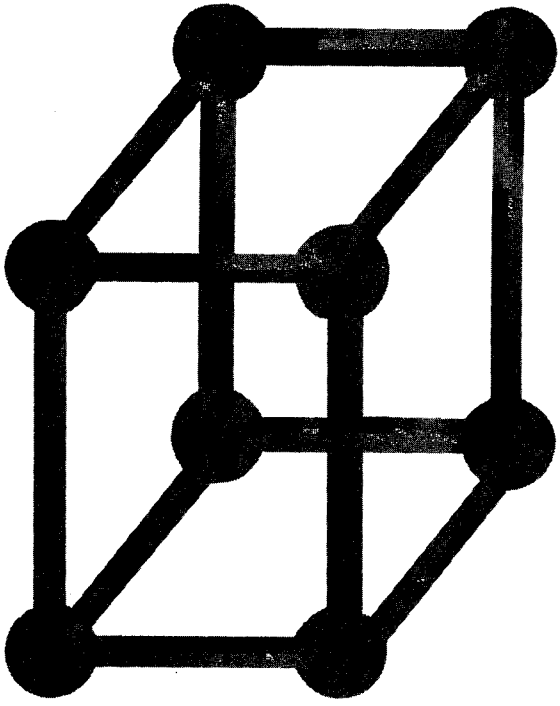
Why There Are No *Clitics*



An alternative perspective on pronominal allomorphy

Daniel L. Everett

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An Alternative Perspective on Pronominal Allomorphy

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Daniel L. Everett

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This book is dedicated to linguistic field workers who, in spite of the lack of appreciation and understanding they often encounter, put up with messy data, bugs, temperature extremes, sickness, loneliness, personal danger, and sorrow at the sight of social injustice and physical suffering. Their effort is important to the speakers of the languages that they study and crucial to those of us who depend on the data and analyses they provide in order to advance toward answers to questions on the nature of human language.

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Abbreviations

ACC	accusative
AGR	agreement
AGRP	agreement phrase
AGT	agent
AN	animate
ANAL	analytic
AP	aspect
ARB	arbitrary
ASP	aspect
ASPP	aspect phrase
AUX	auxiliary
BC	binding condition
BEN	benefactive
C	constituent
c-command	constituent command
Case	morphological and abstract syntactic case
CDAP	configurational distance agreement principle
CFC	complete functional complex
CI	complex inversion
CL	clitic
CLLD	clitic left dislocation
COMP	complementizer
CONDIT	conditional
COR	coreference
CP	clitic placement
D	Determiner
D-structure	deep structure
DAT	dative
DEF	definite
DIR	directional
DP	determiner phrase
EC	empty category
ECO	empty category object
ECP	empty category phrase
EMPH	emphatic
EPP	extended projection principle
ERG	ergative
ETR	external theta role
EXC	exclusive
FC	functional category
FCI	French complex inversion
FP	functional projection
FEM	feminine
GB	government and binding theory
GF	grammatical form
HUM	human
IMP	imperative
IMPF	imperfect
INAN	inanimate
INDEF	indefinite

INFL	inflection
INTER	interrogative
INTSV	intensive
IP	inflectional phrase
IU	interpretive unit
L	(any) language
LD	left dislocation
LF	logical form
LOC	locative
m-subcate-gorization	morphological subcategorization
MAS	masculine
MED	maximal extended domain
MT	minimalist theory
MV	morphological visibility
N	nominal
NOM	nominative
NP	noun phrase
O	object
PART	particle
PAT	patient
PF	phonological form
PL	plural
PP	prepositional phrase
P&P	principles and parameters theory
PRES	present
pro	pronoun with no phonological symbol
PRO	null pronominal
PROG	progressive
PRT	particle
PRONS	class of pronominals
R-expressions	referential expressions
REFL	reflexive
RPM	restructuring phrase marker
S	subject
SE	any reflexive reciprocal clitic
SG	singular
SPEC	specifier
SUBJ	subject
SYN	synthetic
t	trace
TP	tense phrase
UG	universal grammar
UTAH	uniformity of thematic assignment hypothesis
V	verb
VBL	verbal
VP	verb phrase
WFR	word formation rules
X	any head
Xm	maximal projection
XP	any phrase
*	ill-formed, not grammatical
< >	theta-grid of a lexical entry
[]	features—marks syntactic boundary
( )	marks phonological boundary
{ }	set
1s	first-person singular
2s	second-person singular
2d	second-person dual
3s	third-person singular
3d	third-person dual
3p	third-person plural
X^0	head

1
Introduction

Linguists have long been interested in clitics, as the many clitic-oriented references cited in this study attest. It has been argued that clitics have many different and often bizarre properties not manifested by other categories. This is natural, to a certain extent, since they are implicated in a wide range of structures and grammatical principles and held by most to inhabit a sort of limbo between morphology and syntax. In spite of all the study of clitics that has gone on for the past twenty years in formal, generative linguistics, however, I believe that, until now, no theory has emerged which successfully unifies the various crosslinguistic manifestations and uses of clitics under a single conceptual framework.

My own concern with clitics started over ten years ago during my initial fieldwork on Pirahã, although at the time I did not know that the pronominal things that were bothering me were clitics. My complete befuddlement with clitics in Pirahã at that time has led me over the years to attempt various solutions to the problems posed by clitics generally (e.g. Everett 1986b, 1987, 1989a). Long after I was able to propose a plausible analysis of clitics in Pirahã, I nevertheless continued to work on understanding the mechanics and details of clitics and their relation to the lexicon, theta-theory, and Case-theory. I am convinced that clitics provide insights into the relationship between morphology and syntax, in particular as to whether these differ in any fundamental way and if so,

how.[1] The principal goal of this book is to begin the groundwork for a theory of clitics that will contribute to the understanding of what these and other pronominals demonstrate about the morphology-syntax interface. I argue that any real insight into clitics must properly characterize their relation to agreement affixes and pronouns, since they all share a common semantic core, in the sense that they are all composed of the same meaning bits, and they interact significantly in a wide range morphosyntactic phenomena. My basic thesis is that pronominal clitics, agreement affixes, and pronouns are epiphenomena, produced by the insertion of PHI-FEATURES (their common meaning bits) into different syntactic positions. That is, if you look in the mental dictionary for a pronoun, a clitic, or an agreement affix you will not find one.

The idea that pronouns are composed of smaller bits of morphosyntactic or semantic information is not a new one. One of the clearest statements of this idea is found in Chomsky (1981). He introduced the notion of phi-feature into what was then known as GOVERNMENT AND BINDING THEORY (GB), more recently characterized as PRINCIPLES AND PARAMETERS THEORY (P&P). Chomsky claimed that:

> there is some set of grammatical features that characterize pronouns; i.e. pronouns are distinguished from overt anaphors and R[eferring]-expressions in that the grammatical features of pronouns are drawn solely from *phi*, whereas overt anaphors and R-expressions have some other grammatical features as well. (1981:380ff)

Thus Chomsky distinguished between *him*, composed exclusively of phi-features (third person, singular number, nonnominative Case, masculine gender) and *himself* which has all the same phi-features as *him* plus the additional reflexive specification, marked by *-self.*

[1]I would like to thank Rick Kazman for discussing many of these issues with me and Ted Gibson for always being both encouraging and professional. My colleagues at the University of Pittsburgh have given me an excellent environment in which to work and learn. I thank the dean of Pitt's Faculty of Arts and Sciences for his support of my research in many ways. Thanks also go to audiences at the University of Pittsburgh including those in my fall 1990 seminar on clitics, Johns Hopkins University, Carnegie Mellon University, MIT, University of California Irvine, University of California Santa Cruz, and the University of Utrecht for their comments. Special thanks to Carol McKee for criticisms and comments on the chapter on acquisition. She helped me see how ignorant I still am about language acquisition research and how much work my arguments here still need. Nevertheless, I leave my discussion of these matters as is, in the hope of eliciting the comments of others for additional improvements that might be made.

This important proposal was not explored much in subsequent work by researchers in GB theory, even though it raises a number of interesting questions for theories of morphology and syntax. In a minimalist theory of the kind outlined in Chomsky 1992, the issues become even more urgent. For example, if pronouns are composed exclusively of phi-features, should they be listed in the lexicon or should only the phi-features which characterize them be listed? What does it mean to say that a pronoun is characterized by phi-features? What about other pronominal categories, e.g., agreement, affixes, and clitics? Are these characterized exclusively by the same phi-features as pronouns? If so, should the various pronominal categories be distinguished by lexical labels, e.g., clitic, affix, pronoun, or does syntax alone provide adequate means to distinguish between them? If syntax indeed has the wherewithal to keep pronominal categories distinct, can the supposed lexical distinctions between these be eliminated? But if I eliminate these lexical distinctions by removing pronominal categories from the lexicon, how is it that clitics, affixes, and pronouns have such different morphosyntactic and phonological behaviors? How can these behaviors be expressed in a theory without lexical entries for pronouns, clitics, and affixes, i.e., where these different categories are merely surface manifestations of what are nothing more than phi-feature bundles?[2]

In this monograph, I argue not only for the thesis that the lexicon of a given language never contains pronominals per se but only the phi-features which compose them; I also argue that terms like pronoun, clitic, and affix are merely labels for syntactic configurations or nodes, much as grammatical functions such as subject and direct object are treated in Chomsky 1965 and subsequent studies; and that the various manifestations (i.e., clitic, affix, pronoun) of particular sets of phi-features are in a relation of ALLOMORPHY, their phonological shapes given by postlexical or precompiled spell-out rules (cf. Anderson 1992; Hayes 1990; Bonet 1991).

