possessor but "a kind of location" (Kiparsky 2001: 355), in the prepositional construction, and there is no [+person] ban or repair. The ban on [+person] nominatives depends on the allative being a quirky subject and S being in-situ. It strongly recalls the pattern of Icelandic and Basque, where the Person Case Constraint only arises if the oblique interveners between a nominative and its Case-licenser, and suggests the same analysis: the Person Case Constraint as intervention in Case/Agree of [+person] pronouns.⁵¹

- (70) a. Liisa-lla_i oli han-et_j poika-ystävä-nä ol-le-ssa-an_{i/*j} Ruotsi-ssa.
 Lisa-ALL was he.ACC boy-friend-ESS be-INF-INESS-her Sweden-INESS
 Liisa had him as a boyfriend when she was in Sweden.

- b. Hän_i oli Liisalla_j poikaystävänä ol-le-ssa-an_{i/*j} Ruotsissa.
 he.NOM was Liisa-ALL boy-friend-ESS be-INF-INESS-her Sweden-INESS
 He was with Liisa as a boyfriend when she was in Sweden.

(Kiparsky 2001: 355)

The repair of the Person Case Constraint by accusative in Finnish is perfectly analogous to that by absolutive in Basque if they are both the same theoretical entity, dependent Case, and predicted if dependent Case is last-resort Case-licensing. The application of Λ is straightforward, yet it is also revealing because of the accusative-ergative difference that distinguishes Finnish from Basque. In Basque dependent Case is added to T, the locus of the ergative, and T is also near or at the edge of the phase where the failure of Case licensing of [+person] S is detected, since S is in the local neighbourhood of T: (71)a. In Finnish, dependent Case is added to ν , the locus of the accusative, (71)b. Yet the failure to Case-license a [+person] S cannot be detected at the ν P level. In a plain unaccusative with the post-verbal subject, S gets nominative from T_{NOM},

⁵¹ NOTE-100: There is a gap in this regimentation of the facts. Outside the *have* and nominative-object constructions, pronominal S can only appear as agreeing nominative in [Spec, TP]; pronouns cannot appear in as post-verbal non-agreeing nominatives in the inversion-like construction (the same restriction characterizes English locative inversion, Bresnan 1994). So when we examine pronouns that correspond to nominative non-pronouns, it is impossible to directly contrast the accusative S pronouns of the *have* and O of nominative-object constructions, with an intervener between them and T, with simple postverbal S pronouns with no intervener, since the latter are out. This allows for an alternative hypothesis: accusative is the form pronouns take when not in [Spec, TP], corresponding to the non-agreeing nominative of non-pronouns. Other analyses sharing the general approach to nominative objects here do view the accusativity of pronouns along these lines, relating it to animacy-based case-marking splits like split ergativity and differential object marking, so that a pronoun has to satisfy more subjecthood criteria than a noun (most explicitly Kiparsky 2001, cf. also Maling 1993, Taraldsen 1986). The alternative in fact changes nothing in the present discussion if the nominative vs. accusative form of pronouns is determined syntactically, rather than morphophonologically: [+person] but not other pronouns must be in [Spec, TP] (or agreeing) to be licensed as nominatives, and if not then a last-resort accusative becomes available to them. (A different analysis is that the DPs in question are getting both nominative and accusative: Nelson 1998: chapter 4, Rezac 2004: 305ff. It seems incorrect both morphologically, when modifiers of accusative pronouns corresponding to nominative objects are examined, Kiparsky 2001: 320, and syntactically, since the *have*-construction is built on unaccusative *be* with no expected accusative potential).

so the νP is evidently not a phase, neither blocking nominative assignment nor invoking Λ to assign accusative to S. The minimal phase must be the TP/CP containing T_{NOM} . Failure to Case-license S is detected at that level. Λ applies, adds the Case-licenser κ to the numeration, and if κ lands on ν , the numeration converges with S Case-licensed by ν_{ACC} (we return to this directly). This turns the νP into a phase, as (71)b indicates, which it was not prior to the application of Λ . There are no complications involved with Λ as an interface algorithm that modifies numeration in virtue of convergence. In contrast, the picture would be far less clear if Λ were only allowed to modify the head of the phase at which it applies, as in the alternative of Chomsky (2000, 2001) discussed in section 1.3.1. This conclusion from Finnish is the same as the one drawn from French, (71)c, where also a failure to converge at one phase, the νP , adds κ to the numeration in such a way as to create a new phase, the strong pronoun containing $\Gamma + \kappa$ (section 1.3.2.1).

- (71) a. $*[\text{TP S T } [\nu P \nu_{\text{ABS}} \dots \text{DAT} \dots t_S]] \rightarrow_{\Lambda} [\text{TP S T}_{\text{ERG}} [\nu P \nu_{\text{ABS}} \dots \text{DAT} \dots t_S]]$ (Basque)
 b. $*[\text{TP X T}_{\text{NOM}} t_X \nu \dots \text{S/O}] \rightarrow_{\Lambda} [\text{TP X T}_{\text{NOM}} t_X [\nu_{\text{ACC}} \dots \text{S/O}]]$ (Finnish)
 c. $*[\nu_{\text{ACC}} \dots \text{DAT} = \Gamma + \text{D} \dots \text{O}] \rightarrow_{\Lambda} [\nu_{\text{ACC}} \dots \text{O} \dots [\Gamma_{\kappa} \text{D}]]$ (French)
 ([] = phase boundaries, X = gen./allat./null EA intervener of Finnish)

It remains to understand where Λ adds κ . The choice is as throughout free, subject to independent parameters of the language. Adding κ on T will not help since it already has a Case feature. Adding it to the intervener X will not result in anything as in Basque because the obliques involved (possessors, etc.) are necessarily above S for their syntax and interpretation. Adding it to S is impossible, as in Basque and French.⁵² Adding κ to ν is the only remaining plausible option, and indicated by the accusative morphology of S.

However, the independently expected relationships of ν to the intervener X are not the same across the Finnish constructions in (69). Only in impersonals and imperatives is the intervener for T-O Agree, a null EA, manifestly not an intervener for ν -O Agree. In the neccessive and possessive constructions, standard assumptions about applicatives put the oblique bearer-of-obligation and possessor between ν and V (McGinnis 1998, 2001, Pylkkänen 2002, Cuervo 2003), and so they are expected to intervene for ν -S Case/Agree. Phase-theory supplies the independently needed solution. Empirically, these obliques and not S raise to [Spec, TP] to satisfy the EPP of T (Kiparsky 2001), which makes Finnish into a "quirky subject" language like Icelandic rather than like Basque or Spanish. In order to raise to [Spec, TP] when ν becomes the phase-head ν_{ACC} by the addition of κ , the obliques must not be inside the spelled-out complement of ν_{ACC} , on pain of being spelled-out too. If not in the complement of ν_{ACC} , they do not interfere in its Case/Agree relationship with S. So the obliques must either raise to the edge of the νP phase by some means, or they are base-generated there like the silent EA of impersonals and passives.⁵³ So much is required by phase-theory alone, or to be more specific, by the valuation of uninterpretable features leading to spell-out (section 1.3.1). Since phase-theory demands that in a quirky subject language, the applicative oblique of unaccusatives have this property, while in

⁵² Yet this cannot be observed in Finnish where post-verbal nominatives are nonagreeing (cf. Rezac 2008a: XX for the cross-linguistic commonality of this behavior and references to theoretical proposals).

⁵³ NOTE-300: We can go farther: the obliques of psych-verbs are quirky subjects in Faeroese and Tamil where the S always gets accusative, not just to repair the PCC, so the need of the oblique to raise or be base-generated higher is independent of PCC rescue by accusative (see Rezac 2007: Appendix). Perhaps there is a deeper principle that conflates ν^o and Appl^o or simply puts them in the same minimal domain, if there is only one specifier argument between the two of them in a quirky subject language. Cf. McGinnis (2001) for related discussion.

non-quirky subject language it is S that raises past the applicative oblique, the property seems a good candidate for the parameter that differentiates the two types of languages.

1.3.9 Overview and extensions: Arizona Tewa and Kashmiri

This concludes the presentation of last-resort dependent Case phenomena. Although the technical presentation has at times been involved, it appears that for all the diversity of last-resort Case licensing phenomena discussed, the technology ends up quite 'clean': it comes down to very little beyond Λ itself, and quite general aspects of the theories of syntactic dependencies in which it is embedded: Case-licensing/ ϕ -Agree through uninterpretable features, the spell-out of a phase upon the valuation of uninterpretable features, the Obligatory Case Parameter, the theory of applicatives, the existence of quirky and non-quirky subject languages. Some complexity comes from variation in the Person Case Constraint (e.g. is S subject to it? are animate 3rd persons?). Stipulations specific to the making the repairs work out are limited to whether S/O can host an added Case licenser, and to parameters of this kind when contrasting the languages that have been discussed with those that lack any repairs. If Finnish is very much like Icelandic for the Person Case Constraint, Icelandic simply lacks the Finnish-type repair. The obvious and un insightful but not unreasonable stipulation is that the Icelandic unaccusative v is not a potential locus of Case licensing at all, or even that there is no v , a parameter of the same type as saying that the French, Basque, Icelandic, but not Georgian S/O lack Γ or have a Γ that cannot host an added Case licenser.

It is also important to keep sight on the horizon beyond the technology. The concept of a dependent Case as a theoretical entity grouping the accusative and ergative has both its virtues – they are the cases borne by the "odd man out" in transitives, and its defects – it is hard to capture theoretically and there are surface exceptions. Dependent Case to repair the Person Case Constraint confirms the existence of the entity, and clarifies its character in two independent ways. First, there is an at least apparently last-resort use of Case that extends beyond Case-licensing the "odd man out" of transitives: to Case-licensing the subject of intransitives as well when it cannot get Case. So there is a Case entity that seems to arise only when a DP needs Case-licensing, in a way that cannot be captured by stipulation like pairing accusative and external argument selection on v . Second, dependent Case in both transitives and intransitives groups ergative and accusative.

This dependent Case is linked to other phenomena through repairing the Person Case Constraint: to unfocussed dative strong pronouns for clitics in French, and to Object Camouflage in Georgian. The proposal of Cardinaletti and Starke (1999) brings at least the former down to extra Case licensing, forging one link uniting the repairs. Another comes from the discoveries of Albizu (1997), Anagnostopoulou (2003) and others about the Case-based character of the PCC (chapter IV, section XX): the constraint bars a [+person] nominal without inherent Case if there is an intervener between it and its structural Case licenser. The two links mesh very well. The constraint is a failure of Case-licensing by one of the clausal loci that provide structural Case. The last-resort repairs step in, and either provide Case licensing to the [+person] element, visible as structural (dependent) Case morphology, or to the intervener, and so remove it from the path of clausal Case-licensing. Λ is last-resort, Case-requirement sensitive Case-licensing.

Beyond the Person Case Constraint narrowly construed, there are other [+person] licensing requirements that have repairs, perhaps coming down to the same mechanisms (cf. Béjar and Rezac 2009). One we have seen in Arizona Tewa in chapter III, and Kashmiri exemplifies

another. From a distance they seem a good fit to Λ , but abut against many uncertainties and unclarities. I end on a tentative extension of Λ to them.

Arizona Tewa introduced the first last-resort repair of [+person] licensing. It assumes the following form: In function of the [+person] status of O, the EA oscillates between bare, unmarked and oblique-like case morphology, and correspondingly its syntactic comportement between one like and one unlike the bare, unmarked O and S.

- (72) PH-interaction in Arizona Tewa: EA has direct case unless O is equal to or higher than it on the scale 1, 2 > 3 [= [+person] > 3], in which case EA is oblique.

It has been noted that the oscillation resembles one between an EA with the unmarked nominative of an accusative system, and one with the marked ergative of ergative ones, hinting that the latter might be the dependent ergative introduced in response to a Case-licensing failure. Its correlation with the [+person] status of O points in the same direction if [+person] needs Case-licensing as in the Person Case Constraint:

- (73) Arizona Tewa: EA and O can both be Case-licensed by a system that fails when O is [+person]; the system then licenses O, and EA gets last-resort dependent Case.

This is very much like the PCC and its repairs if it is supposed that in Arizona Tewa EA and O compete for a single Case-licenser capable of licensing [+person], in place of the separate T and ν in of French or Basque. This foundational idea is advanced, independently of the PCC, in Nichol's (2001) analysis of the similar EA-O person hierarchy interaction in the related Tanoan language Picuris, as a conflict between the requirement of the highest DP in need of Case (the EA) and any [+person] DP in need of Case to associate to T. In Picuris and Arizona Tewa the conflict is parametrically resolved in favour of the [+person] DP; in other languages like Kashmiri discussed below, in favour of the EA. The missing element of the analysis is what happens to the other element: in Arizona Tewa, to the EA, when O is [+person]. Here last-resort dependent Case comes in through Λ in a way parallel to PCC repairs. The same problem arises in subsequent proposals departing from a basis similar to Nichol's: that such languages have but one licensing field for EA and O where the French or Basque have one for each, and the mechanics of the system pick the [+person] DP over the other, as advanced in Béjar (2000, 2003), Bianchi (2006), Béjar and Rezac (2009), and taken up below.

One tack to take is to capitalize on the similarity to the French PCC repair and simply attribute to the Arizona Tewa TP the same abstract syntax as the French applicative and prepositional ν P. There is a single Case licenser capable of licensing [+person], T, and EA intervenes between it and O. Nothing goes wrong if O is not [+person], but if it is, Case licensing must be added by Λ .⁵⁴ As in French, it is added to the intervener rather than O, and makes the EA into a PP-like oblique that is perhaps realized below O, perhaps invisible to the Case/phi-agreement system for the same obscure reason that English *to*-PP experiencers of raising verbs are (see note NOTE-3).

An alternative that brings the oblique EA closer to the dependent ergative of Basque is to put the sole Case-licenser of [+person] on ν . Béjar and Rezac (2009) advance this hypothesis for languages with EA-O person hierarchy competition in general, on the observation that O is

⁵⁴ As in the PCC, the Case-licensing of 3rd persons is separate, e.g. by a number / gender system that does not care about the EA; see chapter IV, section XX.

normally the primary goal. The ν of such languages has a higher Case-licensing potential (a richer phi-probe) than that of English, and it can potentially Case-license both O and EA, in that cyclic order, because O is in the complement and EA in the specifier of ν . When O is [+person] however, the Case-licensing capacity of ν is taken up by O, and EA finds itself without a Case-licenser. Λ steps in to give a Case-licenser for the EA to T.⁵⁵ The distinctive syntax of the oblique EA in Arizona Tewa would follow if its Case-licensing by T moves it. EA that is Case-licensed by ν is in [Spec, ν P] and a ν P-internal argument along with O, and when Case-licensed by T because O is [+person] it is in [Spec, TP].⁵⁶

On both proposals, one would expect a minimally different alternative where the [+person] O is capable of getting a Case-licenser, as it is in Georgian but not French, Basque, or Finnish. Kashmiri appears to instantiate this possibility (Nichols 2001, Béjar and Rezac 2009). There is a similar if more refined EA-O person hierarchy interaction (the hierarchy being $1 > 2 > 3$). Both EA and O are ordinarily bare DPs, but if EA does not outrank O, O assumes a case homophonous with the dative. I refer the reader to the two cited analyses for the details of how a $1 > 2 > 3$ hierarchy is implemented with the same mechanisms as a [+person] $>$ non-[+person] hierarchy. They develop for Kashmiri the two proposals above for Arizona Tewa, with either T or ν as the sole Case licenser that must associate to O if O outranks the EA. On either scenario either EA or O would end up without Case, and last-resort Case licensing added to O surfaces as dative case (cf. Georgian in section 1.3.6, with a different spell-out). At least, that is the foreshadowing of a proposal to be truly developed.⁵⁷ The scope of Λ

⁵⁵ Where Béjar and Rezac (2009) postulate an "added probe".

⁵⁶ This difference accounts readily for the inaccessibility of oblique EAs to extraction, often limited to ν P-internal arguments (cf. Béjar and Rezac 2007: Appendix), but not to their failure to control.

⁵⁷ There are many other potential candidates for Λ that would show it affecting the primary Case licenser of a language, but they could be analysed through local devices. Consider last-resort nominative in Icelandic ECM/raising infinitives, exemplified in (i), (ii) under the analysis in Rezac (2004: 323-332). If the subject of the infinitive is a DP without inherent Case, it is normally an agreeing nominative under raising verbs and an accusative under ECM verbs. However, if the infinitive contains a quirky oblique subject construction, which would surface with a nominative S in a finite clause, the quirky subject intervenes with Case assignment to and agreement with S. Under raising verbs, the object then surfaces as a nonagreeing nominative, and interestingly, under ECM verbs as well (see esp. Maling and Sprouse 1995, Jónsson 1996: 177-180; cf. Schütze 1997: 107-9, Sigurðsson and Holmberg 2008, i.m.a.). As Boeckx (2003) emphasizes, the infinitive-internal nominative in such contexts controls infinitive-internal participle agreement even if it does not control matrix agreement, (ii). The pattern suggests a last-resort nominative assignment by nonfinite T just when non Case can get to the embedded object. However, the paradigm is also compatible with an alternative where a nonfinite T optionally assigns a nominative in general, and it becomes overridden by subsequent ECM accusative or raising agreeing nominative. The same two analyses seem at present possible for other instances of apparently last-resort Case assignment: see Bobaljik and Branigan (2006) and Folli and Harley (2007) on Romance causatives, Béjar and Rezac (2007) on the K'ekchi focus antipassive, Hornstein et al. (2008) on English and Portuguese infinitival prepositions.

- (i) a Við teljum koma marga íslendinga / *margir íslendigar
 we believe to.come many Icelanders.NOM/*ACC
 We believe many Icelanders to have come. (Taraldsen 1995: 322)
- b Ég taldi [hestana] hafa verið gefna [konungi]
 I believed the.horses-ACC to.have been given-M.PL.A a.king-DAT
 I believed the horses to have been given to a king. (Schütze 1997:106)
- c Ég taldi [Jóni] hafa verið gefnir hestar/*gefnar hestna]
 I believed John-DAT to.have been given-N.PL horses-NOM/*ACC.PL
 I believed John to have been given horses. (Maling and Sprouse 1996: 180)
- (ii) a Mér hefur/hafa sýnst mennirnir vera gagnrýndir ómaklega
 me.DAT has/have seemed the.men.NOM to.be criticized unjustly

The algorithm Λ is formulated generally enough so that any instance of nonconvergence can trigger the addition of a probe. Consequently, an element α that is not interpretable in any numeration will always license the addition of a probe by Λ and so make it appear that the probe is obligatorily present in a given configuration or on a given lexical item, (9).

- (9) Λ (lemma): If an element α requires the presence of an uninterpretable feature F in all numerations where it finds itself, Λ licenses F in *all* numerations.

The result is that Λ can be construed to cover almost all syntactic dependencies because they can be construed as a case of non-convergence. This provides a new perspective on the source of the property that licenses syntactic dependencies in the syntax, uninterpretable features like phi-probes. *Wh*-dependencies are a good example. It may be supposed that they must be interpreted in [Spec, CP] of a particular C_Q , due perhaps to their inherent semantics that requires them to take scope over the type of semantic object into which C_Q turns a TP (Karttunen 1978, Romero 1997; a requirement of C_Q could also serve as the basis of the example). Most *wh*-words are not born in the specifier of a C_Q ; arguments for example must originate in thematic positions to satisfy other requirements of their interpretation. If a numeration with a *wh*-word contains a C_Q , adding a probe to it to drive the movement of the *wh*-word will allow the *wh*-word to satisfy its requirement and the derivation to converge.⁵⁸ If there is no C_Q , adding a probe to the head at the edge of the phase will allow the *wh*-word to move out of the spell-out domain of the phase, the complement of the head, and so not cause it to crash and have a chance at satisfying its requirement in a later phase. This is one of the original grounds for Λ in Chomsky (2000: 109, 2001: 34). In the same manner can be inserted any probes needed by criterial and successive-cyclic dependencies, provided that failure to establish the dependency leads to non-convergence. Pursuing such extension would presumably require much refinement of Λ or the system in which it is embedded, to address such issues as parameterically varying availability of successive-cyclic movement. (Uninterpretable feature on the goal plays no necessary role in this view, as discussed for Case.)

The licensing of criterial and successive-cyclic probes as last-resort does make predictions that sometimes differ from having probes be present independently of convergence requirements. *Wh*-movement again provides an example. Suppose that a *wh*-word needs merely to be sufficiently close to C_Q , including in the specifier of its TP complement. Then Λ will not license an uninterpretable feature on C_Q to trigger *wh*-movement if the *wh*-word is coming from the local [Spec, TP], only if it is coming from any other position. The result derives the ban on string-vacuous *wh*-movement of Chomsky (1986b), and it seems like a possible treatment of the special properties of the highest subject A'-relations, such as anti-agreement (q.v. Richards 2001: chapter 4).

The extension of Λ to the domain of regular criterial and successive-cyclic probes goes in the reverse direction from the phenomenon that originally justifies it. The need to posit Λ comes

It has seemed to me that the men are unjustly criticized. (Jónsson 1996: 178)

b MÉR hefur/??hafa sýnst Jóni hafa verið gefnir þessir sokkar.
me.DAT has/??have seemed John.DAT to.have been given-PL these socks.NOM.
It has seemed to me that John was given these socks. (Jónsson 1996: 179)

⁵⁸ Cf.: Fox 2000: 23 note 5 observes that since obligatory QR is always for semantic effect, to allow a quantifier to be interpreted, it might be viewed as obeying Scope Economy, i.e. reference set computation.

from the existence of probes whose presence depends on information that is not on the path between them and their goals: the probe licensing a strong direct object pronoun or otherwise unavailable accusative Case in function of a dative higher than the probe. That scenario remains the foundational justification for a last-resort algorithm, because the dependency of such probes on "external" information cannot be coded by the regular, path-sensitive mechanisms of syntactic dependencies. Λ will create such configurations when it inserts a probe on an item in the numeration that ends up below the item creating non-convergence, for example. However, the occurrence of the more canonical criterial and successive-cyclic probes now also falls under the purview of Λ . For criterial probes, Λ assumes the function of superfluous coding on lexical items of probes whose presence is determined by the need of a goal like a *wh*-word to move. For successive-cyclic probes, Λ plays the role given to it in Chomsky's (2000, 2001) proposal of forcing a probe at the edge of a phase when needed for convergence of the spelled-out portion, and eliminates the successive-cyclic clause from the formulation of path-dependence in (37).

Λ can therefore serve as the general mechanism for the introduction of the properties triggering or licensing syntactic dependencies. In the construction of *wh*-dependencies, a *wh*-probe on C_Q or a phase-edge is inserted in the construction of a numeration as a consequence of the interpretable properties of the *wh*-word which only converge with such a probe. Motivated by convergence, the insertion of the probe is grounded in the requirements of the interfacing systems, interpretive (*wh*) or morphophonological (Case). Λ thus serves as a channel of transmodular inspection, which has been invoked particularly for semantic properties licensing syntactic dependencies, whether discussed explicitly as transmodular or not. A recurring example is the use of the theta-criterion to determine the syntactic well-formedness of Merge in Epstein and Seely (1998: 122), Chomsky (2000: 103, 106, 111f.), and more explicitly in Johnson and Lappin (1999: chapter 3). In this view, the properties licensing syntactic dependencies, uninterpretable features, are the dynamic, on-line response of syntax to the requirements imposed on it by external systems: a step towards eliminating the "imperfection" of a syntax optimally meeting interface requirements. Nevertheless, there is a profound restriction imposed on Λ however, and it is a seed of doubt that it can or should serve the function of channeling semantic properties into syntax. Λ should be constrained to failures at the input to external systems, not to their internal computation: the theoretical and empirical considerations of modularity alike indicate this. It can be easily questioned whether a property like the *wh* and theta criteria are input rather than internal/output failures in the interpretive module.

Should that qualm prove unfounded, the reference of Λ to convergence also allows a curious view of what properties of lexical items are in the syntax. Lexical items come with properties legible in the interpretive and in the morphophonological components, and some but not all of these are assumed to play a role in syntax in the formation of syntactic dependencies: categorical features like N, *wh*-features, but not the features differentiating *cat* and *dog*, *seven* and *eight*, perhaps even *few* and *none*, *few* and *blue*, *old* and *former*. The properties of lexical items must thus be typed as syntactically visible or not, for example by "late", post-syntactic insertion of the invisible properties. The minimalist program shifts many of the syntactic mechanisms of GB like the theta criterion to the interfacing components, and this vastly reduces the properties that the syntax must see. Since Λ inserts probes based on the convergence of a numeration at an external system, the properties of lexical items that determine the convergence at that system need not be in, or at least be visible to, the syntax. It suffices that they be inserted during the mapping to an external system like interpretation, at which point a *wh*-word must be known to be a *wh*-word and cause a crash if it is not locally related to a C_Q . A vision thus arises of a bare syntax where

lexical items are assembled and dependencies established between them not in virtue of any properties visible to syntax, but in virtue of the success or failure of a lexical selection to converge. This possibility must be tempered with the role that interpretable lexical properties play in conditions on syntactic dependencies like relativized minimality and selection, to the extent these cannot be construed as simple interpretability at LF and realizability at PF.

The full elimination of autonomous, lexically-specified licensing of syntactic dependencies by Λ faces a residue of mismatches between the need to create a syntactic dependency for convergence and the presence or absence of that dependency. One set is constituted by the failure of a plausibly available syntactic dependency to be licensed even when needed for convergence. It may call for no more than a parametrization of the availability of Λ in certain syntactic structures, much as discussed for the AP in section 1.3.2.2. However, an examination of two paradigms apparently showing this effect in the core domain that Λ does affect, Case licensing, suggests alternative solutions. The other set is constituted by probes that are not easily justifiable by convergences. It also points to a fundamental issue in the parametrization of uninterpretable features, which does not come down to convergence, and returns us to the difference between obligatory and dependent Case. We will examine them in turn.

Failure of Λ to operate when it would rescue a structure may call for trivial parametrization of which phase-heads may resort to it or which lexical items may host added features, or lead to genuine articulation of the various options left open in proposing Λ . One familiar instance of Case licensing failing when needed is Rothstein's (1992) extension in (74) of Burzio's (1986) generalization that unergative but not unaccusatives are potential Case licensors vs. unaccusatives (along with the other arguments discussed in her paper). The problem arises more generally for various exceptions to the dependent-Case generalization of note NOTE-45, such as unaccusatives/passives with an applied object without inherent Case, where we expect dependent Case to arise, sometimes rightly (Inuit, Chukchi), sometimes not (Basque, Nieuw). Λ might need to be parametrized, but a simpler solution presents itself. If unaccusatives but not unergatives in English lack any potential host for a Case-licenser below the theme (T but no v capable of bearing κ), and if Case in English cannot be added to bare DP arguments as discussed for French, then an application of Λ to the noncovergent (74)b would not rescue it.

- (74) a. They laughed John off the stage.
b. The cart rolled the rubber off its wheels.

(Rothstein 1992: 127)

- c. The rocks thundered / *fell their way into the ravine.

A second, more complex, instance occurs in (75). The verb *allege* differs from a regular ECM verb like *believe* in not licensing a full DP subject of an ECM complement, but it licenses a null subject such as a *wh*-trace. A traditional interpretation is that *allege* fails to assign Case past the more robust boundary of its infinitival complement as compared to regular ECM infinitives, but successive-cyclic *wh*-movement through the edge of the infinitive brings the *wh*-subject into a sufficiently local relation with it (cf. Kayne 1981). Last-resort Case-licensing should be available here for the subject of the infinitive, given the robust availability of Case-licensing for the subject of infinitives cross-linguistically, as in English *Mad Magazine* sentences *the plan fail?!*, *for-to* infinitives, or most pertinently ECM infinitives in Irish (McCloskey 1985). However, a full paradigm suggests a different interpretation: weak pronoun and expletive subjects are licensed on par with A'-traces, passives of the verbs where the subject raises are fine,

and so are expletive constructions where the expletive is the subject of the infinitive and the noun in need of Case in-situ. Although these facts can be construed in terms of Case, as in Boskovic (1997) where they are first fully assembled, they suggest that the problem of *allege*-type verbs is not really Case assignment but rather the licensing of the subjects of nonfinite clauses (EPP licensing), shown at great length to be an independent phenomenon in English in Schütze (1997: chapter 2). Following Boskovic (1997), null and weak elements escape the requirement by cliticizing; DPs cannot escape; but Case is available independently as embedded expletive constructions and passivization show. Much recent work shows that the nature of positional / EPP licensing is different from that of Case licensing and other syntactic dependencies, setting this problem apart (esp. Lasnik 2001, Fox and Lasnik 2003, Lasnik and Park 2004).⁵⁹

- (75) a. She believed / alleged there to be stolen documents in the drawer.
 b. She believed / alleged it to be impossible to square circles.
 c. She believed / *alleged (it and the) stolen documents to be in the drawer.
 d. Who did she believe / allege ___ to have kissed her?
 e. Stolen documents were believed / alleged to be in the drawer.

A greater conceptual problem for Λ is the existence of probes that are present without any motivation of convergence, or even if their presence would cause nonconvergence. It is hard to find convincing examples of the first type, because it is hard to exclude some relatively plausible motivation in interfacing systems. However, the optional agreement in cross-clausal agreement configurations of type (76)a seems to fit the profile. Remote agreement in raising out of infinitives can be taken to allow the Case-licensing of the embedded DP, but that is not so here, where the DP is Case-licensed within the finite clause. There appear to be no interpretive requirements that are being met by the agreement, because it is inert for all diagnostics like anaphora binding. The best one can do, it seems to me, is to suppose that a phi-probe on the matrix T is mysteriously needed by the mechanism that satisfies the matrix EPP requirement. The probe agrees either with a remote goal (here plural) or with the CP complement (singular) (Rezac 2004). However, it is not in fact the goal of phi-agreement that satisfies the EPP requirement in English; here it is the expletive, and in "locative inversion" various adverbial elements do so (Bresnan 1994, Collins 1997, Culicover and Levine 2001).

- (76) a. There seem(s) (*to each other) like there are two anthropologists in agreement.
 b. Two anthropologists seem (to each other) like they are in agreement.
 c. There seem to be two anthropologists in agreement.

⁵⁹ A still fuller paradigm for these verbs reveals further subtleties like (i), beside and a great deal of speaker variation: see esp. Postal (1974, 1993), Kayne (1981), Rooryck (1997). Case would independently play a role with the verb *show*, (ii): it behaves as a regular ECM verbs when lacking an internal argument, and as *allege* when one is present except that a weak pronoun or expletive subject cannot be licensed either (but see Postal 1993: 363 for another explanation). By simple locality over A-positions, we expect any Case assignment base the internal argument to be impossible, giving this paradigm.

- (i) I estimate it to be raining / *it to be six inches long (Postal 1974: 298).
 (ii) a. The investigator showed (*Mary) the pictures to have been taken at dawn.
 b. The pictures were shown (*Mary) ___ to have been taken at dawn.
 c. The investigatory showed Mary that the pictures were taken at dawn.
 d. Mary was shown ___ that the pictures were taken at dawn.
 e. ?What pictures did the investigator show Mary ___ to have been taken at dawn?

It may be that the phi-probe of T in English furnishes further evidence of independence from convergence requirements: it is present obligatorily in certain contexts where it is not only unnecessary but where it causes a crash. English does not permit clauses without a nominative or a plausible candidate for one, like a CP. Other languages do. The analogue of impersonal passives or unergatives like (77)a is fine in French for example (Kayne 1975, Safir 1982), impersonal unaccusatives with only oblique arguments of the type (77)b are famous in Irish syntax (McCloskey 1996), and recent work puts emphasis on the theoretical relevance of Slavic passives and unaccusatives with only accusative arguments (Lavine and Freidin 2002, Bailyn 2004; cf. the French *falloir* construction discussed in chapter IV). It might be that what rules out the analogues of these in English is the need of the phi-probe of T to find a goal, which these languages satisfy by either not having a phi-probe or by having default strategies (Rezac 2004). Yet that is a superficial and hasty conclusion given the actual complexities of the properties of these constructions and the variation in languages in allowing them; French for example allows impersonal passives only if there is an argumental PP around (and even then only in a very restricted way if there is an accusative object), and only one impersonal unaccusative. More promising seem proposals in the vein of Dobrovie-Sorin (1998) that do not reduce this variation to a brute difference in the presence or default satisfaction of the phi-probe of T.

- (77) a. *There/*it/* \emptyset was shot at/on the boat. "The boat was shot at."
 b. *There/*it/* \emptyset strengthened on my voice. "My voice strengthened."
 c. *There/*it/* \emptyset needs her. "She is needed."