If successful at my task, this model simplifies the lexicon by eliminating entire classes of entries from it without adding anything in their place; phi-features must be stored in the lexicon separately whether or not separate entries for pronominals, etc., are posited. But how significant would the elimination of pronominals from the lexicon be for linguistic theory generally? Since the ultimate goal of linguists is not merely to simplify grammatical components but to improve the understanding of linguistic phenomena and the human linguistic capacity they

[2]Actually they are much more than bundles, according to work by Bonet (1991); and as discussed further below.

are evidence for, most of this monograph will adduce evidence from various case studies that in fact this new proposal enjoys empirical and conceptual advantages over the traditional perspective that clitics, pronouns, and affixes are separate lexical entries, and leads ultimately to a deeper understanding of the issues.

In this study, I assume much of the spirit, if not always the form, of the MINIMALIST THEORY (MT) of linguistics, developed in Chomsky (1991, 1992) and others (cf. Epstein 1992) out of the basic assumptions of PRINCIPLES AND PARAMETERS THEORY (P&P) and the generative research paradigm launched in the early 1950s. In MT, as its name implies, minimal assumptions about the properties of grammar expressions are made—so minimal, in fact, that many notions that have been crucial to linguistic work for the past decade within the P&P tradition (e.g., government, the projection principle, the theta-criterion, A- vs. A'-positions, and others) are abandoned under this new approach. To avoid unnecessary burden on the reader, I use most of the terms of P&P informally, introducing newer terminology only where it relates directly to the analysis at hand.

This is not the place to introduce MT, since it is new and underdeveloped in many details and thus not ready to be introduced in any global fashion, although Chomsky (1992) has developed it to some degree. Indeed, there are many implications and proposals of the theory that still puzzle me. Nevertheless, the spirit of the research program seems to me quite exciting. I hope that the present study pays back its theoretical debt to MT by showing how it can be extended and applied to a wide variety of AGR-related phenomena on the morphology-syntax interface. At the same time, in spite of my use of this particular framework, I attempt to present results which may be useful and accessible to researchers from other theoretical backgrounds.

The monograph is organized as follows. First, I outline the basic model of pronominals and phi-features, stating my basic claims on the lexical storage, syntactic insertion, and phonological form of phi-features and phi-feature arrays. A summary of technical concepts used in this monograph is presented to avoid confusion stemming from my occasional non-traditional usage of traditional morphological terminology. The third chapter develops a theory of agreement and clitic-doubling, in which I exploit the proposal made in chapter 2 that clitics are adjuncts to X^m structures (essentially, phrases), whereas affixes are complements to stems, which are dominated by X^0 (essentially, lexical categories). These ideas are developed in detailed studies of languages ranging from Romance and Celtic to Muran and Peba-Yaguan. The fourth chapter pursues these proposals via a study of COMPLEX INVERSION in French and its previously unnoticed, yet fascinating relationship to subject clitic doubling in certain

northern Italian dialects. The next chapter moves to a study of the Romance *se* clitic and its interaction with binding theory and valency alternations. The final chapters take up some residual, but nevertheless important, issues concerned with the syntax of pronominal determiners in Romance, clitics and binding as seen in WH-movement and CLITIC LEFT DISLOCATION structures, and the implications of the present model for the acquisition of clitics. The final chapter is a brief summation of the principle results of this study.

I would like this book to interest and help both theoretical linguists and field workers. Its interest to theoretical linguists lies, I believe, in its recognition of heretofore unnoticed problems and regularities in clitic-pronominal relations, its ability to derive the differences between clitics and affixes, and its treatment of languages which, although clearly important for morphological and syntactic theories, have been largely ignored by other researchers. I also believe that this study, although difficult going in many places, is worthwhile reading for field workers. I believe it will help them recognize issues which they might have otherwise overlooked or lacked the tools to deal with adequately—such as the very existence of clitics, how to sort out clitics from affixes, the relationship between clitics, agreement, and word order, and some relations between clitics, agreement, and ergativity. Clitics are common in languages, yet, due no doubt to what Tom Givón refers to as the "sterility" of theorizing without field work to back it up, there are few theories which tackle the relationships and phenomena just mentioned as these relate to clitics—a serious omission for field workers since it is precisely this type of relationship that field workers need to understand most. For example, if language X has a particular kind of clitic, what are this clitic's implications for, or effects on, other parts of the grammar? Field workers need resources which help them have an a priori awareness of possible relationships, yet neither linguistic typology nor previous theoretical works serve this purpose well with regard to clitics. I wish it were possible to write a book like this that required no theoretical terminology and that could be completely self-contained. But it is not. I am naive enough to believe that linguistic understanding has advanced greatly by theoretical developments based on Chomskyan-related research and that it is not possible to discuss those results without the concepts involved. Since concepts must be labeled, new concepts require new labels, thus new vocabulary and more work for the field worker. But stick with it—an extra few hours spent in wading through new concepts could save more time of head-scratching in a language situation.

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2
Storage, Insertion, and Form of Phi-Features

The purpose of this chapter is to develop the basic model to be explored in the remainder of this monograph. I argue that clitic, pronoun, and agreement behaviors can be accounted for without positing any of them as theoretical primitives, ontological categories, or lexical entries. First, I discuss the lexical storage of phi-features, giving special consideration to the evidence that they are stored individually in the lexicon. Next I consider how and where phi-features are inserted at D-structure and the implications of these insertion sites for determination of argumenthood and LF visibility of pronominals. The consideration of these latter matters leads naturally into the discussion of clitic doubling in chapter 3.

2.1. Terminology. Before beginning the discussion in earnest, it is necessary to define certain terms which are crucial to the exposition.

MORPHEME. The morpheme is traditionally defined as the "minimal unit of sound and meaning" (Nida 1948:1). Unfortunately, although this notion is simple and intuitively appealing, it is ultimately unworkable. For example, while there are certainly forms that can be peeled off from words and which appear to signal a single change in meaning via a single change in form, aside from prototypically agglutinative languages, the notion of morpheme is simply not applicable in many constructions in most languages. Consider, for example, the common cases in which multiple sound changes are effected by a single meaning

change, e.g., English *child* versus *children*, where the latter uses both a vowel change and a suffix to mark plural. Or consider the situation in which multiple meaning combinations represented by a single form, as in Romance inflection, e.g., Portuguese *falou* 's/he/it spoke', where the suffix *-ou* means person (third), number (singular), mood (indicative), aspect (punctiliar), tense (past), and conjugation *(-ar)*. The traditional morpheme is also hard-pressed to give any insight into the astoundingly complex interactions between morphology, syntax, and phonology in Romance clitic orders and forms, as discussed in the work of Bonet (1991). Anderson (1992) discusses other examples of inadequacies of the traditional structuralist notion of morpheme. In summary, the morpheme is of no help where there are many-to-one mappings between form and meaning (including suppletive pairs, e.g., *go* and *went*) or meaning and form. For these reasons, I avoid use of this term in this monograph except as a simple mnemonic device, with no theoretical status.

LEXEME AND LEXICON. A lexeme is a distinct lexical entry. Therefore, all lexemes are lexical entries, by definition. But not all lexical entries are lexemes in the model proposed here. Lexemes are special entries in that they are that class of lexical entries which subcategorize for other lexical or phrasal categories. Like all lexical entries, a lexeme also contains idiosyncratic information about an item's meaning or category. Most major word class items, nouns, adjectives, verbs, and prepositions, are lexemes, since most of these have subcategorization frames. Stems are formed by lexemes or combinations of lexemes. Nonlexemes entered in the lexicon include phi-features, e.g., number (*they run* versus *he runs*), person (*he runs* versus *you run*), morphological and abstract syntactic case (henceforth Case), (I_{NOM} *saw* him_{ACC} versus He_{NOM} *saw* me_{ACC}) and gender (*he* versus *she*), as well as features such as tense and aspect.[3]

I assume that the class of nonlexemic lexical entries will be quite small and that it will consist primarily of phi-features and other primarily grammatical kinds of information. Derivational morphology will be stored as lexemes. I assume that the lexicon is word-based (cf. Aronoff 1976 and Anderson 1992), rather than morpheme-based, except for phi-feature-like entries, which are active in distinguishing words and word classes. Thus the lexicon contains both words and a list of INFLECTIONAL CATEGORIES (phi-features and certain grammatically active inherent features) of the language in question. That is, it will contain a list of tenses,

[3]In Chomskyan theory, abstract syntactic case (Case) is properly assigned, under rigorously constrained conditions, to NPs by certain phrasal heads (Chomsky 1986) or via agreement between functional head and its specifier position (Chomsky 1993).