Spurious or not, the example brings up one of the intuitions behind uninterpretable features as licensing mechanisms for syntactic dependencies. Recent work has the phi-probe of T in English license nominative Case and attributes to it a quasi-universal character. Earlier exploration in the minimalist program however emphasized the role of synchronically arbitrary and parametrically highly variable morphological properties of lexical items in driving syntactic computations, resting on an ultimately diachronic basis. The leading idea comes from work on head-movement: it is the affixal character of elements like T or D that drives syntactic movement of V or N, and that affixal character typically reflects diachronic weakening (Chomsky 1995 for head movement in the verbal domain, Longobardi 2001 in the nominal domain). Consider from this perspective the synchronically arbitrary difference between a tensed finite verb that lacks agreement affixes and one that has them as the end-result of the diachronic atrophy of subject pronouns to clitics to agreement markers, correlating with movement of the controller of the agreement marker to [Spec, TP]. In a framework that permits lexical items to be arbitrarily listed with uninterpretable features as triggers of syntactic dependencies, the latter but not the former verb/T may be attributed a phi-probe.⁶⁰ Nothing bars or makes unnatural the use of such devices under the present proposal where syntactic dependencies are licensed for convergence, but the system invites exploration of the nature of the convergence requirement involved. One option is always to stipulate that certain elements like nouns or like a given T/V come with features that must be eliminated by the formation of a syntactic dependency, like a phi-probe or a D feature in the lexicon, which is not interpretable at LF and so must be eliminated, and which, in the case of

⁶⁰ It is not clear that this freedom is actually envisaged beyond strong categorial features that drive movement in earlier versions of minimalism; cf. Chomsky (1995: 4.2.2) for automatic if parametrizable insertion of features on syntactic elements during the construction of the numeration.

an unvalued probe, is perhaps is not realizable at PF and so must get a value. Λ plays no special role here, though it permits potentially divorcing these properties from the mechanism that must establish a syntactic dependency for convergence from the mechanism that actually establishes that dependency, an exploration not undertaken here.

The device in discussed in the preceding paragraph requires a given lexical item like T to seek a goal for phi-agreement/Case-licensing. It lends itself therefore not only to phenomena where such a probe is present independently of convergence requirements, but also to the parametrization of the localization of probes added by Λ in the clausal architecture. The one clear example of this is the Obligatory Case Parameter, whereby accusative languages choose T as the locus of obligatory Case and ("morphologically") ergative ones choose *v*. In the dedevelopment of Λ for dependent Case, obligatory Case has been left aside as not falling under its purview at all. If last-resort, convergence-based Case licensing is extended to all syntactic dependencies however, obligatory Case also must fall under it, and the choice of T or *v* as the locus of the obligatory Case probe if one is needed at all must be parametrizable. Attributing one of these items a lexical phi-probe along the lines of the preceding paragraph is one option and does not differ from theories without last-resort Case licensing. Perhaps one should like to go beyond an arbitrary choice of this sort and understand the deeper properties that make a language ergative or accusative; but the conclusion that an arbitrary choice is necessary may also count as a valuable recognition that languages of both types, like Basque and French, share an otherwise relevantly identical syntax, and that synchronic coding of diachronic development or plain choice among the degrees of freedom in a system exist (cf. NOTE-45).

1.5 Limits of Λ

The proposal for the origin of uninterpretable (phi-)features developed here is both radical and conservative. It is radical in comparison to the standard way of treating syntactic dependencies that eschews transderivational comparison entirely, including the existence of any last-resort structures or derivations that exist only in virtue of others failing. The paradigms of last-resort dependent Case in repairs of [+person] licensing indicates that some last-resort phenomena do exist. It is important to end that the proposal is also extremely conservative in comparison with extant alternatives for last-resort mechanisms specifically, and for transderivational computation in general.

The last-resort computation here is highly constrained: it applies only in the case of non-convergence of a syntactic structure at the input to external systems; it modifies its numeration only, not the computation from it; and it only works by inserting uninterpretable features, or to speak more generally, enabling licensing. The first two aspects make Λ an "interface" algorithm that ensures tight encapsulation of syntactic computation. The last aspect bears some further contrast with alternatives. Λ has the potential to change a syntactic structure only by adding licensing capacities to its numeration. The limitation of this view of last-resort phenomena emerges clearly when compared to an unchecked Minimize Structure, to a general transderivational mechanism like Optimality Theory, or to a mechanism of truly arbitrary scope like the arbitrary (idiomatic) realization of any given meaning by any syntactic structure (cf. Jackendoff 2002). Optimality Theory computes the best candidate from a given input according to ranked and violable constraints ensuring on the one hand faithfulness to it, and on the other minimal markedness or, from a different perspective, conformity to UG principles like islandhood. Since any constraint may be violated, there is no such things as an ungrammatical

output for a given input, and any faithfulness or markedness constraint may be over-ridden if outranked by another. Structure may be added or deleted, principles evident in the computation from certain inputs may be suspended in others. Although there are technical ways of ensuring that certain principles are not over-ridden, the character of such a system seems at odds with the character of syntactic computation. The theoretical intuition underlying a nontransderivational view of syntax is that the mapping of an input to output in syntax is invariant across inputs in its principles, always respecting the same markedness/UG constraints and the same faithfulness constraints, with very little leeway in the latter for deviation from the properties of the input in the output structure. Λ articulates one deviation, in licensing capacities and their consequences, but it is a very small one: *She showed him you* in French may be repaired by *She showed him to you*, but a dative that cannot independently be interpreted as prepositional be subjected to this process to create an otherwise unavailable nonce syntax-semantics mapping like *She baked you to him*, and interpretable information may not be added or deleted to create the likes of *She showed him to your person*, *Our introduction took place through her*. It may be that more is needed than Λ allows, thinking of other potential examples of last-resort licensing like Montalbetti's (1984) Overt Pronoun Constraint or the nonintrusive last-resort resumptives of Shlonsky (1992), but the limits are tight.

With mention of these other empirical domains, we come to a question about Λ raised in the introduction but wholly outside the present scope. Transderivational computation has seen many uses over through the development of generative grammar. The one explored in this work belongs to narrow syntax: an otherwise impossible syntactic structure is deployed by the system responsible for grammaticality judgments to become fully grammatical in the very narrow context of [+person] violations and not elsewhere, like a psych-unaccusative with an ergative subject in Basque or a strong unfocussed dative pronoun in French. Outside syntax, there is reference-set computation with the same character in the system of interpretation, if the works of Fox (2000) and Reinhart (2006) on coreference and nonlocal binding are right: an otherwise unavailable interpretation becomes fully available as last-resort. With quite a different character, often clearly distinct from grammaticality judgments, we find apparent reference-set computation in the systems of use. Jacobson (1997) attributes to the parser the original transderivational paradigm: the blocking of an OVS analysis by an SVO one for potentially ambiguous input in a language where OVS is ordinarily freely available (Chomsky 1965: 128, Lakoff 1973, Hankamer 1973, Langendoen 1975). Miller (1992: 257 note 28) identifies as a "transderivational performance constraint" the non-absolute preference for a certain causative structure in French, unless the dispreferred one is the only one possible, though it does not come without a cost. Intrusive resumptives easily come to mind as fitting to this broad category, but with much unclarity as to which extra-syntactic system they belong (Pesetsky 1998; Alexopoulou and Keller 2007). Similarly for the "conciseness" preference of *yesterday* over *the day before today* unless pragmatically motivated, not to be conflated with the absolute morphological blocking of *goed* by *went* (Poser 1992: 123-5, Legate 1999, Langendoen 2002: 631; contrast Williams 2007).⁶¹ This preference could easily cover the intuition of Avoid Pronoun (Chomsky 1981) or Minimize Structure (Cardinaletti and Starke 1999) if there are

⁶¹ Within the system of realization, there is a pervasive but very limited kind of transderivationality that has perhaps a rather different character: that of simple lexical insertion in run-of-the-mill analytic-synthetic alternations (*quicker*, *more rapid*) if instantiated as word-phrase blocking in some way (Andrews 1990b, Poser 1992, Börjars et al. 1996, Kiparsky 2005, Disciullo and Williams 1987, Williams 1997, 2007) and even in the simple Elsewhere Condition for vocabulary insertion (Halle and Marantz 1993, Embick and Marantz 2008).

instances of those outside the domain of narrow syntax investigated here, perhaps with a character akin to intrusive resumptives, made use of but not judged grammatical.

Such an array of transderivational computations beside the proposal that Λ is a system at the interface of narrow syntax, affecting its input in function of its output, suggests the existence of a general transderivational mechanism in linguistic cognition operating over the input and output of diverse modules, with specific effects depending on the nature of the module affected. If the input of narrow syntax is nought but terminals and uninterpretable features, to be clad with form and meaning upon mapping to the interfacing systems, then an external mechanism can only manipulate uninterpretable features. The input and output to interpretation and the parser would be different, involving fixation of reference for the one and sets of candidate structures for the other. In this way the engine for a transderivational computation might be generalized and account for such computation in other domains.

1 Chapter VI: Phi-licensing and the nature of uninterpretable features

Throughout chapter V, we have seen the deployment of otherwise unavailable Case to repair problems with [+person] licensing, (1), converging with the independent analysis sketched in chapter IV of the [+person] licensing problem as a failure to get Case.

(1) Examples of PCC repairs:

* notates element banned if [+person] on left-hand side, ok otherwise
underline indicates element affected by the repair

	<i>Person Case Constraint</i>	<i>Repair</i>
a. Basque dial.:	DAT _{Appl} -ABS _S * unacc.	→ <u>ERG</u> *-DAT
b. Finnish:	OBLQ _{Appl} -NOM _S * unacc.	→ OBLQ- <u>ACC</u> *
c. Chinook:	bare _{Appl} -bare _S * unaccusatives	→ <u>ERG</u> _{Appl} -bare _S *
d. Arizona Tewa:	bare _{EA} -bare _O * transitives	→ <u>ERG</u> _{EA} (?)-bare _O *
e. French:	(EA-)DAT _{Appl} -ACC _O * trans.	→ ACC*- <u>DAT</u> _{pp}
	≡ [Γ _{DAT} +D°+N°]-ACC _O *	→ ACC*-[Γ _{DAT} + <u>Case</u> D°+N°]
f. Georgian:	(EA-)DAT _{Appl} -ABS/ACC _O * trans.	→ DAT _{Appl} - <u>O's self</u> .ABS/ACC*
	≡ DAT _{Appl} -[Γ+D°+N°] _O *	→ DAT _{Appl} -[Γ+ <u>Case</u> +D° N°] _O *

Case appears to be implicated in [+person] licensing because the repairs can all be construed as the addition of Case-licensing, as is clearest in Basque, Finnish, and Chinook, where the result coincides with independent "dependent Case" morphology. Dependent Case, and Case is general, is not assigned to [+person] nominals alone, however. The introduction to chapter V has sketched the reason why the Case/phi-agreement/A-movement system in general is to be held independent of any interpretive property (and thus any requirement) of the nominals assigned Case: Case, phi-agreement, and A-movement affect idiom chunk nominals that are interpretively inert in themselves, as in (2). This goes for dependent Case as well.

- (2) a. Close tabs were kept on her (without close tabs/*they/*PRO being kept on you).
b. Once would expect close tabs to be kept on her.

This concluding chapter considers some issues that bear on what might be the requirement of nominals to bear Case, using [+person] licensing – a requirement that might be independent of the need for Case in general, but that in light of the use of Case in [+person] licensing repairs appears not to be. Such an inquiry has the potential to clarify the nature of the licensing requirements of interpretable phi and of the uninterpretable features like Case that license them. While the evidence is potentially rich, its consequences are presently fairly ambiguous, leaving it open whether licensing requirements belong to the interface with LF or PF components, and depends on various assumptions about them. However, it does extend the conclusion drawn for plain Case licensing to [+person] licensing: the requirement involved is not directly related to interpretive properties such as independently uncoverable, a position consonant with the view of an autonomous syntax operating independently of them.

Case is eliminated (assigned) by the syntax in order for a structure to converge at the interfacing systems. The introduction to chapter V has discussed Case as formal feature that is

not interpretable by at least one of the interfacing systems of LF and PF, and therefore one that must be eliminated by syntax for Full Interpretation. It has also raised the possibility that Case is "grounded" in one of these systems, motivated in it beyond mere Full Interpretation: as a requirement on its input as well but one due to its internal properties, or even a requirement that is potentially of a kind legible to it. Here these questions are addressed starting from the idea that Case and specifically the [+person] licensing requirements are indeed grounded in an external system in some such way: what it might be, whether there is need for a featural coding in syntax, and what the relationship between external requirements and syntax is. It is presupposed that the external system that where Case is grounded is the morphophonology, but only to start the exposition.

One way to construe such grounding is as an input requirement on morphophonology that cannot be satisfied in it but nevertheless pertains to it. The classical intuition is that nominal stems require Case in order for the morphophonological system to realize them: the Latin stem *equ-* 'horse' may occur in various cases like the nominative, but there is no spell-out of the stem itself (Chomsky 1980b, 1981: 2.3, Vergnaud 1982, Rouveret and Vergnaud 1980: XX; cf. Chomsky 2000: 127 for Case in pied-piping). Syntax satisfies it by establishing a relationship between a Case-licenser and a nominal, reflected at PF as assigned Case.¹ Grounding Case in this way in the input requirements of an external module has the consequence that there is no actual need for syntactic uninterpretable Case features to cause a Full Interpretation crash if not eliminated. If getting Case is a condition on the legibility of nominal stems by the input of morphophonology, the input will crash unless Case is assigned. This view fits well with the view of Case in Chomsky (2000 et seq.) where its principal role of the feature is to identify the actual need to get Case, and it cannot act as a probe itself. The role of establishing Case dependencies shifts to uninterpretable (unvalued) phi-features on the Case licensers T and *v*, which look for a phi-set and by doing so assign Case, encoding the close empirical relationship between Case and phi-agreement (George and Kornfilt 1981, Schütze 1997, Chomsky 2000).

If Case is so grounded in the input requirements of morphophonology and if it is not coded as a feature that would have to be eliminated for interpretability at LF as well as PF, a further possibility presents itself. Case could be a requirement not of the input to morphophonology but an internal or output requirement of it, and so one that is legible to it and potentially satisfiable by it, if not satisfied by syntax, even after the application of Λ . In the domain not of [+person] licensing, the idea is due to Albizu (1997) who proposes that if the syntax does not create a configuration for [+person] licensing there may be language-specific morphophonological repairs. This is not untenable even in the present context where [+person] licensing failure causes a syntactic repair that other morphophonological requirements do not, but it demands great care on the theoretical side of modularity, and on the empirical side where it is simply not true that the Person Case Constraint is fixed by anything like the varied panoply of parochial repairs like those for 3.DAT+3.ACC clitic clusters in Romance (chapter II), such as partial haplology.² The same holds of Case generally, since at least often when not satisfied by syntax, it cannot be supplied as a default. Theories of morphophonology do provide nuances between an immutable

¹ For diverse ways to do this and so of what Case exactly is, see Bittner and Hale 1996, Rezac 2003 as the remote licensing of an empty K(ase)°, Cardinaletti and Starke 1999 as a local one, and Pesetsky and Torrego 2001 as uninterpretable feature valuation.

² Albizu's (2007) repair is reanalysed in Rezac (2008a), but one is reminded of a number of "like licenses like" phenomena like the weak Person Case Constraint and related phenomena discussed in chapter IV, note NOTE-70, which might well be morphophonological repairs, beside the other options mentioned there.

input requirement and an easily and variably repairable morphophonological problem: as an "early", pre-vocabulary insertion requirement rather than a "late" one in Distributed Morphology, or a gap in the feature combinations defining a paradigm rather than in the realization of its cells in Paradigm Function Morphology (Bonami and Boyé 2006: 304f.).

These various options for articulating Case exist under a variety of views about what the requirement is and how it can be satisfied. The Person Case Constraint and related phenomena suggest that Case can be relativized to classes of phi-features, so [+person] can be licensed independently of the number and gender of non-[+person] (Anagnostopoulou 2003, Rezac 2008a).³ Why would phi-features need Case, and why would Case-assigners relate to the Tense, Aspect, and/or the C-system (Travis and Lamontagne 1992, Bittner and Hale 1996, Cardinaletti and Starke 1999, Pesetsky and Torrego 2001, 2004)? The classical construal of Case as a requirement on the spell-out of nominal stems has been mentioned and could be adapted for phi-feature classes. Another possibility has been widely suggested specifically for [+person] licensing: [+person] must be sufficiently hierarchically prominent, and one way to achieve this is by (the system underlying) Case-licensing / phi-Agree:

- Murasugi (1992: 132): the relative prominence of arguments on the person hierarchy correlates with syntactic prominence of AGR heads coding the interpretable phi-features of these arguments.
- Albizu (1997): a morphophonological condition requires that c-command among arguments matches the person hierarchy in the same minimal domain, coming down to a Case-licensing domain due to the way syntax groups phi-features; ultimately related to the referential status of arguments (esp. note 29 and text apposite).
- Aissen (1997): the relative mutual prominence of arguments on the person hierarchy and on the grammatical function hierarchy should match, coded as a violable constraint.
- Nichols (2001): highest-ranking argument on the person hierarchy must be syntactically related to the functional head Tense, ultimately due to the interpretive requirement of anchoring referential arguments to utterance time (p. 535).
- Bruening (2001): certain arguments including all 1st/2nd but only some 3rd persons are attributed a feature that must be checked outside the vP.
- Sigurðsson (2004), Bianchi (2006: 2047-9), Holmberg and Sigurðsson (2008): a pronominal argument must establish a syntactic relationship with a corresponding person head, hierarchically arranged in the left periphery of the clause according to a person hierarchy, ultimately due to an interpretive requirement that its person feature be "anchored" in the deictic arguments of the speech act of which the left-peripheral heads are a syntactic coding (cf. Speas 2000, 2004, Speas and Tenny 2003, Schlenker 2003).