Cases, aspects, grammatical numbers (e.g., singular, dual, plural), persons, etc. that the language makes use of in its grammar. These will be associated with spell-out rules, but will not take the form of traditional morphemes.

MORPHOSYNTACTIC UNIT. A morphosyntactic unit is a position in a PARADIGM (Matthews 1972, Anderson 1992), a root or stem plus the accretion of configurational features. A paradigm is the sum of these combinations for a given root or stem. Morphosyntactic units emerge, therefore, from the syntax. For example, the correct use of, hence the paradigmatic distinction between, *he* versus *him* depends not only on their lexical features, but also their appearance in different syntactic positions (subject versus object, respectively).

STEM. A stem is a combination of one or more lexemes.

ROOT. A root is the semantic and grammatical core of the morphosyntactic unit; i.e., what would be left if all derivational and inflectional morphology were removed (e.g., via back-formation).

WORD FORM. A word form is the postlexical, taxonomic phonemic representation of a morphosyntactic unit.

CONFIGURATIONAL FEATURE. A configurational feature is a nonlexemic feature (either lexical or exclusively syntactic) inserted into a specific morphological or syntactic position (via lexical insertion or syntactic assignment), as determined by a phrasal head. Configurational features include, for example, GAMMA-FEATURES (features indicating proper or antecedent government, Lasnik and Saito 1984, 1992), as well as Case, gender, number, tense, and person.

INHERENT FEATURE. An inherent feature is a property inserted from the lexicon into a particular node independently of any other morphosyntactic node. Some otherwise inherent features may also appear as configurational features, e.g., when they appear on other nodes due to a requirement of the phrasal head. For the X^0 on which a feature is inserted independently of other nodes, the feature is inherent. For the X^m on which the feature is postlexically determined (assigned or checked), the feature is configurational. So, for example, even if I assume that accusative Case is a lexical entry, inserted into AGR^0 or V^0 at D-structure, it would still be, in this view, an inherent feature of V^0/AGR^0 (even though there might never be a direct phonological reflex of nominal phi-features like Case on a verb) since it is not assigned to either of these nodes by any other node, but is part of what the relevant node means in a formal sense. Accusative Case is, however, a configurational feature of the direct object NP since the NP may be either accusative or nominative, depending merely on its position—the case is in no way part of the

lexical meaning of the head noun.[4] Gender may be inherent for all or some nouns in a given language, but configurational for an adjective, as in (1), from Portuguese.

(1) a. *a garota*$_{[FEM]}$ *cansada*$_{[FEM]}$
the tired girl

b. *a garota*$_{[FEM]}$ *inteligente*$_{[FEM]}$
the intelligent girl

c. *o garoto*$_{[MAS]}$ *inteligente*$_{[MAS]}$
the intelligent boy

I assume that gender, as other configurational features, is always assigned or checked between a gender-bearing noun and an adjective modifying it, whether or not it does (1a) or does not (1b) have a phonological reflex of this gender on one or more of the words (or none, as in English), so long as there is evidence that the language makes use of that feature as an inflectional category and is not merely part of an isolated word (see §§ 2.9–2.11).

By this definition, purely configurational features (if indeed they exist as more than mere notational devices), e.g., gamma features or anaphoric indexes, are never inherent features (cf. Chomsky 1980; Everett 1989a). They are merely properties of the syntactic configuration in which they are found.

PHI-FEATURE. Any morphosyntactic or semantic feature which may be both an inherent feature and a configurational feature is a phi-feature, e.g., Case, person, number, and gender. Thus, gamma features and anaphoric indexes, are not phi-features. Tense would not usually be classified as a phi-feature, because, although it is an inherent feature of the T^0 node, at least in the matrix clause, it is not usually assigned to other nodes by a phrasal head. In those languages, however, which require that the tense of certain kinds of embedded clauses (e.g., subjunctive clauses, cf. Picallo 1984) match or be assigned by the matrix T^0 or V^0, tense would be a phi-feature by my definitions of configurational and inherent features.

MORPH. A morph is the phonological reflex of semantic or grammatical information, not necessarily a one-to-one mapping, as in (1). Therefore *he* and *him* are separate morphs even though they are not separate lexical

[4]If one assumes that Case is always assigned by AGR^0, rather than v^0, as does Chomsky (1992), the notion of inherent versus configurational features, as defined in the text is unchanged.

items. On the other hand, the transitive and intransitive forms of an ambitransitive verb like *eat* (*John ate* versus *John ate green eggs*) are the same morph, in spite of different grammatical properties. The phonology fails to distinguish them.

ALLOMORPHY. Allomorphy is a relationship of complementary distribution between two or more morphosyntactic units which differ grammatically only via configurational or phi-features. In the latter case, the phi-features of each pair of allomorphs must be in a subset relation. No allomorphs may contrast for any inherent feature. By this reasoning, *he*, *him*, and *-s* (as in *runs*) are allomorphs, but *he* and *she* are not (since they differ in inherent features, not merely in phi- or configurational features).

SPELL-OUT RULE. A spell-out rule is a postsyntactic rule providing the word form of a morphosyntactic unit. These rules may refer only to phi-features and lexical properties. Spell-out rules, like other phonological rules, are strictly local. This means that a spell-out rule never sees more than one node at a time, meaning that purely configurational features, e.g., gamma features, never have a phonological reflex.

SIMPLE CLITIC. A simple clitic is defined by Zwicky (1977) as a phonological weakening and attachment of a morphologically free form to another phonological expression. Simple clitics occur in the same places where one would expect the nonreduced form to occur. For example, English has various special clitics, usually involving so-called functional-categories, such as prepositions, pronouns, and auxiliaries, as in (2)–(4).

(2) a. I will be here by three.
b. I'll be here by three.

(3) a. I like them.
b. I like 'em.

(4) a. I am going to buy you a beer.
b. I'm gonna buy you a beer.

SPECIAL CLITIC. Zwicky (1977) defines special clitics as forms which are not found in the syntax where the expected corresponding nonclitic form would occur and argues that these are attached to another expression in the morphosyntax. English lacks special clitics by this definition, although they are abundant crosslinguistically, illustrated in (5) and (6) with examples from Brazilian Portuguese.

(5) a. *você poderia dar aquele livro para Maria* (*Maria* is a nonclitic object)
Can you hand that book to Maria?

b. *você poderia* ***lhe*** *dar aquele livro* (*lhe* is a special clitic)
Can you hand that book to me?

(6) a. *a professora viu João* (*João* is a nonclitic object)
The teacher saw John.

b. *a professora o viu* (*o* is a special clitic object)
The teacher saw him.

2.2–2.5 Lexical storage of phi-features

In the remainder of this book I argue for the thesis that clitics, affixes, and pronouns result from the stacking of phi-features into functional category heads (FC^{0}s), resulting in the syntactic configurations in (7)–(9).[5]

(7) Pronouns: $[_{D^m}\ [_{D^0}$ phi-features]]

(8) Clitics: $[X^{m/0}\ [_{AGR^0}$ phi-features$][X^{m/0}\ \ldots\ ]]$

(9) Affixes: $[X^0\ [_{AGR^0}$ phi-features]]

By the proposals in (7)–(9), pronouns are phi-features in D^0 position (i.e., the head of the DP or DETERMINER PHRASE; cf. Abney 1987 for detailed argumentation for the DP phrase). Clitics are phi-features in AGR^0, adjoined in the syntax to X^m. Affixes are phi-features in AGR^0, included within X^0 (in the sense of Chomsky 1986b). To emphasize: according to (8) and (9), clitics equal adjuncts, and affixes equal complements. This proposal raises various questions immediately, e.g., why are these the only possible D-structure insertion sites for phi-features?

[5] X^m here represents a MAXIMAL PROJECTION, i.e., the largest expansion of a phrase. X^0 represents the head of any phrase. A FUNCTIONAL CATEGORY is an abstract or concrete category whose function is principally grammatical rather than semantic, in the sense that these generally lack any independent reference. Functional categories include determiners, agreement, tense, aspect, and other such grammatical categories which head their own projection in the syntax. Agreement, for example, is assumed here to be inserted under a separate syntactic node, AGR, rather than exclusively inserted onto the verb.

What determines whether phi-features will be adjoined to X^0, as in (8), or included within X^0, as in (9)? Which of the phi-feature configurations in (7)–(9) may serve as arguments, i.e., bear theta-roles? What is the nature of stacking and how might it be constrained?

Answers to these and related questions are suggested in the course of this chapter. First, however, I consider evidence in favor of the claim that phi-features are stored separately in the lexicon. Four sources of evidence are considered here: (1) phi-features may surface separately; (2) individual phi-features distinguish pairs of binarily opposed PRONs;[6] (3) phi-feature stacks vary in the number of phi-features they contain, with the number and type of phi-features present at least partially determining the syntactic behavior of the pron involved; and (4) while agreement may involve different phi-features from language to language, there is no case where agreement is noun-specific, i.e., where there is a special agreement allomorph for a feature of a single noun.

2.2. Phi-features surface separately. Consider the pattern of agreement found in Arawan languages, as illustrated by Deni, a language spoken in northwestern Amazonas, Brazil. According to Boley (1991), person and number in Deni precede the verb and reference the subject NP. Gender, on the other hand, is suffixed to the verb and usually references the object; first- and second-person are always morphologically feminine in Deni. The parentheses in example (10) indicate that Deni is a PRO-DROP language, i.e., that the verb may occur alone with only prefixes and suffixes and without NP or pronoun arguments.