These and other views of [+person] licensing must account for the role of Case in it. Nichols (2001) emphasizes that only [+person] without inherent Case needs such licensing in EA-O PH interactions. We have seen the same to be true of datives in configurations where accusative clitics would incur the Person Case Constraint, both French datives clitics and cross-linguistically (chapter IV, sections 1.5.1-2, 1.6.3; Postal 1981, Albizu 1997, Anagnostopoulou 2003). A [+person] person DP with inherent Case does not need clausal [+person] licensing, yet

³ For evidence that these classes have distinct syntactic probes, see Taraldsen 1995, Sigurðsson 1996, Laka 1993a, Fernández and Albizu 2000, Rezac 2003, Béjar 2003, Etxepare 2005, Béjar and Rezac 2009.

it does not differ from one with structural Case that does on such terms as grounding in utterance time, potential for context shifting, domain where referential uniqueness holds, and so on. The same remark characterizes more generally attempts to ground Case in an interpretive requirement, keeping in mind that idiom chunks get Case: Uriagereka's (1996) proposal that Case is needed for tokening, Brandt's (2002) as anchoring to utterance context, Chomsky's (1981: 176f., 333f., 1986a) as a condition on theta-assignment.

Speaking more generally, the repairs of [+person] licensing can be unified as adding Case licensing. However, the role of Case could be indirect, if it is the driving force in creating the hierarchical configurations of which [+person] licensing is read, which though not falling under any of the above proposals retains their flavour. There are some fairly clear instances of [+person] elements that do not seem to move, as pointed out in chapter IV:

- (3) a. *Líklega höfum það þá bara verið við.*
 probably have.1PL it then only been we.NOM
 Probably, it has then only been we.

(Sigurðsson and Holmberg 2008)

- b. *Henni *leiddumst/?*leiddist við*
 her.DAT bored-1PL/DFLT we.NOM
 We bored her.

(Sigurðsson 1996)

However, if the default-agreement variant of (3)b is bad not due to [+person] licensing but due to the impossibility of pure number-agreement morphology, as seems likely on the basis of various languages (Sigurðsson 1996, Rezac 2008a: XX), then the pronoun *við* here can be supposed to need not [+person] licensing of its own due to being strong. Its person agreement is still blocked by the same principles that block the person agreement needed for [+person] licensing of elements like clitics, but these elements can all be viewed as moving to be licensed, in the clause or within structures like inherent Case PPs. [+person] licensing still does not reduce to movement, though, because in instances like Basque, Finnish, and Chinook in chapter V, special dependent Case assignment is necessary in addition to any movement that happens independently, or so it would seem. The need to get Case, as noted above, has a neat take on it in terms of PF requirements, but a more opaque one in terms of interpretation.

For the moment, the conceptual grounding of [+person] licensing in prominence, in relatability to tense, or to clausal reification of speech act participants, lacks support independent of the phenomena which it strives to ground. Moreover, there are clues that [+person] in the Person Case Constraint is really about (grammaticalized) animacy rather than personhood. If so, there is an important consequence. The intuition of some of them is that [+person] licensing derives from the need to localize elements corresponding to the features of the speaker and the addressee in the left periphery of the clause, under the general assumption that a part of the left periphery is dedicated to the syntactic reification of some or all indexicals, speaker and addressee as much as T° does for utterance time. What counts as an indexical characterized independently of and a-priori to hypotheses about their syntactic coding (see Perry 2006, Schlenker 2008 for reviews), and the animacy of an argument is clearly not it (Rezac and Joutiteau in prep.). We will see an independent argument for this point below, from elements that are interpretively indexical but not subject to [+person] licensing. So this attractive view of [+person] licensing seems to be on the wrong track.

One line of evidence for the role of animacy comes from interpretive over-riding of the constraint by forcing an inanimate interpretation of 1st/2nd person arguments. French bans [+person] accusative clitics in causatives with a dative causee even if the causee is non-clitic, and this has been assimilated to the Person Case Constraint in chapter IV, section XX. Postal (1989: chapter 5) observes that the ban is lifted if the accusative [+person] is interpreted as inanimate in counterfactual and dream contexts. Rezac and Jouitteau (in prep.) extend to finding to scenarios where the causee is a clitic and to the Person Case Constraint in French generally:⁴

- (4) a. Si j'étais une armoire, on le/me (lui) ferait choisir (à Jacques).
 If I was a closet, one him/me.ACC him.DAT would.make chose to Jacques
- b. J'ai rêvé que j'étais un médicament, et qu'on me leur distribuait dans toutes les écoles.
 I dreamt that I was a medicament, and that one me.ACC them.DAT distributed in all the schools.

(Rezac and Jouitteau in prep.)

In these examples, an inanimate interpretation lifts the Person Case Constraint. Ormazabal and Romero (2007) demonstrate that both morphological animacy and animate interpretation imposes the Person Case Constraint in Spanish. First, varieties of Spanish that distinguish grammatically animate and inanimate 3rd person clitics ban the former in the same contexts where the Person Case Constraint bans 1st/2nd/reflexive accusative clitics. We have seen other languages do the same (Finnish, Chinook), though it does not seem to cleanly correlate with making a morphological contrast in the 3rd person (Finnish vs. Icelandic, Chinook vs. Basque), or with grammatical relevance of animacy 3rd person (Anagnostopoulou 2003: 291ff.). Second, Ormazabal and Romero (2007: 327-9) building on Roca (1992) also argue that if a 3rd person clitic is c-commanded by a coreferential animate DP, it is subject to the Person Case Constraint. The relevant relationship is c-command by an independent animate argument, not reference to, coreference with, and clitic left dislocation of an animate; this defines the configuration where interpretive λ -binding is possible and obligatory (cf. chapter V, section XX), suggesting that animacy matching is required by it. In this domain too there is variation, for French (at least for some speakers) has neither the ban nor the PCC repair in the same contexts.⁵

⁴ All three sentences show variation. Some speakers do not get them at all; but for others they are grammatical, if strained (the normal reaction is to try to use a 3rd person pronoun), in crisp contrast to the PCC. Some speakers have the amelioration only with a nonclitic dative in causatives. They may be speakers who have a *me-lui* morphophonological clitic cluster restriction independently of the PCC, cf. chapter IV, note NOTE-155.

⁵ NOTE-117: There are reasons to beware of assimilating the binding effect to the PCC. Roca (1992: 59) notes that only 3rd person, not 1st person datives prevent the accusative from being animate-bound, although this could be analyzed as the weak PCC (note NOTE-70 of chapter IV). Furthermore, Ormazabal and Romero (2007: 329) note that the constraint continues to prevent the binding of a subject *pro* in the passive in the presence of a dative clitic (i). Not only does this not hold in French of the quite natural (ii), but Béjar and Rezac (2003) point out that subject 1st/2nd person are not restricted by the PCC in Spanish (iii). The restriction recalls that on nominative subjects of middle *se* constructions in French, see below. Another context seeming to extend the PCC to 3rd person animates in Spanish even when homophonous with 3rd person inanimates and not ordinarily barred is under clitic climbing, which may extend to French causatives (chapter IV, note NOTE-45, 112). Cf. perhaps also the role of gender in PCC-like restrictions (French: chapter IV, note NOTE-48; Chinook, NOTE-202 above; Greek, Anagnostopoulou 2003: 199ff.).

- (i) Mateo_i piensa que *pro*_i (*le) fue entregado a la policía.
 Mateo thinks that her.DAT was handed.over to the police.

- (5) a. Mateo_i piensa que se_k lo_{*i} entregaste a la policia_k.
Mateo thinks that SE him handed.over.2SG to the police
Mateo_i thinks that you handed him_{*i} over to the police.
- b. La madre de Mateo_i dice que se lo_i lleves a casa.
the mother of Mateo says that SE him.ACC should.bring to home
The mother of Mateo says that you should bring him to her place.
- c. El niño_i, te lo_i llevamos a las cinco.
the child, you.DAT him bring.1PL at the five
The child, we will bring him to you at five.
- d. El paquete_i especifica que se lo_i entregues al portero.
the package specifies that SE him should.hand.over.2SG to.the doorman
The package specifies that you should hand it over to the doorman.
(Ormazabal and Romero 2007: 327-8; *se* < *le* 3SG.DAT by Suprious *se*)
- (6) a. James_i a averti les filles qu'on allait le_i/_{*me} leur présenter (AVANT la soirée).
James has warned the girls that one was.going.to him/_{*me}.ACC them.DAT introduce
before the evening
- b. James_i a averti les filles qu'on allait ??le_i/√me présenter à elles (AVANT la soirée).
James has warned the girls that one was.going.to ??him/√me.ACC introduce to them
before the evening

{MJ}

It is difficult at present to draw more conclusions about the nature of [+person] licensing from the fact that it can be affected by interpretive manipulations of animacy. The effect is compatible either with construing [+person] licensing as an ultimately interpretive requirement that interpretative manipulation in (4) can satisfy if the syntax fails to do so. However, it would also follow if [+person] licensing is an interpretatively irreparable requirement, or a morphophonological requirement, and the apparent interpretative manipulation in (4) consists in the presence vs. absence of animacy features on 1st/2nd person morphemes upon their entry into the syntax, choosing homophonous but non-animate lexical items. Whatever the approach however, [+person] licensing seems independent of indexicality.

A different line of evidence points in the same direction, and indicates that whatever the requirement, it is about grammaticalized rather than directly interpretive properties. Postal (1989: 140f. note 1) observes this for another constraint, which has been related to the PCC although

Mateo thinks that he was handed over to the police.

(Ormazabal and Romero 2007: 329; *le* ok if *i*≠Mateo)

- (ii) James_i a averti les filles qu'il_i allait leur être présenté (AVANT la soirée).
James has warned the girls that he was.going.to them.DAT be introduced before the evening

{MJ}

- (iii) (Yo) le fuí presentado.
I.NOM him.DAT was introduced
I was introduced to him.

(Béjar and Rezac 2003: 58)

there remain discrepancies: the ban of 1st/2nd person nominative subjects of mediopassive *se* structures, as in (7). A similar constraint in Italian has been subsumed under the PCC in D'Alessandro (2004: chapter 4), treating *se* as an oblique intervener for T-nominative [+person] licensing. In French matters are more complicated: on the one hand, the constraint affects humans and even animates for some speakers, as in (7)a, while on the other hand examples like (7)b are contextually unproblematic for some speakers as in *Je me transporte facilement* 'I transport easily', said by a wheelchair-bound person (for MJ, as for Zribi-Hertz 1982: 363-5 vs. Postal 1989: 141 note 2; cf. also Medová 2008: 7.5). Whatever the nature of the constraint, Postal makes two key observations. First, there are 3rd person elements used as devices to refer to 1st/2nd person that are *not* affected by the constraint, as in (7)c: *votre serviteur* 'your servant', *ma pomme* 'my apple', *Bibi* 'darling' (cf. English 'yours truly'). Second, other formally 3rd person expressions like *on* in (7)d are affected by it: *on* is the regular French weak 1PL pronoun and controls 3SG agreement and local anaphora, though 1PL nonlocal and cross-clausal anaphora (see Wechsler and Zlatic 2000 on similar elements).

- (7) a. Un ami(, ça) (ne) se trahit pas.
a friend that NEG SE betrays not
One does not betray a friend. {MJ} (*ça* required at colloq. level where *ne* is dropped)
- b. *Je (ne) me/se trahis pas
I NEG SE betray not
One does not betray me. {MJ}
- c. Bibi / votre serviteur / ma pomme (ne) se trahit pas.
darling / your servant / my apple NEG SE betrays not
One does not betray me (in guises like "your servant", "yours truly", etc.) {MJ}
- d. Nous, on se trahis pas (NOUS).
we we SE betrays not US
One does not betray us (US). {MJ}

(modelled on Postal 1989: 140f. note 1)

Postal's point can be elaborated in the wake of Collins and Postal's (2008) investigations of 3rd person "impostors" used to refer to the speaker and addressee in English, like 'yours truly', 'this reporter', 'Daddy', 'Madam'. Although formally 3rd person, some of the French impostors like *ma pomme* have, like their English analogues, some of the key properties of 1st/2nd person indexicals: obviation with respect to c-commanding 1st person in (8)a and unshiftability in (8)b, though genuinely 3rd person for agreement and anaphora in (8)c. The behavior recalls English *yours truly*, as indicated in the translations (cf. Collins and Postal 2008: ex. 22, 35, 36 resp.).⁶

⁶ There are systematic differences between the English and French known to me: for example, the French ones only antecede 3rd person PRO (i), though as in English project 1st in coordination (ii).

(i) Sans PRO *se*/**me* poser trop de questions, ma pomme a enterpris le voyage.

Without asking himself/*myself too many questions, yours truly undertook the trip. (√myself in English) {MJ}

(ii) Votre serviteur et quelques amis sommes fier de nous-mêmes.

your servant and some friends are(1PL) proud of our-selves (Collins and Postal 2008: ex. 137) {MJ}

- (8) a. *Je_i connais biens les points faibles de ma pomme_i.
I know well the points weak of my apple.
Intended: *I know well the weaknesses of yours truly.
- b. Elle_i a dit que [ma pomme]_{speaker/*i} est toujours la bienvenue ici.
she has said that my apply is always the welcome here
She said that your truly_{speaker/*she} is always welcome here.
- c. Ma pomme_i(, elle_i) va pas se_i/*me_i laisser faire comme ça.
my apple, she is.going not SE let make like this
Yours truly is not gonna let himself/*myself be taken in like that.

{MJ}

The difference between "impostors" like *ma pomme*, not affected by the mediopassive *se* constraint in (7)c, and formally 3SG *on* in (7)d which is so affected although it started out diachronically like an impostor (cf. *homme* 'man'), seems is the degree of grammaticalization. *On* is the regular weak pronoun for 1PL in French, while "impostors" like *votre serviteur* or *ma pomme* are more stylistic devices. But the mediopassive *se* constraint must be about grammaticalized indexicality (or animacy), not about interpretive indexicality, which is clearly a property of *ma pomme* in (8). Now, there is a structural way to cash this out so that the mediopassive *se* constraint can be stated over a uniform interpretive feature: impostors not affected by it have a rich structure wherein the 1st/2nd person and/or animacy features are burried, ensconced in a shell that licenses them but renders them invisible for the outside, e.g. [_{3SG} ma pomme [_{1SG} me]] or vice versa (cf. Collins and Postal 2008); the structures would be similar to the outcome of Georgian Object Camouflage studied in chapter V. This seems harder to maintain when imposters are antecedents of simple 3rd person pronouns like *elle* in (8)c, which are nevertheless not subject to the mediopassive *se* constraint. This last point can be elaborated directly through the Person Case Constraint. One 3rd person impostor is simply identical to 3rd person pronouns, including clitics, for the addressee: *Alors, elle prend le croissant?* "So, is she (the addressee, cf. 'Madam') going to buy the croissant?" In this mode, the addressee as 3rd person accusative clitic is not subject to the PCC, as in (9). If there is a 2nd person feature burried and licensed within the clitic, an unexpectedly rich structure for the clitic must be supposed.

- (9) Alors, je la leur présente?
so, je her.ACC them.DAT introduce
So, shall I introduce her (= the addressee) to them?

In the opposite direction, we can also find syntactically [+person] elements that must not be so interpreted, yet they are nevertheless subject to [+person] licensing. Chapter IV made this point about fake indexicals: in order to get the right reading, 1SG phi-features of *me* in the following sentence must go uninterpreted to permit *que* 'only' to operate on the formula *x presented x to her* rather than *x presented me to her*, but despite such absence of 1SG in interpretation, the Person Case Constraint and its repair treat *me* as 1st person.

- (10) Ya que moi qui me <*lui> suis/sois présenté <à elle>
there.is only me who me.ACC her.DAT am.IND/SUBJ introduced to her

Context: "We should have made her welcome, but _____. No one else among you thought it important to present yourselves to her."

{MJ}

The Person Case Constraint also permits a different argument to be developed about [+person] licensing whose force is close to that of the one from the uninterpretability of idiom chunks. The PCC and its repairs affect not only 1st/2nd person clitics, but also the reflexive 3rd person clitic *se*, regardless of the features of its antecedent. This alone looks like a divorce between the constraint and interpretively motivated properties, and it can be pushed. Some instances of the reflexive clitic *se* in French are not argumental but idiomatic: verbs like *s'en prendre à* 'take it out on' are lexicalized with the reflexive clitic *se*. This *inherent se* is inert in syntax and interpretation: it cannot be omitted, replaced by another argument, or license the complex anaphor *elle-même* 'herself'. Nevertheless, it behaves like any other reflexive *se* for the Person Case Constraint and its repairs (cf. the Appendix):

- (11) Elle vit dans un apart avec deux chats_i sans *s'(*leur)_i en prendre* (à eux_i).
 she lives in an apartment with two cats without SE them.DAT GEN take to them
 She lives in an apartment with two cats without taking it out on them.

{MJ}

So [+person] licensing constraints operate over grammaticalized features removed from those that play a role directly in interpretation. The [+person] property that the syntax sees in various constraints and tries to license by repairs of the kind studied in the foregoing chapters is independent of the property that picks out speaker/addressee indexicals and gives them their properties like unshiftability, and of the de facto properties of the referred-to objects like animacy, which is shared by all the foregoing examples. In light of this, the effect of inanimate interpretation for speaker/addressee in obviating the Person Case Constraint discussed earlier can be modelled by supposing that an apparent inanimate interpretation of a 1st/2nd person pronoun avoids the Person Case Constraint simply to the extent that a speaker can put a 1st/2nd person pronoun into the syntax without a grammatical animacy feature, use it to refer to an animate speaker/addressee, and spell-out the result.

The conclusion that grammaticalized rather than directly interpretive properties are involved in [+person] licensing is of little aid in pegging down the interfacing system that requires [+person] licensing and answering the question of whether that system could also effectuate it. Much depends on the construal of the interpretive system. In some way, it interprets the featural input given to it by narrow syntax. At this point, it sees only sees grammaticalized indexical and animacy features, and may impose various requirements on them like [+person] licensing, if this requirement is due to the interpretive interface. Eventually such elements along with the impostors end up with the interpretive behavior of indexicals (and animates), such as unshiftability. If the interpretive system is syntactically trivial beyond composing the local constituents of expressions given it by the syntax, there may be little more to say: by virtue of lexical content that makes it fit for use as an indexical (or to refer to an animate), an expression is so used, whether grammatically specified for a 1st/2nd (animate) feature or not: so *the person who is speaking* may be so used. The syntactically relevant notion of [+person], as reflected in [+person] licensing, is not necessary to the usability of an expression to refer to the speaker/addressee/an animate entity, and that is all there is to such reference. Purely interpretive

properties cutting across such expressions independent of their syntactic feature specification, like unshiftability, can still fall out as properties of interpretation construed as use for reference. Such seems to be the view of the interpretive component in Chomsky (2000b), McGivray (1998). The syntactic triviality of the interpretive system does not mean it does not impose conditions with rich consequences at the interface with syntax as a matter of legibility of input: Full Interpretability against features it cannot read, distinction between tokens within the same domain (Uriagereka 1996), economy conditions on remote variable binding (Fox 2000, Reinhart 2006), as well as on local binding (Reuland 2001, 2005b, Neale 2006: 357, Reinhart 2006: chapter 4) – and a licensing condition [+person] elements. How this is to be construed so that it is met by the system resulting in Case-assignment, however, is less clear than the suggestion that morphophonology requires that [+person] gets, say, an assigned-Case shell for spell-out, as mentioned above. These points transfer to a richer interpretive component, like the autonomous Conceptual Structure of Jackendoff (1990, 2002), save that all the questions about whether that component could effectuate [+person] licensing independently of syntax remain.

If it is the PF interface that somehow demands [+person] licensing, as has been proposed for Case in general, one could in that domain too ask the question of whether it is an requirement on the input to PF, or a requirement that could be met within the PF component if not met by syntax. Unfortunately, evidence is helpful at this point. Consider haplology, for instance. A potential candidate for it repairing the Person Case Constraint is (12), whose traditional analysis is rather as an instance of the "weak" Person Case Constraint whereby 1st/2nd + 2nd/1st clitic clusters are said to be tolerated by some speakers, e.g. Heger (1966: 29) (q.v. chapter IV, note NOTE-70). As such, it is unacceptable to MJ. However, (12) with the pronunciation given to it could also be analysed as haplology of the *me me* clusters, with a gemination of the initial consonant of the resulting single *me*, for that exists independently (Bouvier 2001). While a possible analysis, it runs afoul of Miller's (1992: 264f.) independently motivated observation that haplology in French does not affect 1st/2nd person clitics. Speaker intuitions tell against it as well: to the extent it is acceptable, it is perceived as contextual omission of the dative experiencer clitic, which is possible in English and French independently in this sentence.⁷

- (12) Ma mémoire ne me me montre pas mettant la lettre à la poste.
 my memory NEG me.ACC me.DAT shows not putting the letter to the post
 [ma memwa:r nə mmə mɔ̃:tr] (in original *a* is *à*, *e* is *é*, *ə* is *œ*)
 My memory does not show me to myself posting the letter.
 (Damourette and Pichon III: 942) {*MJ, except with null dative}.

Another inconclusive phenomena is one of the substitutions of the locative clitic *y* is for dative clitics, discussed in Rezac (2008e). These phenomena are heterogeneous. One class consists in morphophonological with no effect on the Person Case Constraint and with no syntactico-semantic restrictions on the substituted-for dative, such as the substitution of *y* for 3SG.DAT *lui* (only) in Québec French (Auger 1994), found also for some varieties of Continental French and related varieties for 3SG/PL.DAT *lui/leur* alike (cf. chapter II). Another class, discussed in Couquaux (1975, 1978), Postal (1990), Rezac (2007), has the same or very similar distribution as the phrasal PCC repair, so that it is available in clitic combinations banned by the Person Case Constraint but not others, and for lexical but not extended datives, for example. Finally, a third class discussed at greater length in Rezac (2008e): the substitution is

⁷ See Rezac and Jouitteau (in prep.) for related discussion about clitic cluster allomorphy.

general, for any dative clitics, with no restrictions on the type of dative substitutive for or limitation to PCC contexts, and keeping canonically dative clitic properties like licensing of floating quantifiers that do not belong to accusative clitics. This substitution shown in the following examples eliminates the PCC (at least for some speakers), as noted already in Lambrecht (1981):

- (13) a. Elle les y [lezy] a présentés, à son voisin / à ses voisins.
she them.ACC LOC has introduced, to his neighbour(s)
- b. Pierre i-m-y-présentera, à ton oncle
Pierre he-me.ACC-LOC-will.introduce, to your uncle (Lambrecht 1981: 37)
- c. J-m-y présenterai, à toi et aux autres
I-me.ACC-LOC will.introduce, to you and to.the others (Lambrecht 1981: 38)
- d. On t'y jettera dans les bras, à tes amis.
one you.ACC LOC will.throw into the arms, to your friends
- e. Laetitia m'y a (tous) présenté/décrit, à mes nouveaux collègues.
Laetitia me.ACC LOC has (all) introduce, to my new colleagues
- (Rezac 2008e)

It is tempting to link the mechanism by which this last locative-for-dative substitution obviates the Person Case Constraint to the absence of phi-features on the locative clitic *y*, in contrast to the dative clitics. That said, the phenomenon is equally compatible with a syntactic or morphophonological construal. The utter lack of other syntactico-semantic effects of the substitution makes it a candidate for the morphophonology, and if so, apparently deleting phi-features from the dative clitic in the morphophonology has affects the licensing of the [+person] accusative clitic, necessitating revisions in most syntactic theories of the Person Case Constraint. However, the phenomenon is just as compatible with the hypothesis that unfocussed dative pronouns can be base-generated underspecified for phi-features in this variety of French, instead of fully specified as in other varieties, and this being the only difference between the two types of datives, the phi-less datives will show all the syntactico-semantic properties of regular datives save precisely those where phi-features are critical, namely intervention in the Person Case Constraint. So it turns out we have at the moment no evidence that would tell for or against localizing [+person] licensing at the PF interface, as in Albizu (1997).⁸

The interest of [+person] licensing in this work is as the engine driving the repair strategy that adds [+person] licensing capacity, including the clearest cases of uninterpretable phi in the syntax where the structure of one nominal refers to the phi-features of another. The repair proposal Λ is neutral about what it means to license [+person], so long as doing so leaves a nonconvergent structure or derivation. The evidence considered here indicates that a formal, grammaticalized rather than directly interpretive feature is involved, one that is more about animacy than about personhood and so less likely to be tied to indexicality and its syntactic representation; and that syntax moreover is encapsulated from the interpretive notions of indexicality or animacy in responding to the requirement by (it seems) Case assignment, much as

⁸ To be distinguished is *lui* > '(y)i reduction with different properties such as absence of liason (Morin 1981: 99).

it is encapsulated from all interpretive requirements of DPs when assigning them Case. The results leave open at what interface these requirement(s) hold(s) – or if the minimalist hypothesis is wrong, the possibility that it is a syntax-internal requirement.

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1 Appendix: PCC repairs and irreparable structures in French¹

This appendix resumes the pattern of grammaticality judgments on unfocused strong pronouns, directly contrasting PCC repairs with various irreparable contexts. The Cliticization Requirement requires of accusative and dative but not locative or genitive pronouns to cliticize if not focussed. The obligatory character of this cliticization emerges most clearly if (i) there are recent backgrounded antecedents of the pronouns, and (ii) if focussed is placed elsewhere by contrastive or operator (*only, even...*) focus on another element or by verum focus on the assertion. These are then the contexts into which to insert strong pronouns to see how they compare with clitics.² The contrasts emerge sharply, converging with the unanimous verdict of the literature on PCC repairs that takes focus into account, esp. Kayne (1975), Postal (1990), along with traditional descriptions like Grevisse (1993: §657 b).³

1.1 Basic contrasts

The basic paradigm (1) establishes the ungrammaticality of unfocussed dative strong pronouns when clitics are available, their perfect acceptability in PCC contexts, the utter inacceptability of unfocussed accusative strong pronouns, and the perfect status of unfocussed locative strong pronouns. More examples of PCC repair are (2), (3). These examples involving all lexical datives, and so some speakers have an alternative form of the repair, using the locative clitic *y* in all and only contexts where an unfocussed strong dative pronoun is allowed in these examples, providing a strong corroboration of a distinct syntactic structure (Couquaux 1975, 1978, Postal 1990, Rezac 2008e).

- (1) [Qu'est-ce que tu veux dire qu'les garçons le/te connaissent pas?! Bien sur qu'ils le connaissent. "What do you mean that the boys don't know him/you?! Of course they know him/you."]
- a. Je ~~le~~ *leur* ai montré pas plus tard qu'hier.
- b. Je *l'*ai montré *à eux/√montré à EUX/√MONTRE A EUX pas plus tard qu'hier. [^[dative]unfocussed DAT strong pronoun]
- c. Je *t'*ai montré √à eux/√à EUX pas plus tard qu'hier. [^[*unfocussed DAT strong pronoun in PCC]unfocussed ACC strong pronoun, even in PCC]

¹ I am grateful to Mélanie Jouitteau and Michal Starke for much discussion about these matters. The judgments reported here are solely those of MJ (though nearly all often verified with other speakers), and while initially collected at diverse periods, they have been all comparative checked together.

² Second occurrence focus (Rooth 1996) is allowed in (some) such contexts, but marked enough to reveal itself readily: cf. *her* in *Their PARENTS only_{SOF} know HER_{SOF}/*'er, so if there's anyone the KIDS should know, it's her*. Similarly, *They {DO know her}* vs. *They {DO} {KNOW her}* vs. *They {DO} {KNOW} {HER}*, each focus defining its own intonational phrase as indicated. Clitics in turn cannot bear such focus, even if they can be emphasized for other reasons (Cardinaletti and Starke 1999: 153, 163, cf. perhaps focus on parts of words, Artstein 2004).

³ The conventions are that focus is indicated by capitals and if it is not indicated on the dative/accusative/locative pronoun in question, it is not focussed. The relevant reading on which the examples are tested is always that where these pronouns are anaphoric in to the matching pronoun or DP established by the preceding context, even when focussed (often then accompanied by an ostensible gesture). Thus when the context contains "him/you", it is a shorthand for two readings, each with whichever of the two has an anaphoric pronoun later. I strike-through the 3rd person accusative *le/la/les* when for MJ virtually obligatorily deleted.

- d. *Je *leur* ai montré toi pas plus tard qu'hier.
 "I showed him/you to them no later than yesterday."
- e. Même qu'ils pensent tout le temps à toi/à lui (pendant leur vacances).
 "They even think about you/him all the time (during their vacations)."
- (2) Qu'est-ce que tu veux dire?! bien sur qu'elle connaît / tu connais les filles. "What do you mean?! Of course that she/you knows the girls."
 a. Il *la leur* a présentée pas plus tard qu'hier. (*il la leur a* pronounced [ia])
 b. Il *l'a* présentée *à elles/√à ELLES pas plus tard qu'hier.
 c. Il *t'a* présenté à elles pas plus tard qu'hier.
 "He introduced her/you to them no later than yesterday."
- (3) Je dis pas qu'elle ne connaît pas les filles. "I am not saying that she does not know the girls."
 a. Je dis qu'elle ~~la~~ *leur* a pas PRESENTÉE.
 b. *Je dis qu'elle *l'a* pas PRESENTÉE à elles.
 c. Je dis qu'elle *t'a* pas PRESENTÉE à elles.
 "I am saying that she has not INTRODUCED her/you to them."

"Perfect acceptability" of datives in a PCC context and commensurability thereof with a locative context are (sharp) grammaticality judgment, which do not preclude that a strong dative pronoun may be more marked than a locative strong pronoun or a dative clitic for other reasons.⁴ MJ reports (1)c than (1)a or (1)e for ease of accessing anaphoric links to the context, which seems unsurprising: clitics signal to the parser and/or to pragmatics a highly accessible discourse antecedent for a following gap (Ariel 1990, Delfitto 2002, Kempson 2007, cf. Tasmowski 1985), facilitating the linking of discourse referents to gaps, while locative examples like (1)d have one less antecedent than PCC repairs. One can easily find contexts like (4)a where there seems to be no trace of any markedness of the strong pronoun in a PCC context (originally drawn from a film description), in contrast to non-PCC (4)b, while (4)c reintroduces complexity due to the causative. In the context of the theory proposed in chapter V, it would be possible to attribute apparent markedness of PCC repairs to the extra computational load that Reinhart (2006) posits for all reference-set computation, but at present the data follows from the independent factors about clitics and antecedents noted.

- (4) a. L'étrange Frédérique séduit les gens sans se donner à eux.ⁱⁱ
 "The strange F. seduces people without giving herself to them."
 b. *L'étrange Frédérique offre son corps aux gens sans le donner à eux.
 "The strange F. offers her body to people without giving it to them."
 c. L'étrange Frédérique te fait séduire les gens sans te donner à eux.
 "The strange F. makes you seduce people without (her) giving you to them." [tested on the reading indicated, where F is the agent of *give*]

⁴ Pointed out by Michal Starke, p.c., with observations relating to parsing and the greater load induced by two pronouns by Mélanie Jouitteau p.c.

In stark contrast, unfocussed strong dative pronouns are simply ungrammatical in other contexts where clitics are impossible, although focussed strong dative pronoun is fine. We may take up first in this section those contexts where there is no clitic-doubling alternative and where the discussion is simpler. Of these, all but the last fit directly the foregoing description, while if the last diverges (which is unknown), it is in an almost predicted fashion. The following sections take up raising/ECM and causative contexts, which fit logically here but merit more discussion, and the contexts where clitic-doubling is a possibility, namely coordination and modification structures. The contexts discussed in this section are then:

- Arbitrary gaps in the clitic cluster from monopredicate constructions.
- Multiple dative clitics in causative structures.
- Dative complements of causativized unergatives with accusative subject.
- Condition B and overlapping reference.
- Multiple dative clitics in raising structures.
- Inherent dative *se*.

Arbitrary gaps in monopredicate constructions: Citations are given to places where the gaps are independently noted; a more thorough discussion of the gaps (which depend on many factors) and the repairs in Rezac 2008d.

(i) 3SG.DAT LOC **lui y* (vs. *leur y*, *m'y*) (Morin 1981: 99 note 6, Miller and Monachesi 2003: 3.4), permitting a *direct* contrast with PCC repair.