(10) a. *(tia) zuhu Ø-na-ru*
2s^FEM carry 3s-^AUX-IMPF^FEM
He carries you.

b. *(pua) zuhu ti-na-ri*
3s^MAS carry 2s-AUX-IMPF^MAS
You carry him.

[6]For brevity, I refer to the class of pronominals as PRONs, which includes pronouns, pronominal clitics, and pronominal agreement affixes. The class of PRONs is internally subdivided into morphosyntactically independent pronominals (pronouns) and morphosyntactically dependent pronominals (clitics and affixes).

The appearance of individual phi-features in separate morphosyntactic positions, as in Deni, is not uncommon crosslinguistically, especially in languages with well-developed gender or class systems. This phenomenon requires linguistic theory to provide some mechanism for targeting individual phi-features. If it is assumed that morphosyntactic rules refer only to syntactic or lexical categories (the standard assumption in most syntactic theories), then the evidence from Arawan supports the view that gender is an independent lexical category or entry in that language. Person and number must also be stored separately from gender.

There are two hypotheses one might entertain with regard to how person and number are stored in Deni, since they may be separated from gender but never appear independently of one another (there is no exclusive person-marking form that lacks number distinctions in Deni). One could first hypothesize that person and number, like gender, are each stored separately in Arawan and subsequently stacked in the verbal prefix position. Alternatively, one could suppose that, although gender is apparently a separate lexical entry, person and number together form a separate set of prefix entries in the lexicon, with a separate entry or subentry for each person-number-form combination.[7] If spell-out rules are already needed, however, there is nothing to be gained and much economy to be lost by considering prefixal morphemes (in the traditional sense) to be stored in the lexicon. I therefore conclude that languages like Deni provide independent confirmation of the suggestion that person, number, and gender are stored separately in the lexicon.

2.3. Individual phi-features distinguish pairs of binarily opposed PRONs. It is quite easy to show that PRONS differ one from another by phi-features, as though they were composed of phi-features in much the same way that phonemes are composed of distinctive features. Points of contrast among items in other domains, such as the distinctive features of phonology, are generally taken to be derived from independent items. Thus the segment has no status in phonological theory, except as defined

[7]An Aronoff-like model would not need to suppose this, only that its WORD-FORMATION RULES (WFRS) be able to mention person and number. Mention of person and number in WFRS assumes that they are found someplace in the language, such that a WFR may mention them; why not in the lexicon?

by the intersection of phonetic-features and phonological principles. So consider examples like (11).[8]

[8]A brief discussion of how phi-features are different from phonological distinctive features is worth addressing at this point. Phonological distinctive features make up the PFs of words that we hear. Phonological rules must be able to refer directly to these features. It is important to also know what the distinctive features of a language are and their allowable combinations in order to be able to know what the phonemic inventory of the language is (at least for orthographic considerations). It might therefore be argued that phonological distinctive features are themselves stored separately in the lexicon and inserted independently into different phonological positions. But of course this will not do. Phonological composition of most individual lexical entries prior to insertion must be known so that we can list phonological distinctive features in individual lexical entries. To know what the inventory of features is for a given language, a list could be made of the distinctive features in two locations in the lexicon, e.g., once as a distinctive feature chart and again in individual lexical entries. Alternatively, these features could be listed only in individual lexical entries and the phonemes of a language derived by inventorying these individual lexical entries. Could this same reasoning be applied to phi-features? That is, we know that some R(eferential)-expressions, e.g., *John* and *Mary* contain the same phi-features as *he* and *she*. Can the phi-features be derived from the lexical entries that a language has without listing them separately? Clearly not. Languages distinguish R-expressions by any number of semantic features which never appear elsewhere in the grammar as morphosyntactic features. Semantic features do not determine nor predict the morphosyntactic features that a language uses. A word like *coisa* 'thing' in Brazilian Portuguese is arguably semantically neutral as to gender. But it must be marked morphosyntactically as either masculine or feminine. No native speaker believes that *coisa* really has gender or that it shares any properties other than adjectival concord with *mulher* 'woman'. In other words, phi-features are not derivable from lexical entries in the same way that phonological features are. Moreover, phi-features are basic in the sense that they drive phonological interpretation—spell-out rules apply to the output of phi-feature insertion. Phonological features do not drive other nonphonological components of the grammar—although they themselves are parasitic on the semantic and grammatical information of particular lexical entries and syntactic combinations. Phi-features, while similar in some respects to phonological features (e.g., in their hierarchical arrangements, if Bonet (1991) is correct), are different in a crucial way; they are LEXICALLY BASIC. Therefore, they should not be treated as merely the syntactic counterpart to phonological features, in spite of some obvious similarities. I assume that there is a universal phi-feature inventory in the morphology, just as there is a universal distinctive feature inventory. I differ, however, from some researchers in believing that, just as not all phonological distinctive features appear in every language, so some phi-features may not appear in a given language, although they are available in universal grammar.

(11) a. *He* puts *his* collar on *him.*

b. *She* outruns *her.*

c. *It* is raining.

How should the pronominals in (11) be treated? Should each of them be entered separately in the lexicon, or should they be derived via phi-feature insertion? The latter tack seems better for understanding the relationship between *he, him, his* on the one hand and *her* and *she* on the other hand. That is, while a single entry might be posited for 3s^MAS/3s^FEM, it would only be necessary to list individual Case-distinguished forms as allomorphs of the lexical entry in question. In the research program pursued here, however, each individual item of each gender series ({he, his, him} versus {she, her}) would be analyzed as an allomorph within that series, distinguished from the other allomorphs by which Case and other phi-features they bear (cf. the definition of allomorphy in §2.1). As used here, "bearing a Case feature" is interpreted as meaning that a Case feature is inserted into the relevant X^0 position, and stacked up on any other features found in that position. Perhaps a similar analysis is possible to capture the gender differences in (11), as in *she* and *he*. It could be said that these differ only according to the value the feature [gender] bears when inserted into the relevant positions.[9] *It* differs from *he* and *she* by lacking phi-features, except Case.

If correct, this reasoning supports Chomsky's analysis of pronouns as characterized exclusively by phi-features. The relevant observation here is that the conception of phi-features as independently accessible entities suggests that they may also be independent lexical entries. If so, then the fact that two languages make different Case distinctions, for example, would be reduced to a lexical distinction between them—one language simply has a lexical entry that the other lacks. If phi-features are stored separately, however, is it also necessary to store the pronouns they characterize separately? The answer, again, is no. Before this issue is considered further two more arguments are presented for phi-features being stored separately in the lexicon.

[9]This claim would not mean that *he* and *she* are allomorphs in any sense. Recall from §2.1 that these cannot be allomorphs since [gender], unlike Case, is an inherent feature on nouns, and allomorphy never involves differences in inherent features.

2.4. Phi-feature stacks vary in the number of phi-features they contain. The verbal suffix *-s* instantiates the phi-features of person and number, lacking gender and Case.[10] I suggest that this suffix is like the pronouns in these examples in that it also is characterized by phi-features, where it is understood that Chomsky's expression "characterized by" means "composed of." But *-s* differs from the free forms in bearing fewer phi-features;

(12) a. He run*s*.

b. She runs

Other examples of PRONs which vary in the number of phi-features they are composed of are not hard to find. Consider the Brazilian Portuguese data in (13).

(13) a. *ele se viu*
He saw himself.

b. *ela se viu*
She saw herself.

c. *eles se viram*
They saw themselves.

d. *você se viu*
You saw yourself.

e. *vocês se viram*
You saw yourselves.

f. **eu/nos se vi(mos)*
I/we saw myself/ourselves.

[10]This suffix also manifests tense, mood, and aspect features, which are irrelevant at this point. I simply say that *-s* is a portmanteau morpheme and that the presence of these various features on a single morph does not imply that they originated in the same position at D-structure nor that they form a single lexical item.

In example (13), the pronouns are inflected for gender but the verbal agreement suffix is inflected only for person and number.[11] Moreover, in this series *se* is not marked for number or gender. Its marking for person is quite minimal, as the examples show. I analyze *se* here as simply [−1person], i.e., nonfirst person.

One easy way to account for the differing number of phi-features in the above examples is to say that phi-feature insertion is basically free—insert as many phi-features as necessary any place they are allowed. Each language will have a morphological restriction on the minimal number of phi-features that can occur in AGR and other restrictions should follow from this and UG. These issues are addressed in later chapters. If this tack is right, then variable numbers of phi-features in different PRONs is another argument for the independent storage of phi-features.

2.5. No noun-specific agreement. Assume for the moment that agreement is a purely syntactic phenomenon, namely, the spreading of features from the argument to the agreement node. This view would have to explain why patterns like (14) and (15) are never found in natural languages.

(14) a. *The man run*c*.

b. The boy run*s*.

c. *The dog ron*z*.

(15) a. *The football flew*k*.

b *The basketball flew*t*.

c. The soccerball fl*ew*.