- (5)
- a. C'est parce que le nid protège son petit_i que l'oiseau ?**lui_i y* donne à manger.
 - b. C'est parce que le nid protège son petit_i que l'oiseau *y* donne à manger **à lui_i*.
 - c. C'est parce que le nid protège ses petits_i que l'oiseau *leur_i y* donne à manger.
 - d. C'est parce que le nid protège ses petits_i que l'oiseau *y* donne à manger **à eux_i*.
"It's because the nest protects its young that the bird gives him/them to eat in it."
 - e. [Chœur des vers:] C'est parce que son petit_i a faim que l'oiseau *nous* **lui_i* donne à manger.
 - f. [Chœur des vers:] C'est parce que son petit_i a faim que l'oiseau *nous* donne à manger à lui_i.
"[Chorus of worms:] It's because its young is hungry that the bird gives us to him to eat."

(ii) 3SG.ACC+LOC in the context of a dative (Heggie and Ordóñez 2005: 12f.)

- (6) Maï voulait de nos hérissons, mais c'était embêtant de ~~les~~ lui donner à la boutique. C'est parce que c'était calme à la Mouche qu'
"Maï wanted some of our hedgehogs, but it was importune to give them to her at the shop [hedgehog traffic being illegal]. It's because it was calm at the Mouche [a bar] that"
- a. on les *y* a donnés à Fanch.
 - b. ??on l'y a donné à Fanch.
 - c. ** on *y* a donné lui à Fanch.
"We gave them/*it there to Fanch [a friend of Maï]."

(iii) mediopassive *se* + dative: gap discussed and distinguished from the PCC in Rezac (2008d). Postal (1990: 167f.) shows that it is not repairable either by a strong dative pronoun, or by the clitic repair using the locative clitic *y* for those speakers who have it, unlike the PCC. The latter can be verified by controlling for focus context as in (8).

- (7) a. Un tel mensonge ne *se* < **lui* > dit pas < à Louise / *à elle >
 b. Cela ne s'y dit pas, à Louise.
 "One does not tell this / such a lie to Louise / *to her.
 {MJ save for *y*} (Postal 1990: 167f.)
- (8) Le breton est en train de mourir, mais Reun_i cherche une formation dans la langue, et
 "We know that Breton is dying, but Reun is looking to study the language, and"
 cela ne se < **lui*_i > dit pas < *à lui_i / √à son banquier >.
 "and one does not say that *to him_i / √to his banker."
 {MJ}

Multiple dative clitics in causative structures. Irrepairability here is a classic observation (Kayne 1975: 296f., Postal 1981: 308): see chapter IV, note NOTE-65 about how speakers realize such structures.

- (9) Maïs Eric a oublié de le faire! Comment les étudiants vont faire maintenant?
 "But Eric forgot to do it! What will the students do now?"
 a. ?*/??Johan lui leur fera porter les livres TOUT DE SUITE.
 b. **Johan lui fera porter les livres à eux TOUT DE SUITE.
 c. **Johan les lui fera porter à eux TOUT DE SUITE.
 "Johan will make him bring the books to them IMMEDIATELY."

Dative complements of causativized unergatives with accusative causee: Irrepairability here is also a classic result (Kayne 1975: 292-7, Postal 1981: 313f., 1984: 122, Tasmowski 1985: 316), but at least in Postal's case for speakers who also fail to permit a focussed dative pronoun. MJ has the required contrast directly.

- (10) Ilse voulait faire une blague à Maï en l'appelant pendant le spectacle. Maïs on a trouvé plus drôle: je l'ai fait téléphoner à EUX [montrant le maire et ses suivants] pendant la séance.
 "Ilse wanted to make a joke on Maï [a town councillor] by calling her during the show. But we found a better joke still: I made her call THEM [showing the mayor and his followers] during the séance."
- (11) *Ces gens vont être bien surpris. Ilse a promis de leur envoyer un SMS pendant le spectacle, mais je l'ai fait TELEPHONER à eux pendant la séance.
 "These people are going to be really surprised. Ilse promised to send them an SMS during the show, but I made her CALL them during the séance."

AP modifiers: These modifiers contain complements of adjectives like *redevable*, which requires a dative complement and is perfectly felicitous here, and *reconnaissant*, which does not,

and is less felicitous here. The adjectives discussed here are of the same type as under raising and ECM below, but the degradation of the strong pronoun does not seem to make the distinctions among adjectives found in these other structures for MJ, and all seem more or less bad, as do dative complements of participles in reduced relatives (cf. chapter IV, note NOTE-90). There is no possibility of cliticization. Distinct in structure but also without possibility of cliticization are participles heading reduced relatives like *attaché* 'attached' or *envoyé* 'sent' (see chapter IV, note NOTE-90). Cf. Kayne (1975: 185f.) for nouns taking dative complements.

- (12) Pour une aide ponctuelle, "For timely help,"
 a. il (lui_i) faudrait une fille ⟨*lui⟩ redevable ⟨à Maï / *à elle_i / √à ELLE_i⟩.
 b. il (lui_i) faudrait une fille ⟨*lui⟩ (?)reconnaissante ⟨à Maï / *à elle_i / √à ELLE_i⟩
 "there would be need of a girl indebted / grateful M-J / *to her / √to HER." [both with and without *lui* as antecedent of *elle*].
- (13) Une fille suffisamment reconnaissant à Maï / *à elle s'occuperait bien de la boutique.
 "A girl sufficiently grateful to Maï / *to her would take good care of the shop."
- (14) "A counsellor attached to her/M-J came to talk to us.

Cliticization banned by Condition B / overlapping reference.

- (15) a. Vous avez acheté un billet à TOI, pas à ta sœur qui voulait pourtant aller au concert depuis des mois. Quel égoïste tu fais!
 "You have bought a ticket for YOURSELF, not for your sister who has nevertheless wanted to go to the concert for months. What an egoist you are!"
 b. Vous ⟨*t'⟩avez ACHETE un billet ⟨*à toi⟩? Tu savais pourtant qu'on avait des places gratuites.
 "You BOUGHT yourself a ticket for yourself? But you knew that we had seats for free!"
 c. Vous vous êtes toujours dédiés à toi/à TOI. (Alors ne t'étonne pas qu'au bout de vingt ans elle demande le divorce.)
 "You have always devoted yourselves to you (SG). [wide focus or focus on YOU] [optional context: So don't wonder that after twenty years, she asks for divorce.]
- (16) a. Nous ⟨*m'⟩avons acheté des billets ⟨√à MOI / *à moi⟩.
 "We have bought tickets for me."
 b. Nous *nous* ⟨*nous/*me⟩ sommes TOUJOURS dédiés ⟨à nous/à moi⟩.
 "We have ALWAYS devoted ourselves to us/me."

Inherent dative *se* and repaired accusatives: There is one context where perhaps – just perhaps – PCC repair does affect the accusative, and it fits neatly into a last-resort construal of the repair: when a dative is inherently incapable of being affected by the repair, namely when it is an inherent clitic. The reflexive clitic *se* participates in the PCC both as a banned [+person] if accusative, and as an intervening dative. *Se* can also be an *inherent* clitic with no pronominal

counterpart, lexicalized with certain verbs, both dative and accusative.⁵ Bonet (1991: 192f.) and Albizu (1997) observe variation in whether inherent *se* participates in the PCC in Spanish and Catalan, and Albizu (1997) derives nonparticipation by restricting the PCC mechanism to arguments. For French inherent *se*, as accusative it triggers the PCC and its repair, (17). As dative, it does mostly give rise to the PCC by blocking a 1st/2nd person accusative clitic, with variation among speakers (de Kok 1985: 384n, Heger 1966: 28, Schwegler 1990: 99): thus for MJ (18). When the PCC does arise, it is naturally not repairable by affecting the inherent *se* which has no strong pronoun analogue. Some speakers can then resort to a strong accusative pronoun, which is not otherwise available to repair the PCC, as in (19). It has a better status than the otherwise often wholly impossible strong accusative pronoun, q.v. chapter IV, note NOTE-20 (Morin 1979: 296, 1981: 105, Postal 1990: 178, but not Couquaux 1975: 53, 64, and both in Perlmutter 1971: 56). Yet the accusative in contexts like (19)c seems to require a clear focus nevertheless, at least for MJ. If there truly is a PCC repair here, affecting the accusative just in case the dative cannot be affected, it fits nicely into the last-resort approach developed at the end of chapter IV, but no conclusions can be drawn at present (see note NOTE-162).

- (17) Elle vit dans un apart avec deux chats_i sans *s'⟨*leur⟩ en prendre ⟨à eux_i⟩*.
 "She lives in an apartment with two cats without taking it out on them."
 {MJ} (original < Google)
- (18) a. On *se l'/?m'arrache*.
 "We fight (one fights) over it / ?me."
 b. *Il ne faut pas que je *me lui casse*
 "It must not be that, for him, I leave."
 {MJ} ((b) good in Heger 1966: 28, Schwegler 1990: 99)
- (19) a. Je me ⟨l'⟩imagine mal ⟨Paul / *lui⟩ à cet âge-là
 "I have trouble seeing him/Paul at that age."
 b. *Je t'imagine mal à moi à cet âge-là
 c. Je me ⟨*t'⟩imagine mal ⟨toi⟩ à cet âge-là
 "I have trouble seeing you at that age."
 (Morin 1979: 296, Perlmutter 1971: 56, cf. Postal 1990: 178; focus not marked)

1.2 Raising, ECM, and causatives

I have reserved raising and ECM structures containing adjectives with dative complements for a separate section, because here for some speakers there surface complexities beyond what is discussed in Kayne (1975) and Couquaux (1975), whose introduce the basic generalization: where cliticization is impossible, PCC repairs are as well (cf. Tasmowski 1985: 259 note 12).⁶ The structures embed an adjective with a dative complement under a raising or ECM verb. Under a raising verb that has its own dative experiencer, many speakers allow double dative

⁵ NOTE-10: *Se* is also a middle formant (q.v. Dobrovie-Sorin 2005), in which case it is banned from co-occurrence with a dative clitic by a non-PCC constraint: see Rezac 2008d. Middle *se* also imposes a restriction on [+person] nominatives, with variation and variable extensibility to 3rd person humans (cf. Postal 1989: 140f., 141 note 2 and references there), which has been linked to the PCC for Italian in D'Alessandro (2004: chapter 4) (cf. Medová 2008: 7.5 for discussion). Its recalls the animacy restrictions on Spanish double object passives (chapter VI, note NOTE-117), independent of the PCC.

⁶ Distinguish adjectives with locative complements, some of the same when taking inanimate arguments (*attaché fidèle*). *Proche* 'close' allows a dative complement only as a clitic, while taking *de* 'of' + DP otherwise.

clitic sequences of 1st/2nd+3rd person dative, and none 3rd person datives.⁷ Couquaux does not allow any such clusters, both PCC repair by strong pronoun and locative clitic are very strikingly out, (20). Kayne (1975) also reports degradation, less than the clitic version, but at different points the sign of the degradation varies from * to ?, but it is not clear it is significant: it is explicitly said that the failure to cliticize in n (21)d is as bad as in (21)c and compared by cross-reference with **On <la> fera répondre <cette fille> à eux* "One will make her/the girl reply to them" (p. 296) as if they were to have the same status (p. 306 note 30).

- (20) a. Paul *me <*leur>* semble reconnaissant <?*à eux>.
 b. *Paul *m'y* semble reconnaissant (à ses amis).
 "Paul seems to me to be grateful to them (his friends)."
 (Couquaux 1975: 53, 71 note 11).
 c. (cf.) Jean <leur> reste reconnaissant <?*à eux>.
 "Jean is grateful to them." (Couquaux 1977: 134)
- (21) a. Elle *me <*te>* semble infidèle <?*à toi>.
 "She seems to me unfaithful to you." (Kayne 1975: 175)
 b. Elle <t'>est infidèle <?*à toi>
 c. Jean <t'>est antipathique <?*à toi>.
 "She/J is unfaithful/antipathetic to you." (Kayne 1975: 172, 306f. resp.)
 d. Tout le monde <*te> croit Jean antipathique (à Marie / ?à toi)
 Everyone believes Jean antipathetic to you / to Mary. (Kayne 1975: 305f.)

For MJ, there is some variation according to adjective and structure. Starting with raising, all adjectives seem to allow double dative 1/2+3 *me lui* type clusters and not 3+3 *leur lui* type (along with 1+2 *me te*), (22), although some contextual priming to identify the two datives and their roles is desirable.

- (22) Maï, elle *me leur / *lui* leur paraît attaché, fidèle, sympathique, désagréable, antipathique, semblable, fidèle
 "M, she seems to me / *to him to be attached / faithful, sympathetic, disagreeable, antipathetic, similar, faithful to them."

When it comes to using a strong pronoun in a raising structure, there appears to be a split between plain raising and raising with an experiencer, but crucially, it is not a split that correlates with the possibility of cliticization. With plain raising (23) where cliticization is always possible, many adjectives refuse an unstressed dative strong pronoun: *antipathique* 'antipathetic', *sympathique* 'sympathetic', *semblable* 'similar', *désagréable* 'disagreeable', *loyal* 'loyal', *util* 'useful', *bénéfique* 'beneficial'. Some might allow it, perhaps *fidèle* 'faithful', *supérieur* 'superior', *attaché* 'attached'.⁸ Likewise, all or most adjectives require cliticization when used as modifiers

⁷ Cliticization is fine with *être* 'be'. Kayne (1975: 175) reports it to be often exclusively literary with *sembler* 'seem' without a dative experiencer clitic of its own (the reverse seems true in Italian, Cinque 2004), perhaps relatable to the preference for attaching a dative clitic to the highest interpretation site possible (Kayne 1975: 290, Rouveret and Vergnaud 1980: 177, Postal 1981: 319 note 30, 1984: 135, 152, Tasmowski 1985: XX). *Paraître* 'seem' for MJ is relatively transparent to cliticization with or without an experiencer.

⁸ Adjectival raising complements like *attaché* or *connu* 'known' are to be distinguished from homophonous

above (ex. (12)). By contrast, the raising+experiencer contexts more readily tolerate an unfocussed strong dative pronoun complement of the adjective for some adjectives. *Loyal*, *semblable*, *bénéfique*, *utile* placed instead of the adjectives in (24)a seem to give a good result, but crucially, this is whether the experiencer is *me* or *lui* in (24)a indicates, and so whether whether cliticization of the dative complement of the adjective is possible or not to give the good *me leur* or the bad *lui leur* of (22) (cf. also ex. (30)). Other adjectives, given in (24)a, are bad with an unfocussed strong pronoun complement as in plain raising, and the dative clitic in (24)a must be interpreted as the complement of the adjective if at all: *antipathique*, *sympathique*, *désagréable*. These do tolerate a focussed strong pronoun complement, (24)b.⁹

- (23) a. Tu parais __ au groupe / à EUX / *à eux
 "You seem __ to the group / to THEM / *to them."
 b. C'est à cause de leurs_i PROPOS que "It's because of their WORDS that"
 je <leur> suis <*leur> reconnaissant / redevable / sympathique <*à eux / à EUX>.
 It's because of their_i WORDS that I am grateful / indebted / sympathetic to them_i.
- (24) a. Les animateurs on plutôt jugé bien ton stage, ils ont trouvé bon ton rapport aux jeunes_i. Quand à Iffig / moi, tu lui / me parais antipathique / sympathique / désagréable à eux_i.
 "The organizers have for the most part judged your training well, they found your relationship to young people_i good. As for Iffig / me, you seem to him / to me unpleasant / sympathetic / disagreeable to them_i.
 (ADJ may or may not be focussed without changing judgment)
 b. On ne va pas pouvoir travailler ensemble. Toute l'équipe pense que tu est désagréable avec les clients! Quand à la directrice, tu lui parais même antipathique / sympathique / désagréable à EUX!
 "We won't be able to work together. All the team thinks that you are disagreeable with the customers! As for the director, you seem to her to be unpleasant / sympathetic / disagreeable even to THEM."
 (EUX accompanied by gesture showing the colleagues)

Consider finally ECM complements. These make for an uneasy testing ground for many speakers, since they are not particularly natural, though judgments of grammaticality do obtain

participles heading reduced relatives (Postal 1989: 71), cf. English *The boat seems attached to it* (*by you). As the latter, *attaché* does not tolerate strong pronouns, (12).

⁹ I do not have an explanation for the improvement of unfocussed dative strong pronoun complements of some adjectives in raising + experiencer constructions, but perhaps a track to explore. 'Seem' + experiencer structures in French may be not just subject-raising structures, but also experiencer-control structures if the experiencer is clitic (Rouveret and Vergnaud 1980, Cuervo 1999), translating to a familiar difference in the richness of functional architecture of the complement. One could try seeing if this does not to a richer structure for AP complements of raising+experiencer verbs for some but not other adjectives, perhaps looking for correlates in the (non)separability of the adjective and its dative complement under AP extraction, ordinarily behaving as in (i) (Abeillé and Godard 2000, cf. Abeillé and Godard 2008, Kayne 1975: 299 note 27). Functionally richer adjectives might then more easily tolerate an unfocussed dative strong pronoun, perhaps counting as domains for Λ . One is also reminded of the speaker variation in allowing dative / locative pronominal in causative complements, chapter IV, note NOTE-100.