Why can the feature [adult] not spread in (14a), producing agreement with the verb for this feature? Why can [oblong] not spread from *football* to the verb or [spherical] from *basketball* but not from the equally spherical *soccerball*? The answer requires us to acknowledge that either (1) agreement is not spreading or percolation of features; or (2) that agreement is spreading but that only certain features can spread; or (3) that agreement morphemes exist independently in the lexicon, fully composed of phi-features, and that agreement is checking the features of the

[11]In this model, "inflected for" means "bears independently inserted phi-features for."

prefab agreement morpheme against the features of the argument. By the last approach, as long as the argument has no phi-features that conflict with the agreement morpheme, the match is allowed. Since English agreement morphemes lack [adult], [spherical], and [oblong] features, the grammaticality facts in (14) and (15) can be predicted correctly. This approach, however, does not tell us why English agreement morphemes lack [adult], [spherical], and [oblong] features.[12] Moreover, even if this were just an arbitrary fact about English, with no further explanation necessary, this approach fails to predict the absence of the occasional agreement allomorph which singles out such a feature for a specific noun or at least an agreement allomorph used only for a specific noun. Why could there not be an allomorph of verbal agreement which would be used only with the word football in English, for example? After all, if the matter depends on individual lexical items, a certain amount of arbitrariness is to be expected. The idea of lexically entered agreement morphemes then fails to account for the absence crosslinguistically of allomorphs which are used with only a single noun.

One way to account for the absence of this type of rogue agreement affix is to pursue the idea that morphological processes, such as agreement, do not merely involve unconstrained feature spreading or matching, but rather that these processes are stated at a more general morphological level at which only lexical or syntactic categories can trigger exceptionless morphological rules.

This analysis would automatically eliminate the possibility of having an aberrant agreement morph here or there which appeared only with a single NP. Thus, there could be no agreement morpheme [3s^MAS^ADULT] agreeing exclusively with the word man. No feature could be used in agreement except as a general rule throughout the grammar.

Related to the generality of agreement and its implications for the nonexistence of agreement morphemes in the lexicon, is the issue of what features may trigger this general process crosslinguistically. It is well known, for example, that agreement features vary from language to language and that not all languages have the same phi-features. For example, some languages lack grammatical [gender] but distinguish [person]; other languages lack [number]; some languages lack both [gender] and [number]. Differences in particular semantic or grammatical categories across languages are usually handled in terms of the lexicon. Using that strategy then, if a language lacks [gender] as a grammatical category, it is because it lacks [gender] as a separate lexical entry. By this reasoning, crosslinguistic differences in the

[12]Crosslinguistically, agreement patterns based on such features is not unheard of; cf., for example, the papers in Craig (1986).

number of phi-features manifested by specific languages (e.g., the fact that one language has ablative Case while another does not) are reduced to lexical differences, a desirable result in the Chomskyan research program which views the lexicon as the locus of most variation across languages. Languages would differ in the number and type of their lexical entries, not in their syntactic representations or principles; even syntactic parametrization is lexically based in some versions of this model (Borer 1984). Given this result, crosslinguistic differences in phi-features count as an argument for the independent lexical entry of phi-features. Since morphological rules like agreement target only lexical categories, they cannot target subparts of lexical entries. There could be agreement in a language for the feature [spherical] only if this were a general process, indicating that [spherical] is a separate lexical entry in that language.

2.6–2.15 Phi-feature insertion

2.6. Insertion sites. I assume that phi-features are [+nominal] and [+functional] (cf. Grimshaw 1991 for the latter feature). These feature values could be argued to follow from UG, taking the form of underspecification-like complement rules, as in (16).

(16) phi-feature → [+nominal][+functional]

I will not attempt to argue for this proposal here, accepting it as an axiom. This leaves only two possible insertion sites for phi-features, given in (17).

(17) Phi-feature insertion sites

a. AGR^0

b. D^0

Phi-features in D^0 will surface as pronouns or simple clitics. Those in AGR^0 will surface as agreement affixes or special clitics.

The other possible combinations and effects of the interaction of phi-feature insertion with phi-feature spell-out are discussed in §§2.8–2.12. A theory of phi-features and phi-feature insertion must be able to account not only for the different behavior of overt phi-features but also for why some imaginable combinations are apparently never instantiated.

Following MT assumptions, I assume that languages are pretty much alike in their syntax, differing principally in their lexical features and spell-out

rules. If correct, this means that AGR^0 and D^0 are always filled by phi-features in all languages. Languages would only vary in whether or not these features are spelled out and, perhaps, the number of AGR positions they make available (cf. §3.11). For example, by this reasoning, English lacks object agreement affixes and clitics because it lacks spell-out rules for lower AGR. Romance languages, on the other hand, do have spell-out rules for all AGR positions, accounting for the fact that they, but not English, have object clitics. Other possibilities are discussed in chapter 3.

2.7. Feature stacking. The suggestion that multiple phi-features may be stacked under single nodes might seem strange initially, since it involves placing more than one lexical entry under a single syntactic node. This proposal, however, adds nothing to the generative power of the theory and is, in fact, implicit in a good deal of work on pronominals.[13]

The only restriction on stacking is that the features inserted do not conflict for inherent features. A later syntactic principle will require that these features be either REFERENTIALLY ADEQUATE or IDENTIFIABLE. I lump these two conditions together here by requiring that the output of phi-feature insertion be a well-formed INTERPRETIVE UNIT (IU), as defined in (18).

(18) INTERPRETIVE UNIT: For alpha, an X^m node or a chain, alpha is an interpretive unit if the lexical items inserted under alpha do not conflict for feature specification. The features in alpha must refer jointly to a single individual, either through referential adequacy or identification.

(19) REFERENTIAL ADEQUACY: Alpha is referentially adequate if alpha has at least the range of phi-features found on the maximally (overtly) specified AGR in the relevant language.

(20) REFERENTIAL IDENTIFICATION: For alpha, an interpretive unit, alpha is referentially identified iff alpha is referentially adequate, if alpha is bound, or if alpha is coindexed with the external theta-role.

(21) CONDITION ON THETA-ASSIGNMENT: Theta-roles are assigned only to interpretive units.

Consider the effects of (21) in sentences (22)–(25).

[13]Bonet (1991) argues convincingly for the phi-feature composition of clitic-positions, although she does not place phi-features in separate lexical entries, still listing clitics separately in the lexicon.

(22) It is raining.

Since *it* is not an interpretive unit, it cannot bear a theta-role and must be an expletive (*it* bears no phi-features—in spite of the existence of another *it* morph in the language which does bear phi-features; cf. (55)).

(23) *João*$_i$ *se*$_i$ *viu*
John saw himself.

The form *se* is referentially inadequate by itself, since it does not have as many phi-features as the maximal AGR in Portuguese (*se* is only [−1], whereas the maximal AGR bears features for number and person). It is identified in (23), however, because it is bound by João and therefore satisfies (21).

(24) *[$_{NP}$ *John Bill*] *ate cheese.*

Example (24) is ungrammatical because it violates the definition of interpretive unit in (18); *John* and *Bill* conflict for features (since "Johnness" is not "Billness"). In example (25), *he* is referentially adequate and thus may bear a theta-role.

(25) *He's okay.*

The notions of referential identification, referential adequacy, and stacking come into play in chapters 4 and 5 in the discussions of Romance *se* and French subject doubling. I turn now, however, to a more detailed consideration of the clitic-affix distinction and the notion of MORPHOLOGICAL SUBCATEGORIZATION.[14]

[14]An important result is achieved if it is assumed that a phi-feature may be inserted into an already occupied x^0 category at D-structure, namely that the unlikely position that such features originate in separate D-structure positions is avoided. While the latter is superficially plausible for morphologically impoverished languages such as English (as argued in Pollock 1989), it is much less attractive for languages such as Pirahã, which has 2^{16} possible verb forms (see Everett 1986b). To argue that all inflectional features originate in separate D-structure positions would contradict the observation that morphological complexity usually varies in inverse proportion to syntactic complexity so that morphologically complex languages often have extremely simple sentence syntax, the most common sentence type consisting of a single overt constituent, v. A language like Pirahã would have to have incredibly complex syntactic trees that play no other role in the grammar except to serve as a source for the morphological formation of the verb. This position is avoided by using the stacking hypothesis.

2.8. Morphological subcategorization. In §§2.2–2.5 I claim that the structures in (26) and (27) represent clitics and affixes, respectively.

(26) $[X^{0/m}$ AGR $[X^{0/m} \ldots]]$ AGR = clitic

(27) $[X^{0}$ AGR $\ldots]$ AGR = affix

How are these structures derived? What principle is responsible for the fact that both are possible in UG? If the suggestion that affixes are complements of X^0 and that clitics are adjuncts of X^0 or X^m is taken seriously, then one way to account for the different structures in (26) and (27) is to say that the latter results from subcategorization of AGR by X^0, while (26) is simply adjunction, unrelated to lexical properties of X^0.