(i) Aussi fidèle/sympathique <à ses amis> que Paul <leur> soit <à ses amis>.
 "As faithful/sympathetic to his friends/them as Paul is" (Abeillé and Godard 2000 for *fidèle*) {MJ for *sympathique*}

on them. The basic contrasts are as in (25) (confirmed by various speakers), indicating non-repairability despite the impossibility of cliticization. Worth noting that the baseline (25)a with *la*, although grammatical, is both at a relatively level of language not particularly colloquial (nor thought of terribly good style), and it takes a moment to figure out what it's supposed to mean.¹⁰ There is a confounding factor to be kept in mind in further testing: the introduction of a focus on the adjective as in (26) is susceptible to creating a slow-tempo and very careful pronunciation where the contrast disappears. As (26) shows, this is independent of whether cliticization is possible or not.

- (25) a. On *la*/**te* leur croit sympathique. (*la* good but "high level" of language)
 b. On **la*/**te* croit sympathique à eux (, mais c'est pas vrai). (without focus)
 "We believe her/you to be sympathetic to them (, but it's not true)."
 c. √Je pensais qu'elle plaisait aux jeunes, alors qu'en en fait on *la* croit sympathique à EUX.
 "I thought that the young people liked her, when in fact we believe her to be sympathetic to THEM [in contrast to the young people]."
- (26) Tu vois, on *la* croit juste SYMPATHIQUE à eux, mais c'est pas ça du tout – ils passent tous leurs weekends ensemble.
 "You see, we believe her to be just SYMPATHETIC to them, but that's not it at all – they spend all their weekends together."

The causatives of unaccusatives with a dative argument are a configuration similar to ECM, but they are complex and difficult to test and judge. There is evidence that they split into two classes: one where the dative is in some way structurally more prominent than the subject, to which belong *manquer* 'lack', *(dé)plaire* 'please', *apparaître* 'appear', *falloir* 'need', *ressembler* 'resemble', *suffir* 'suffice', and raising *paraître*, *sembler* 'seem' (Legendre 1989ab, Herschensohn 1992, 1999, Landau 2005), and one where it is not, like *appartenir* 'belong', *échapper* 'escape', *naître* 'be born', *parvenir* 'reach', *survivre* 'survive', and the *tomber dessus* construction 'fall on' (Postal 1984: 115f., 1989: 37f., Rooryck 1987, Legendre 1989a: 771, Legendre 1989b: 143-7). Whether these verbs can enter into the *faire*-causative at all varies quite a bit, presumably due to their meaning (Kayne 1975: 252ff., Rooryck 1987: 7ff., Legendre 1989b: 146, Landau 2005: section 3.7, Folli and Harley 2007: 213); irrelevantly, MJ can causativize some with a dative subject as if unergatives: *apparaître*, *ressembler*. When they do causativize, the subject > dative verb *appartenir* 'belong' incurs the PCC for MJ and allow its repair, as would be expected if it has a low, lexical dative: (27). The raising verb *paraître* 'seem' (28) behaves as expected: its dative experiencer is nonlexical, creates the PCC, and does not undergo repair, just like the dative of *falloir* 'need'.

- (27) Context: Mais si on signe avec lui, __ pour TOUT le reste de la vie, (*à) nous/eux.
 "But if we sign with him, __ for all the rest of life, us/them."
 a. ça nous ⟨*lui⟩ fera appartenir ⟨à lui⟩
 b. ça les ⟨lui⟩ fera appartenir ⟨*à lui / √à LUI⟩
 "that will make us/them belong to him for all the rest of our life."

¹⁰ The reported feeling recalls Higginbotham's (1991: 128) reaction to *John is too clever to expect us to catch*.

- (28) a. Elles ont fait apparaître Jean comme fatiguée au jury / ??à eux.
 "They made Jean appear as if tired to the jury/??to them."
 b. Cela m'a fait paraître <*à elle / *à Blanche> vraiment récalcitrant <*à elle / √à tous les membres du jury / √à BLANCHE>
 "That made me seem truly recalcitrant to her / to all the members of the jury / to BLANCHE."

For the consultant of Postal (1983: 414, 1984: 116), *appartenir* (along with *devenir (infidèle)* 'become (unfaithful)') behaves like an ECM verb in tolerating *me lui*, while *naître* 'be born' (highly literary for MJ) does not despite also being a subject > dative, along with the dative > subject *apparaître (infidèle)* 'appear (unfaithful)'. For causativizing the raising *sembler* 'seem', Postal (1990: 171-2) also reports the PCC and irreparability by using a strong pronoun for the experiencer, as for MJ and likewise matching his consultant's judgments on *falloir* 'need'. By contrast with the experiencer of the raising verb, he reports that the dative complement of the adjective can be a strong pronoun when a *me-lui* cluster would result, although there is no baseline given of whether it be out when a *le-lui* cluster would result. MJ's grammar does not bear this, except precisely for adjectives where a dative here can be a strong pronoun independently of the PCC (note NOTE-148). However, all such data are on the very margin (and perhaps beyond) of judgeability.

- (29) Cela vous fera sembler fidèle à Lucille / à elle
 "That will make you seem to unspecified to be faithful to her/Lucille / *That will make you seem to her to be faithful to unspecified." (Postal 1990: 171)
 (30) Ca te <*lui> fera paraître sympathique <*à lui>.
 "That will make you seem sympathetic to him." (à lui o.k. with *attaché* 'attached')

1.3 Coordination and modification, and clitic doubling

All foregoing contexts are those where dative (or accusative) cliticization is blocked, and all but the PCC cannot use an unfocussed strong pronoun in its place. A distinct set of contexts are those where cliticization is blocked, but one might suppose clitic doubling to be an option, one whose existence is controversial. These are coordination and modification.

Kayne (1975, 2000) points out both that clitics cannot extract out of coordinate and modification¹¹ structures (q.v. Cardinaletti and Strake 1999), and that the use of a strong dative

¹¹ As Kayne's range of judgements indicates, the data on adjectival modification of datives are not nearly as clear as for the rest. In general, 3rd person modification like *eux deux* 'they two' is not colloquial, although perfectly acceptable and evaluable given a proper context like a narration, while *eux tous* 'they all' and *eux autres* 'they others' are out. Their work is done at the colloquial level is done by *tous les deux* 'all the two', *les autres*, *tous* 'all' (for dative à *eux deux*, some speakers but not MJ have *aux deux* 'to the two', nor the *nous/vous autres* of Kayne 2000: 172). Fully colloquial is 1st/2nd person modification for *deux* and *tous*: *vous deux* / *tous* 'you two / all'.

For modification of dative arguments, Kayne (1975: 179, 2000: 172) reports the range *à vous / ??à vous autres / ?à vous deux / √à vous tous '*to you / ??to you others / ?to you two / √to you all', in contrast to modified accusatives which are uniformly bad and modified locatives and genitives which are uniformly good. This holds for MJ as well. The culprit may be the emphasis added to even a backgrounded and recent discourse referent through modification in a context like, *Of course she knows you! She saw you two / all arriving in the car*, with the choice of

pronouns in such contexts is impossible, in direct contrast to the PCC.¹² Similarly, the use of strong accusatives is out. Both are fine if sufficiently focussed.¹³ Locative strong pronouns are always perfect. The following examples control for context.

- (31) a. *Qu'est-ce que tu veux dire que les garçons le connaissent pas?! bien sur qu'ils le connaissent. Je l'ai montré à eux et à leurs copains pendant les vacances.^v
 "What do you mean that the boys don't know him? Of course they know him. I showed him to them and to their friends during vacations."
 b. *Qu'est-ce que tu veux dire qu'il n'est pas ici?! Bien sur qu'il est ici. J'ai vu lui et Bernard à la réunion, c'matin. [_{von} list reading]^{vi}
 "What do you mean that he's not here? Of course he's here. I saw him and Bernard at the meeting, this morning."
 c. *Bien sûr qu'elle est dans le quartier. J'ai vu elle et son chien se promener ce matin.
 "Of course she is in the neighbourhood. I saw her and her dog walking this morning."
 d. Je peux te dire qu'elle connaît Paul. Elle pense à lui et son copain TOUT LE TEMPS.
 "I can tell you that she knows Paul. She thinks about him and his friend ALL THE TIME."
 e. Elle a vu *toi et Paul / √TOI^[pointing gesture] et Paul.
 "She saw *you and Paul / √YOU and Paul."

you two/all over simple *you* serving the function of emphasizing something about *you*, e.g. presence of someone else in the car. The emphasis may be sufficient for dative strong pronouns, which in French require less focus than accusative ones (note NOTE-20). However, note that the fully contextualized example below does not in fact seem to permit unfocussed *à eux deux*. The truly focus-sensitive modifiers of Rooth (1992) like *seulement* 'only' and *ne...que* 'X not...that X' = 'only X' used in Cardinaletti and Starke (1999: 162) are good with accusative strong pronouns as well. Here either the focus or the extra structure might legitimize the strong pronoun; the ease with which undoubled strong accusatives appear here indicates extra structure, as in Cardinaletti and Starke (1999) (cf. also Kayne's 2000: XX proposal where *ne...que* = *I did not see (any one other) than X*).

Kayne (1975: 176, 179) also discusses nonrestrictive relatives, attributing them the same contrast as adjectival modifiers, *accusative (i-a), ?dative, √locative (i-c). It is no simple matter to properly investigate these; relatives on pronouns are a marked affair already, pushing towards the literary level where judgments are diluted. For what it's worth, (i-b) seems to be a relatively natural context with a solid judgment of * for a dative + relative.

- (i) (a) Elle <les> connaît (*eux/√tes amis/√EUX), qui sont intelligents.
 She knows *them/√your friends/√THEM, who are intelligent. {MJ} (cf. Kayne 1975: 176).
 (b) A Kerrien je connais F, M, et H, mais ils sont pas là ce soir. Je vais (*leur) téléphoner (*à eux / √à EUX/ √à ces gens), qui pourraient nous aider DEMAIN.
 At Kerrien I know F, M, and H, but they are not there tonight. I am going to call them/THEM/these people, who could help us TOMORROW. {MJ}
 (c) Elle pense à eux, qui sont partis dans un pays lointain.
 She thinks about them, who have left for a far country. (Kayne 1975: 176)

¹² In fact, the coordinations are good on a particular reading: a list. Consider the context of a sentry watching those who arrive and reporting to a visitor: *Bien sûr qu'il est ici! J'ai vu lui, Bernard, et le directeur ce matin*. "Of course he is here! I saw him, Bernard, and the director this morning." or *J'ai vu lui, Bernard, et le directeur arriver*. "I saw him, Bernard, and the director arrive." The accusative here can be a simple conjunction, *lui et Bernard*, and keep its list reading, in which case it is good. When one makes this context unavailable however, the possibility disappears. Imagine one person talking to another about a boy of whom (s)he wants to mention, by adding information, that (s)he saw him with his girlfriend. This is the reading in (31) of a simple conjunction, and the accusative is bad.

¹³ In coordinations, *et* 'and' may be optionally repeated before the first conjunct; cf. Kayne (1975: 184 note 140). This seems available at a colloquial level only as strong emphasis, and especially facilitates a focussed accusative.

- (32) a. Qu'est-ce que tu veux dire qu'ils le connaissent pas?! bien sur que les garçons le connaissent. Je l'ai montré *à eux deux/√à EUX deux pendant les vacances.*^{vii}
 "What do you mean they don't know him? Of course the boys know him. I showed him to the two of them / to THEM TWO during vacationn."
- b. Elle <*vous> a vu <*vous/√VOUS> deux hier soir.
 "She saw you/YOU two yesterday evening."
- c. J'ai demandé si elle avait déjà entendu parler de vous deux, et elle m'a dit qu'elle pensait a vous deux TOUT LE TEMPS.
 "I asked if she had already heard speak of you two, and she told me that she thought about you two ALL THE TIME."

These facts change where a strong pronoun in a coordination or modification structure is combined with a doubling clitic, but not, it seems to me, in a way that is relevant to the repair-use of strong pronouns. There are two classical ways to analyse structures where a clitic co-occurs with a following DP/PP interpretively linked to it in Romance. One is as *clitic doubling*: the DP/PP is base-generated in an argument position, and the clitic doubles it by moving out of it (Uriagereka 1995), or by functioning as agreement (Franco 1994). The other is as *clitic right dislocation* (see De Cat 2007 for French). Here the clitic is base-generated in the argument position alone, and the DP/PP is related to it in some special way, for example as a separately base-generated adjunct to the VP/CP. Although it seems relatively clear that the two types of structures are to be differentiated, many clitic + DP/PP configurations are difficult to peg down as one or the other as one or the other. Notably, neither analysis commits itself to obvious correlates like presence/absence of "comma intonation", which is known not to be required with dislocation, or word order, in the absence of further assumptions about limitations on adjunction, movement, and so on (see Jaeggli 1986, Anagnostopoulou 2005).¹⁴

De Cat (2007) develops the dislocation proposal in detail for clitic + DP/PP constructions in French except those where the doubled element is a contrastively focused dative or accusative strong pronoun. Let us start by introducing the latter for further comparison with the structures on which we will focus. For clitic + contrastively focussed dative *and* accusative strong pronoun, it is agreed that clitic doubling rather than a dislocation structure is involved (Kayne 2000, De Cat 2007). The phenomenon is restricted to pronouns, including pronouns in coordinate and modification structure. Among contrastively focussed strong pronouns, it is generally optional for a bare dative; for an accusative, it is obligatory for some speakers and optional for others, who however need an undoubled accusative to bear a stronger accent than a dative (see chapter IV, note NOTE-20); and it is unavailable for locatives. Here only plain and modified pronouns are used as examples; we return to coordinations, for which it is available, later.¹⁵

- (33) a. Jean me_i/la_j connaît MOI_i/ELLE_j. (Kayne 2000: 164-5) {MJ}
 "Jean knows ME/HER"
- b. Jean me_i/lui_j parle à MOI_i/à ELLE_j/*à Marie_j.

¹⁴ For some cases in the literature of clitic right dislocation, a movement relationship between the clitic and the dislocated DP has been posited, and the difference with clitic doubling is then to be stated through movement types (A, A'), what moves (clitic, DP), or more complex transformations (remnant movement) (Kayne 1994). For French (left and) right dislocation with comma intonation, De Cat (2007) demonstrates the absence of connectivity effects and island restrictions, indicating base-generation.

¹⁵ Relevant is that for MJ the locative clitic *y* can combine with a left and right dislocated animate pronoun, at all levels of speech; see Rezac 2008e.

"Jean speaks to ME/HER/to Mary."

{MJ} (Kayne 2000: 164f.)

- c. Jean nous_i/vous_i photographiait NOUS_i/VOUS_i DEUX.

"Jean took photos of US/YOU TWO."

(Kayne 2000: 172) {MJ}

- d. *Elle y pense à LUI chaque matin.

"She thinks about HIM every morning."

{MJ}

Consider now a doubling structure for a backgrounded strong pronoun. A bare dative or accusative strong pronoun cannot be doubled if backgrounded, and is * just as when undoubled.

- (34) Qu'est-ce que tu veux dire que les garçons connaissent pas Henri?! bien sur qu'ils le connaissent. Je le leur ai montré *à eux / √à EUX pas plus tard qu'hier.

"What do you mean that the boys don't know H?! Of course they know him. I showed him *to them/√to THEM no later than yesterday."

By contrast, it is possible to combine a clitic with a backgrounded strong pronoun in a coordinate or modification structure – importantly, both dative *and* accusative with about equal goodness. The structure containing the strong pronoun does not need any coma intonation in any of these cases, and the strong pronoun is as backgrounded as it gets.¹⁶ In the examples, the doubling clitic is sometimes singular (like the left conjunct) and sometimes plural (like the coordination as a whole), as the data were collected; I return to this issue below. Background doubling without comma is confined to a rather colloquial level, and the typical *first* reaction to it all is as involving dislocation; as such it has been reported into the literature, including at the colloquial level (see esp. Auger 1994: 110 for an insightful investigation).

[coordination, dative, clitic doubled]

- (35) a. Qu'est-ce que tu veux dire que les garçons pas Henri?! bien sur qu'ils le connaissent. Je le leur ai montré à eux / à EUX et à leurs copains pendant les vacances.

"What do you mean that the boys don't know H?! of course they know him. I showed him to them / to THEM and their friends during vacations."

- b. Qu'est-ce que tu veux dire que tu le connais pas?! bien sur que tu le connais. Je vous/te l'ai montré à toi et à tes copains pendant les vacances.