If subcategorization is proposed here, however, it is clear that this would not be the same as the subcategorization of a maximal projection by the head of its phrase. I therefore use a term introduced originally by Lieber (1980) and call the former m(orphological)-subcategorization. M-subcategorization differs from syntactic subcategorization in that: (1) m-subcategorization does not (necessarily) involve theta-assignment; (2) it need not be satisfied at D-structure; and (3) it connects lexemes with lexical entries and categories, rather than heads with their maximal projections.

The notion of morphological subcategorization employed here differs somewhat from Lieber's, however. Lieber (1980) argues for the existence of morphemes, as traditionally defined in the lexicon (cf. §2.1). She distinguished between BOUND MORPHEMES (those which cannot stand alone) and FREE MORPHEMES (those which can stand alone, i.e., without being included in an X^0) by claiming that the former have m-subcategorization frames specifying what kind of host they take. In the present model, m-subcategorization is possible only for lexemes, either specifying lexeme-specific information within an individual lexeme or by mentioning a lexeme in a morphological requirement of the language in question. Moreover, it is understood that the class of lexemes consist exclusively of derivational lexical entries and stems. Inflectional morphology is the result of later spell-out rules which interpret syntactically produced stem plus functional category combinations, along the lines of Chomsky (1992) and Anderson (1992). Some inflectional information, e.g., phi-features, is found in the lexicon in the form of lexical entries. But these entries do not themselves subcategorize for anything. One reason for this is that they lack context-independent referentiality, which I take to be a precondition for subcategorization.

Therefore, while I agree with Lieber that bound inflectional morphemes result from morphological subcategorization properties, I differ

from her in requiring that stems m-subcategorize for inflectional affixes, rather than affixes for stems.

M-subcategorization is used here as a cover term for two different types of morphological selection. The first type is given by morphological rule, the second by lexeme-specific requirements. Both types select for lexical categories and spell-out rules. The latter type may also target specific lexical entries and stem-specific spell-out rules.

As a concrete example, consider verb agreement in Portuguese. I assume that the lexicon contains only idiosyncratic information. However, I also assume that this information will include language-specific WORD FORMATION RULES. So the lexicon of Portuguese will contain the structural requirement in (28).

(28) Portuguese agreement affixation

$[_V{}^0$ stem – AGR^0–T^0]

This condition is a form of morphological subcategorization and it means that the information in AGR^0 and T^0 follows the verb stem. Unlike syntactic subcategorization, however, m-subcategorization does not have to be satisfied until PF, the level at which word-formation must be complete.[15]

Suppletive or irregular morphology will result from lexeme-specific requirements which, by the elsewhere condition (Kiparsky 1973), will supersede the general morphological requirement in (28). Consider the suppletive past tense forms of the verb *ir* 'to go' in (29).

(29) *ir* 'to go'

Category: [+V, –N]
Theta properties: <theta> (theta indicates, as per Williams (1981) that *ir* has only an external or subject-assigned theta-role.)
Inflectional characteristics: categories of inflection (see morphology[16]), and spell-out rules
Morphological input: [stem + {indicative/past/*ir* class/1person/punctiliar/singular}] → *fui*
Phonological output: - (n) etc.→ *foi*, *foram*, *fomos*, *fosse*, etc. (i.e., the full paradigm of *ir*)

[15]Language-specific requirements will determine that AGR/T are expanded by {mood/tense/number/person/aspect/conjugation class information/etc.}.

[16]For example, $[_V{}^0$ stem – {mood/tense/class/person/number/aspect}].

Paradigm gaps (as found, for example, in Celtic; cf. §§3.15–3.18) result from m-subcategorization frames which target not only morphosyntactic nodes, e.g., AGR^0, but also specific individual phi-features which may appear on those nodes. This might be expressed along the lines of (30).

(30) [$_V{}^0$ stem + AGR/T]

If T = [+PAST], then AGR = [−2person]

It is also necessary to guarantee that the [person] and [number] subparts of entries like (30) are coindexed with the subject NP and not the object for nominative accusative languages, but with the object NP in ergative languages. This turns out to be an interesting problem. Since it is directly relevant to the theory I am attempting to develop here, let me turn now to a deeper consideration of this issue.

2.9. Innermost versus outermost agreement. In this section, I propose a model for deriving crosslinguistically common agreement patterns. First, however, it is important to consider alternative proposals in the literature in order to understand what issues linguists have considered important in this regard. I consider in turn the proposals of Anderson (1988) and Chomsky (1992).

One of the best known and most interesting proposals to guarantee exactly the patterns just mentioned is Anderson's (1988). Anderson assumes that agreement is the result of a process which copies features from grammatical function positions, e.g., subject and object, onto the verb or phrasal head. He says :

> For example, if a language has both subject and object agreement, this could be represented by two rules: first copy the relevant features from an object NP (if there is one), and then copy the relevant features from the subject NP. The result is that a transitive verb will be given a morphosyntactic representation like (31a) and an intransitive one like (31b). (1988:34; numbering mine)

(31) a. Transitive [tense, etc., F_i [F_j]]

b. Intransitive [tense, etc., F_i]

The beauty of Anderson's proposal is that it can be used to predict the existence of some ergative/absolutive versus nominative/accusative

case-marking patterns. Anderson observes that a "rule operating on the representations in [(31)] might refer to the values of the 'outermost' features in a representation or the 'innermost' feature values present" (1988:34). The former would be a nominative-accusative pattern, while the latter would be an ergative operation.

Anderson never states what principle would guarantee copying of object features before subject features, although clearly his account crucially relies on this ordering. Presumably one could derive this ordering by showing that features must be copied onto the phrasal head from the bottom up in the phrase. For Anderson's theory to work, however, even with this emendation, it would have to be assumed that this copying always takes place, even when it has no phonological reflex. The reason is that if it does not, his principle cannot explain why certain morphological processes, e.g., case-marking, can occur on transitive objects and intransitive subjects, or transitive and intransitive subjects, in languages without overt agreement.

For example, consider the not uncommon situation in which case marking occurs without person agreement, as in Japanese, example (32) from Croft (1991:222).

(32) *dare ga eigo ga suki deru ka*
who NOM movie NOM fond^of is INTER
Who likes movies?

The *ga* case marks each NP in (32) (or at least is a reflex of that marking) in spite of the fact that Japanese lacks person agreement on the verb. Japanese illustrates a nominative-accusative system. The same phenomenon is found also in Tagalog, which according to many researchers is an ergative-absolutive case-marking system but also without person agreement on the verb as in (33).

(33) *bumasa ng libro ang propesor*
read goal book ERG professor
The professor read the book.

To apply Anderson's analysis to languages with case marking but no agreement, it must either be assumed that features are always copied onto the verb, whether overt or covert, or two explanations must be allowed for case marking, one like Anderson's for languages with overt agreement and another one for languages without agreement. But an account of case marking not based on overt agreement would surely subsume an approach like Anderson's, rendering the latter superfluous, so I will ignore that way

around the problem and assume for the sake of discussion that Anderson's proposal will handle languages with or without overt agreement.

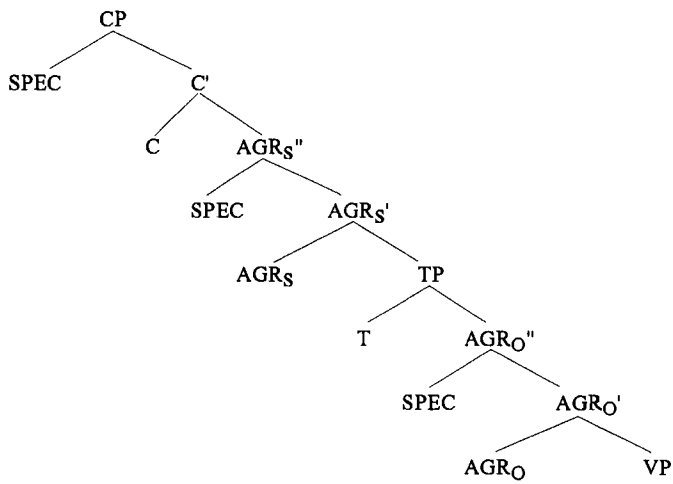
But if features are always copied onto the verb and if this is indeed the source of agreement and case generalizations, as Anderson suggests, then serious problems in this hypothesis emerge. Consider first the effect of his view on the need for an AGR node, which is crucial from the minimalist perspective to guarantee crosslinguistic uniformity of Case assignment and agreement. If indeed agreement is merely the copying of features from a grammatical function position to a phrasal head, then there is little need for an AGR node. Iatridou (1990), in a slightly different context, draws the same conclusion. But an AGR node is important for understanding clitic and affix behavior, and feature-copying without an AGR node would leave no explanation for many of these phenomena. Ignoring the implications for AGR for the present, assume that under Anderson's proposal AGR is retained, and assume that features are copied onto the head via AGR. Now, however, even with this allowance, Anderson's account misses a very important fact, i.e., special pronominal clitics and agreement affixes never occur together for a single grammatical function in any language. My account predicts this complementary distribution between clitics and affixes straightforwardly by allowing for only one source, AGR, as the source for phi-features. This single source is realized either as a clitic or as an affix, depending on morphological subcategorization. How could Anderson's account get this same generalization?[17] Suppose that Anderson's account were modified such that affixes result from copying features via AGR onto the head, whereas clitics result from copying features onto AGR and having them remain there, not proceeding onto the head. This would indeed derive clitic-affix complementary distribution, but it would fail to provide any content to the notions of innermost versus outermost in a language that, for example, had object clitics and subject agreement. The object clitics would be outside the subject agreement in such a language, resulting in the claim that object is outermost. This is clearly undesirable in Anderson's framework, because it corresponds to a pattern common in nominative-accusative languages. Romance languages, as shown in chapter 3, illustrate this pattern clearly, yet, under Anderson's assumptions, would force these languages to behave ergatively instead. Anderson's account might be modified once again to account for the complementarity between clitics and affixes via spell-out rules. So one might claim that agreement features are always copied onto the verb but that they may only be spelled out once, either on

[17]Robert's (1990) work on Valdotain, in which he argues that this language has dual AGR projections for certain grammatical functions would constitute a counterexample, perhaps, if it holds up to closer scrutiny.

the head or on the relevant AGR^0. For a spell-out rule to be so constrained, however, it would have to be nonlocal; i.e., it would have to be able to look at AGR and the verb at the same time. But phonological rules are always local so that this property would be an unwelcome addition to phonological theory. Moreover, the motivation for such a constraint on spell-out rules in order to avoid redundancy is not a likely functional or formal explanation since languages in general do not always avoid redundancy. I conclude, therefore, that an account like Anderson's will not work as an explanation for the crosslinguistic relationships between clitics, agreement, and case marking.

2.10. Upper versus lower AGR. Chomsky (1992:13ff) makes an interesting proposal designed to account for distinctions between ergative-absolutive versus nominative-accusative agreement systems. His claim rests on the assumption that the higher and lower AGR positions in (34) are inherently different, such that for an intransitive clause, languages would differ as to whether they generate AGR_S (the upper AGR) or AGR_O (the lower AGR).

(34)



Chomsky's claim is that:

> Any appropriate version of the Case filter will require two occurrences of AGR if two NPs in VP require structural Case; conditions on Move-alpha require the arrangement given in (34)

> [numbering mine] if structural Case is construed as outlined. Suppose that VP contains only one NP. Then one of the two AGR elements will be "active" (the other being inert or perhaps missing). Which one? Two options are possible: AGR_S or AGR_O. If the choice is AGR_S, then the single NP will have the properties of the subject of a transitive clause; if the choice is AGR_O, it will have the properties of the object of a transitive clause (Nominative-Accusative and Absolutive-Ergative languages, respectively). These are the only two possibilities, mixtures apart. The distinction between the two language types reduces to a trivial question of morphology, as we expect. (1992:13)

Both Anderson and Chomsky are right it seems when they claim that the purely morphological differences between the two types of languages should not be made too difficult by one's theory, since both systems behave in many respects as though the external argument were in fact the same (the ergative and nominative, respectively), i.e., the differences are usually only Case-based, and since one system frequently arises out of the other diachronically. (Cf. Payne 1983 for one hypothesis on the development of ergative-absolutive out of nominative-accusative and Franchetto 1986 for a possible scenario of nominative-accusative development out of ergative-absolutive in some Carib languages.)

I am not persuaded, however, that Chomsky's approach is as simple as it appears at first glance. This is because it relies on an obscure distinction between two types of AGR, whereas the model I am developing here cannot make any such typological distinction between AGR nodes, any more than it could make a distinction between types of NP nodes; thus a particular NP is not a subject or an object, except as these derive from its position. This model is able to base distinctions in syntactic behavior only on positional-configurational differences. In an intransitive clause, it is not clear by Chomsky's account how one could draw any meaningful configurational distinction between AGR_S and AGR_O. There is only one possible structural position for either, and I would be reduced, as I think Chomsky is, to distinguishing the two AGRs (and hence the systems they are supposed to be distinguishing) by mere labels, in effect restating rather than solving the problem. For this reason, I want to pursue an alternative strategy here which takes AGR to be a node without any typing of different kinds of AGRs. I believe that my approach maintains the spirit of Chomsky's minimalist program, but that it is preferable because it is more explicit and makes no assumptions based on node-type.

2.11. A clitic-affix integration approach. In this section, I propose an alternative account. I claim that a morphologically subcategorized AGR position may or may not be linked to a theta-role. If it is, an ergative agreement system is derived. If it is not, a nominative agreement system is derived. The two options are formalized in (35).

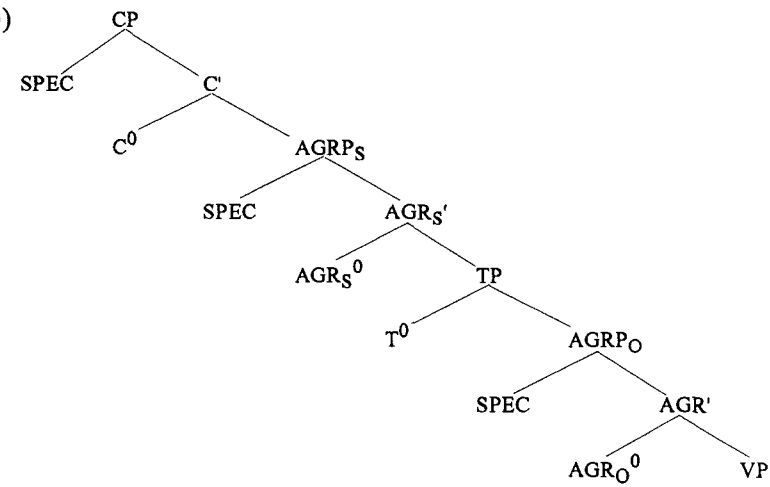
(35) a. Ergative $[_V{}^0$ stem + $AGR_i]$
$<\theta_j, \theta_i>$ [18]

b. Nominative $[_V{}^0$ stem + AGR]
$<\theta_j, \theta_i>$

In (35a), a transitive verb can only agree with the nonexternal argument. Note, however, that this does not mean that the agreed-with argument will be the subject. It will still be the direct object. An intransitive verb will have a noncoindexed AGR. A noncoindexed AGR will always be coindexed in the syntax with the subject. This fact is the basis for nominative agreement systems as well. The only question is how to guarantee this, i.e., that a noncoindexed AGR will reference the subject.

I begin by assuming that lexical insertion takes place into structures like (36), taken from Chomsky 1992:10.

(36)



[18] < . . . > represents the theta-grid of the lexical entry. A lexical grid (Stowell 1981, Chomsky 1981) is the array of thematic or semantic roles assigned by a particular lexical item.

The question now is how to be assured that the verbal agreement suffix will be coindexed with the subject and agree with it in phi-features. One way is to accept the traditional notion of morpheme and to say that languages like English and Portuguese have only subject agreement because they have subject agreement morphemes but lack object agreement morphemes. In the model here, however, such an analysis is impossible since agreement morphemes per se are not stored in the lexicon, so it is impossible to say that English or Portuguese lacks object agreement suffixes—no language has any kind of agreement affix in its lexicon! The lexicon contains only individual entries for phi-features which are unspecified as to whether they are in AGR^0 or D^0 or which AGR^0 node they appear in. But even aside from this theory-internal reason to reject an analysis of agreement based on the presence and absence of specific inflectional morphemes in the lexicon, there is a more general, theory-neutral reason to reject this approach, namely, it fails completely to predict the typological universal in (37).

(37) Object agreement → Subject agreement

That is, for any language L, if L has object agreement, L will also have subject agreement (with transitive and intransitive subjects in nominative languages and intransitive subject in ergative languages).

For English and Portuguese, ignoring momentarily this universal, I could say that verbs m-subcategorize only for subject agreement. But m-subcategorization, as I have defined it here, cannot pick specific AGRs. It can only say how many AGRs can be placed on the verb.[19] What mechanism might guarantee that in Portuguese or English only the upper AGR, not a lower AGR, will appear on the verb? Even if this could somehow be made to follow from m-subcategorization, it is not a desirable strategy since it would render the universal in (37) merely a coincidence, providing no insight whatsoever as to its nature.

Something else is needed, therefore, to account for (37) other than m-subcategorization. Consider (37) more carefully in an attempt to discover what this something else might be. The principle difference between subjects and objects in a configurational theory such as MT, which accords no theoretical status to subjects, objects, or other grammatical relations, is that subject NPs are configurationally more distant from the verb both at D-structure and S-structure, although, following Chomsky

[19]The order of agreement morphemes on the verb is likely given by phonological rules or morphological conditions. See Bonet 1991 for some proposals.

1992, I attempt to avoid explicit reference to such levels. I will reformulate (37), then, in terms of configurational distance as in (38).

(38) CONFIGURATIONAL DISTANCE AGREEMENT PRINCIPLE (CDAP): Fill AGR positions on V^0 in descending order of configurational distance from the verb.[20]

That is, m-subcategorization will indicate only how many AGR positions (i.e., slots for agreement nodes) the verb has. The CDAP tells us that the subject AGR has priority. The motivation for (38) seems to be functional. The functional role of agreement in natural language is to mark the verb so as to recover information about its relation to one or more nominals in its clause. Which nominals are most in need of being marked on the verb? It seems reasonable that these would be the nominals least easily associated with the verb at PHONOLOGICAL FORM (PF; how this is defined is not so crucial here as the assumption that PF follows syntax). These nominals are those which are configurationally more distant from the verb at PF. In descending order of configurational distance are the grammatical functions in (39).