"What do you mean you don't know him?! of course you know him. I showed him to you(PL/SG) and your friends during vacations."

- c. Quoi? Elle connaît pas Paul? Mais elle leur PARLE à lui et à son copain chaque matin!

"What? She doesn't know Paul? But she SPEAKS to him and his friend every morning! [i.e. impossible that she doesn't know him]."

[coordination, accusative, clitic doubled]

- (36) a. Qu'est-ce que tu veux dire que tu le connais pas?! bien sur que tu le connais. Je vous ai présenté toi et tes copains à sa famille/à lui pendant les vacances.¹⁷

¹⁶ There is a prosodic "comma intonation" *only* when indicated. Distinct is a change of melody: the clitic-doubled XP is always downstressed which typically "envelops" it in a separate "backgrounding" intonation.

¹⁷ The example is actually rather odd with *à lui*: there is a persistent feeling of dislocation about it.

- "What do you mean that you don't know him?! of course you know him. I introduced you and your friends to his family / to him during vacations."
- b. Qu'est-ce que tu veux dire que tu le connais pas?! bien sur que tu le connais. Je vous ai vu toi et tes copains chez lui pendant les vacances.
 "What do you meant that you don't know him?! of course you know him. I saw you and your friends at his place during vacations."
- c. Quoi? Elle connaît pas Paul? Mais elle le VOIT/SALUE lui et son copain chaque matin!
 "What? She doesn't know Paul? But she SEES/GREETs him and his friend every morning!"
- d. Quoi? Elle connaît pas Paul? Mais elle les ATTAQUE lui et son copain chaque matin!
 "What? She doesn't know Paul? But she ATTACKS him and his friend every morning!"
- (37) a. Qu'est-ce que tu veux dire qu'ils le connaissent pas?! bien sur que les garçons le connaissent. Je ~~le~~ leur ai montré à eux deux / à EUX DEUX pendant les vacances.
 "What do yo mean that they don't know him?! of course the boys know him. I showed him to the two of them / to the TWO OF THEM during vacations."
 b. J'ai demandé si elle avait déjà entendu parler de vous deux, et elle m'a dit qu'elle vous parlait à vous deux TOUT LE TEMPS.
 "I asked if she had already heard speak of you two, and she told me that she spoke to the two of you ALL THE TIME."
- (38) J'ai demandé si elle avait déjà entendu parler de vous deux, et elle m'a dit qu'elle vous voyait vous deux TOUT LE TEMPS.
 "I asked if she had already heard speak of the two of you, and she told me that she saw you two ALL THE TIME."

At first sight, locatives cannot occur here, either alone (39) or in coordination (40) and modification (42), except with a net comma intonation, (42). However, spontaneous use reveals locative doubling without comma intonation as in (41), subsequently judged grammatical as such. So better elicitation is needed, along with better tools, some proposed below.

- (39) *Qu'est-ce que tu veux dire que les garçons connaissent pas Henri?! bien sur qu'ils le connaissent. Même qu'ils y pensent tout le temps à lui (pendant leur vacances).
 "What do you mean that the boys don't know Henri? of course they know him. They even think about him (during their vacations)."
- (40) *Quoi? Elle connaît pas Paul? Mais elle y pense à lui et son copain tout le temps!
 "What? She doesn't knnow Paul? But she thinkss about him and his friend all the time."
- (41) *J'ai demandé si elle avait déjà entendu parler de vous deux, et elle m'a dit qu'elle y pensait à vous deux TOUT LE TEMPS.
 "I asked if she had laready heard speak of you two, and she told me that she thought about you two ALL THE TIME."

- (42) Elle y pense souvent, à lui.
 "She thinks about him often."
- (43) a. Bon, si elle veut y rester dans sa maison elle y reste, c'est tout. (spontaneous)
 "Well, if she wants to stay in the house, she stays there, that's all."
 b. Si elle veut y penser à sa maison elle y pense, c'est tout.
 "If she wants to think about her house she thinks about it, that's all."

The possibility that is of interest here is using these structures to explain why without doubling, a strong dative or accusative pronoun is not available as a repair in coordination and modification, in contrast to the PCC, where clitic doubling is independently an impossibility.¹⁸

- (i) In a context where cliticization is available, a plain strong pronoun without a doubling a clitic is blocked by the availability of the clitic to express an unfocussed pronoun.
- (ii) In a context where cliticization is unavailable, i.e. in coordination / modification, a strong pronoun + a clitic doubling is an option for expressing an unfocussed pronoun.
- (iii) The existence of (ii) pre-empts the use of an unfocussed strong pronoun in coordination / modification without doubling of the structure, on either of the following two possibilities:
 - (a): (ii) is viewed as a repair itself and blocked by the availability of a clitic where cliticization is possible, so we correctly don't get a clitic-doubled strong pronoun without focus
 - (b): (ii) is viewed as independently available for unfocussed strong pronouns, i.e; not a repair, and some reason specific to the structure of (ii) prevents simple strong pronouns from occurring in it.

Let us call the structure (ii) where a coordination / modification structure an unfocussed strong pronoun and is doubled by a clitic the "backgrounded doubling" structure. If it were a repair, i.e. if (iii-a) were correct, then one way to make it block strong pronouns in coordination / modification without doubling as a repair would be by making doubling preferred for strong pronouns.¹⁹ However, backgrounded doubling treats datives and accusatives in exactly the same way, as there is no degradation of accusatives in the foregoing examples by contrast to datives, while the PCC repair very strongly differentiates them by being available only to datives (and in morphophonological gaps like (6), an accusative strong pronoun is utterly impossible). Suppose then that the backgrounded doubling structure is not a repair, but rather an independently available structure that is simply unavailable to plain strong pronouns. It is then theoretically a bit harder to have it serve the function in (iii-b) whereby it blocks an unfocussed strong pronoun in a modification / coordination, because it is difficult to put it into the same reference-set as the latter. The backgrounded doubling structure [*clitic ... strong pronoun*] is independently available beside [*clitic ... t*] without a relationship between the two, and neither should block the other, just like the availability of clitic-doubling a contrastively focussed dative strong pronoun does not block non-doubling it. This is simply the same problem as that pointed out by much other

¹⁸ Suggested by Michal Starke, p.c.

¹⁹ This seems consonant with other facts about strong dative and accusative pronouns: strong accusative we have seen to strongly prefer doubling for all speakers, and even for datives, where (all?) speakers seem to allow truly free variation at one and the same colloquial level, doubling seems preferred. Cf. Lambrecht (1981).

work on reference-set computation, e.g. Potts (2002) and Reinhart (2006): expressing more or less the same meaning is not a sufficient criterion for blocking, and more is required, like deriving from the same numeration modulo (see chapter IV, note NOTE-165).

There is a direct argument to show that the background doubling structure is not involved in the blocking of unfocussed strong pronouns in coordination / modification in the manner of (iii). It comes from ECM contexts, which at the same time reveal more about how both backgrounded and contrastive doubling operate. The subject position between an ECM verb and its complement predicate seems limited to hosting non-dislocated, non-adjunct material, and the occurrence of a clitic-doubled DP here in a language like Greek indicates clitic doubling rather than clitic right dislocation (cf. Sportiche 1996: 222).²⁰

Consider (44). An undoubled, non-pronominal ECM subject occurs between the matrix and embedded verb, even if it is prosodically very heavy. It may also follow the embedded verb under various circumstances and with some stylistic restrictions.²¹ The same is true of a contrastive focus doubling of a coordination. The same holds of a modification structure, except that the post-verbal position is (clearly) out without right-dislocation. By contrast, for a plain pronoun, it is preferred (cf. De Cat's (2007: 525) observation that, considering examples with a comma intonation, a clitic right-dislocated argument cannot bear contrastive focus, except when it is a strong pronoun.)

- (44) a. Bien sur qu'elle sait que tu es ici! Elle a vu <ta voiture chargée de paquets> arriver <ta voiture chargée de paquets>.
 "Of course she knows that you are here! She has seen your car loaded with packages arriving." (subject after arriver is netly more literary)
- (45) a. Elle vous a vu <TOI ET TON FRERE> arriver <TOI ET TON FRERE>, pas nous.
 "She saw YOU AND YOUR BROTHER arrive."
- (46) a. Je ne peux pas témoigner pour les autres, mais je vous ai vu <VOUS DEUX> partir <*VOUS DEUX / √, VOUS DEUX>.
 "I don't know if I can speak for the others, but I saw YOU TWO leave."
 b. Quelqu'un a cassé les vitres de la boutique. C'était pas les jeunes, ils étaient tous à la fête. Mais Maï m'a dit que avant qu'elle parte, elle vous a vu VOUS DEUX arriver.
 "Someone broke the windows of the shop. It wasn't the young people, they were all at the party. But M-J told me that before she left, she saw YOU TWO arrive."
- (47) a. Elle t'a vu <^{ok}TOI> arriver <^{preferred}TOI>, pas ton frère.
 "She saw YOU arrive, not your brother."

²⁰ There are several other diagnostics in the literature; see Anagnostopoulou (2005) for an overview of ones based on word order for Spanish, Catalan, and Greek, related to the ECM test but harder to replicable in French due to the lack of in-situ postverbal subjects in transitives, and Schmitt (1995: 168) for quite a different one.

²¹ There are differences of type (i), not clear to me.

- (i) a. Je les ai vus, eux deux, tomber (*Je les ai vus eux deux tomber.)
 "I saw them both falling. [not → hitting the ground, as in Englishs]
 b. Je les ai vus tomber tout les deux
 "I saw them both fall." [→ hitting ground, one reading of English]

- b. Je les ai vus EUX arriver, pas toi. (T'étais passé par derrière, qu'est que tu voulais que j'en sache!)
 "I saw THEM arrive, not you. (You went in by the back, how do you imagine I'd know!)"

Now consider a backgrounded doubling coordination. To a first approximation, it seems quite impossible in the position between the matrix and embedded verb in ECM. Instead, it must follow the ECM verb. No comma intonation is necessary when it follows, but the clitic must double the whole coordination and not the first conjunct unlike in the examples of backgrounded doubling given above, which we return to below as a possible sign of dislocation. There are a couple of caveats. First, making the embedded VP heavier permits the coordination to precede it, the heavier the better. Second, setting off the ECM subject with a coma intonation also permits it to precede the ECM verb, apparently with a sense of dislocation of both it and the VP after it. I will provisionally put these aside as secondary. Modification gives the same results as coordination, if somewhat less clearly.

- (48) a. Bien sur qu'elle sait que vous êtes ici!
 Elle vous a vu <*toi et ton frère> arriver <√toi et ton frère>.
 Elle vous a vu, toi et ton frère, arriver.
 "Of course she knows you're here! She saw your and your brother arrive."
 b. Bien sur qu'il est ici!
 *Je l'ai vu lui et sa copine / lui et Bernard / lui et son frère arriver.
 Je √les/*l'ai vu arriver, lui et sa copine.
 "Of course he's here. I saw him and his girlfriend / Bernard / his brother arrive."
 c. Bien sur qu'elle vous cherchait! Elle vous a vu <*toi et ton frère> tomber <toi et ton frère>.
 "Of course she was looking for you! She saw you and your brother fall."
 d. Bien sur qu'elle vous en veut! Elle vous a vus toi et ton frère ennuyer ce pauvre lapin.
 "Of course she has it in for you! She saw you and your brother annoy this poor rabbit." [ok but only with dislocation/parenthetical intonation for *toi et ton frère* and separately the following VP, and better the heavier the VP is.]
- (49) a. Je les ai vus eux deux tomber dans la misère à une vitesse incroyable.
 "I saw the two of them fall into misery at an incredible speed." [ok, prosodic integration, but sense of dislocation, and the longer the VP is better].
 b. Qu'est-ce que tu veux dire que je les connais pas?! bien sur que je les connais. Je les ai vus, eux deux, arriver. / *Je les ai vus eux deux arriver.
 "What do you mean she doesn't know them?! of course she knows them. I saw the two of them arrive."
 c. Bien sur qu'elle sait que vous êtes ici. Elle vous a vu <vous deux> arriver <, vous deux>.
 "Of course she knows that you're here. She saw you two arrive." [net feeling of comma intonation about the preverbal subject]
 d. Je me demandais pas où vous étiez une seule seconde. Je vous ai vus, vous deux, partir.
 "I didn't wonder where you were a single second. I saw you two leave."

- e. On était bien assez dans l'équipe. Bien sur que je vous ai vus partir(,) vous deux, mais c'était pas grave.
 "We were quite enough in team. Although I saw you two leave, it wasn't grave."

The most important aspect of the ECM data is the observation that the unavailability of background doubling does not ameliorate the status of an unfocussed strong pronoun in an undoubled coordinate ECM subject. In the above examples, repeated in key contrast pairs below, the background doubling of a coordination cannot be interfering with a repair using a strong pronoun in the undoubled coordination, because the former is unavailable; yet a strong pronoun is no better in the latter than outside an ECM context. So background doubling seems irrelevant to explaining the absence of unfocussed strong accusative pronouns in undoubled coordinations. ((6) makes the same point about a morphophonological gap: the unavailability of *l'y(...lui)* does not render *y...lui* any good.)

- (50) Bien sur qu'il est ici.
 *J'ai vu lui et Bernard arriver (cf. *J'ai vu lui et Bernard à la réunion, c'matin)
 *Je l'ai vu lui et Bernard / son frère arriver (vs. √Je l'ai vu lui et Bernard à la réunion.^{ix})
- (51) Bien sur qu'elle sait que vous êtes ici.
 *Elle a vu vous deux arriver.
 *Je les ai vus eux deux arriver. / √Je les ai vus, eux deux, arriver.

What does all this say about the nature of background doubling? The unavailability of it in the in-situ position of ECM subjects is a point against clitic doubling (a proposal made by Kayne 2000: 178 note 6, 179 note 12, and more generally for non-pronouns in 1994: 7.3 which De Cat 2007 critiques), or more precisely, against clitic doubling of the same type as contrastive doubling and clitic doubling in Spanish or Greek. On the other hand, its unavailability to locatives – with the caveat noted that it may be an artefact of unsuccessful elicitation – is a point for an analysis other than clitic right dislocation, which when overtly marked by right-peripheral placement and coma intonation is possible to all three, unless there is something independent in the status of datives/accusatives vs. locatives that requires comma intonation only for the last in right dislocation.

A separate line of evidence can shed much light on these matters but I do not have nearly all the pieces of the puzzle. In giving background doubling for coordinations, clitics matching phi-features of both the whole coordination or of just the first conjunct have been presented ((35)b *Je vous/te l'ai montré à toi et à tes copains pendant les vacances*). Indeed, both clitics are perfectly acceptable with no difference in grammaticality or prosodic integration of the coordination or feeling about its status. However, when an element like *ensemble* 'together' is added that requires a plural accusative, only doubling of the full coordination is available. The behavior of contrastive doubling is reminiscent of this in a different way. Doubling of either the whole coordination or of the left conjunct is possible, but determines what is in contrastive focus: either the whole coordination, or only the left conjunct, with the requirement that the right conjunct be effectively "echoed" from the preceding discourse (a requirement that seems absent for background doubling). Finally, with genuine right dislocation involving a coma, doubling of the entire coordination seems required ((48)b *Je les/*l'ai vu arriver, lui et sa copine*, unless a "corrective" repetition). A clitic doubling only the left conjunct gives rise to the impression not

of right dislocation, but of a correction. These facts need to be compared to cases of genuine first conjunct clitic doubling in other languages (Schmitt 1995: 151-3, van Craenenbroeck and van Koppen 2006).

- (52) Qu'est-ce que tu veux dire que tu le connais pas?! bien sur que tu le connais. Je vous/*t'ai vu ensemble toi et tes copains chez lui pendant les vacances.
 "What do you mean you don't know him?! of course you know him. I saw you andn your friends discussing together at his place during vacations."
- (53) a. Il vous/*t'a vu TOI ET TON FRERE arriver, pas nous.
 He saw YOU AND YOUR BROTHER arrive, not us.
 b. Il l'a vu LUI et mon frère arriver? Il t'a vu TOI et mon frère arriver!
 "He saw HIM and my brother arrive? He saw YOU and my brother arrive!"
- (54) Il vous/*t'a vu discuter ensemble, toi et ton frère.
 "He saw you discussing together, you and your brother" (with *t'*, the coordination is a correction)

i

ii Originally from a film description on the internet, with *les gens* subst. for *les hommes* to make contrastive focus more pragmatically marked and so more easily detected.

v The way to express this is: "*Je leur ai montré avec leurs copains pendant les vacances.*"

vi The way to express the non-list reading is: *Je l'ai vu lui et son frère à la réunion / Je l'ai vu avec son frère à la réunion.*

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viii ix Even better: *Je l'ai vu avec Bernard / son frère à la réunion.*