(39) Subjects > Indirect objects/Direct objects

I list only subjects and objects since they are apparently the only grammatical functions which trigger agreement (Dryer 1986:808). This fact can be expressed if the phrase structure in (36) is adopted and allowed to expand in some languages by a third AGRP, associated with either the direct or indirect object, depending on the language. This last phrase, depending on the language, is important since, as pointed out by Dryer (1986) and others, languages with object agreement vary as to whether this agreement is with the direct object or the indirect object in ditransitive clauses. (Cf. also the discussion of Spanish possessor and ethical datives in §§3.10–3.11 below).

It is important to underscore the fact that I am talking here about overt agreement. I am not making any claims about abstract agreement features which are not spelled out by phonological rules. This is primarily because I understand the CDAP to be a parsing aid, at least at the level of its introduction into UG, presumably by functional pressures of the type discussed in Hawkins 1992. While parsing does indeed have access to

[20]For now, I assume that there are only two AGR positions, but cf. below for further discussion.

covert syntactic forms (cf. Gibson 1991), something which by its very nature is an aid to parsing would have to be available at PF.

Functional pressure presumably favors grammaticalization of certain principles, at least at the level of phylogeny or trait evolution. The immediate questions with regard to (38) are: (1) how is it to be formalized, and (2) what accounts for the variation among languages as to whether the direct or indirect object triggers agreement?

Configurational arrays of GFs are at least partially the result of the mapping of the thematic hierarchy onto phrase structure. According to Speas (1990:72ff), thematic roles with wider scope in the thematic hierarchy are assigned to configurationally higher syntactic positions within their clause. Of course, it is well-known that linguists disagree considerably on the nature of the thematic hierarchy, although this disagreement is not generally if there is a thematic hierarchy but rather which thematic roles take scope over others. One pair of thematic roles argued about in the literature is the pair GOAL and THEME. Some researchers (e.g., Fillmore 1968) place the object (i.e., THEME) above the GOAL role. Others (e.g., Speas 1990:16) place the GOAL above the THEME. These are the prototypical roles assigned to the direct object and indirect object positions, crosslinguistically. It may be that the controversy in the literature about the relative scope of these roles in the thematic hierarchy results from the fact that their position in the hierarchy may in fact vary from language to language, some languages putting THEME above GOAL and others GOAL above THEME. If this is correct, then it may be possible to explain the agreement differences for languages in which agreement is with one or the other but not both by saying that languages with the grammatical role of primary object (Dryer 1986) place GOAL above THEME in the hierarchy. In these languages, the verb agrees with the indirect object in ditransitive clauses. Consider examples (40)–(41) from Pacaas Novos (data from Everett and Kern 1996).

(40) *to' na*$_i$*-on*$_j$ *Orowao'*$_j$
hit 3s-3s^MAS NAME
He hit Orowao'.

(41) *mi' ra*$_j$*-m*$_i$ *con*$_k$ *hwam*$_k$ *Hatem*$_i$
give 2s-3s^FEM 3s^MAS^PREP fish^MAS FEM^NAME
Give Hatem a fish.

In these examples, note that the Pacaas Novos verb always agrees with the subject and then agrees with the indirect object if there is one and otherwise with the direct object. The data are especially relevant for this

discussion of morphological subcategorization since the direct object in a ditransitive clause is preceded by a prepositional agreement clitic *con*. This follows directly from the CDAP if Pacaas Novos places GOAL above THEME on the thematic hierarchy and thus maps goals to a higher position.[21] According to Speas' interpretation of Baker's (1988) UTAH (uniformity of thematic assignment hypothesis) and the CDAP, a language would not be able to agree with a GOAL unless it could also agree with a THEME (or vice versa, depending on the instantiation of the hierarchy in the language in question) and it could not agree with the THEME unless it could also agree with the AGENT. What is meant by the notion of "be able to agree with x?" One way to express this concept is to say that the verb stem would be able to include as its complement the AGR node which governs the position that the theta-role would appear in at D-structure if this theta-role were present. Of course, referring to such hypothetical positions is unclear and problematic. Chomsky and Lasnik note a similar problem with regard to the distinction between A and A' positions, i.e., argumental versus nonargumental positions (cf. Chomsky 1981). They claim that this latter distinction "presupposes an equivalence relation among phrase markers: an A-position is one that is marked in the equivalent position of some member of the equivalence class. This is not an entirely straightforward notion" (1991:37).

To avoid this lack of clarity in the formalization of the CDAP, a locally determinable distinction between AGR positions is needed; by locally determinable I mean unambiguously determinable in a given clause. The key ingredient it seems to me is to have some way of keeping track of whether or not a given AGR position is c-commanded by other positions of the same type. Chomsky (1980) recognized a need for such a device in relation to binding theory and proposed the 'anaphoric index' to keep track of c-commanding nominals of the relevant type. Although the anaphoric index has subsequently been abandoned by binding theorists,

[21]Languages in which THEME is higher than GOAL will map to Larson (1988)-like structures in which the direct object c-commands the indirect object position at D-structure. Languages in which GOAL outranks THEME will map to structures in which the indirect object is higher, contrary to Larson's proposal. For languages in which verbs agree with both indirect and direct object (e.g., Georgian), the issue is moot for my present purposes. In those cases there are three AGRs according to my model, all of which are m-subcategorized. There is a lot of empirical work to be done in testing these proposals, though, so much of what I say here with regard to thematic hierarchy prominence is justified exclusively on the basis of disagreement in the literature and crosslinguistic differences in object agreement patterns. Independent evidence for the thematic hierarchy in otherwise little-studied languages is difficult to obtain.

I have argued elsewhere (Everett 1989b) that the anaphoric index is nonetheless necessary for other purposes, e.g., inalienable possession. If the anaphoric index is used here, however, it will need to be modified such that only elements of the same type of category may contribute to each other's anaphoric indexes. It must also be assumed that anaphoric indices, like referential indices, are subject to relativized minimality (cf. Rizzi 1990). As an initial approximation of a formal statement of the CDAP using the anaphoric index, I propose the one in (42).

(42) CDAP: An anaphoric index must be recoverable.

Anaphoric index is defined in (43).

(43) The anaphoric index of alpha is the set of the referential indexes of all alpha-type nodes c-commanding alpha, where alpha-type means that if alpha is lexical, only lexical nodes may assign an index to the anaphoric index of alpha, and if alpha is functional, only functional nodes which agree in value for the feature [nominal] may assign an index to the anaphoric index of alpha. These alpha-type nodes are the assigners of the anaphoric index.

(44) An anaphoric index {} is recoverable iff {} occurs on a syntactic node which is c-commanded by the indexes of its assigners or if the anaphoric index and its assigner(s) are included in the same X^0.

The grammaticality contrasts in (45) are predicted by (42)–(44).

(45) a. $[AGR_1]_i\ [AGR_2]_{j(i)}$ (where AGR_1 c-commands AGR_2), where both subject and object AGRs surface as clitics, as in Pirahã.

b. $[X^0 \ldots AGR_i\ AGR_{j(i)}]$, where subject and object AGRs surface as agreement affixes, as in Georgian.

c. $[X^0 \ldots AGR_i]_i\ AGR_{j(i)}$ (where X^0_i c-commands $AGR_{j(i)}$), where object AGR will surface only as a clitic, as in Yagua, and subject AGR will appear as an affix.

d. $*[AGR_1]_i\ [X^0 \ldots [AGR_2]_{j(i)}]$

e. $*[X^0\ [AGR_1]_i\ [X^0 \ldots [AGR_2]_{j(i)}]]$

Examples (45a) and (45b) have already been discussed. What accounts for the contrast between (45c) on the one hand and (45d) and (45e) on the other? An anaphoric index is not intrinsic to a node. It is contextually defined. A referential index, on the other hand, is an intrinsic feature of the node on which it appears. According to most analyses of affixation (cf. especially Emonds 1986, and DiSciullo and Williams 1987), the features of the affix percolate up to the first node which dominates both the affix and the stem. If this node is the head of a phrase, then the phrase also bears that index. Therefore, (45c) is grammatical because the referential index of a higher AGR (AGR_1) percolates to the X^0 which contains it. As long as X^0 c-commands AGR_2 the anaphoric index of AGR_2 is recoverable. In (45d) and (45e), however, the anaphoric index of AGR_2 is included within a word which does not include the assigner of AGR_2's anaphoric index. Anaphoric indexes, as nonintrinsic features, will not percolate and thus will remain within X^0. Moreover, the anaphoric index of AGR_2 will not be found on the trace of AGR_2 since traces bear only referential indexes which are shown outside of {}'s, and are determined by the intrinsic reference of the chain, formed by a sequence which has no more than one theta-role and includes a Case, e.g., a trace and its antecedents or a single NP. By the lexical integrity hypothesis (cf. Spencer (1991:42ff), subparts of words are not available to the syntax. Thus, although AGR_2 has an anaphoric index in (45d) and (45e), there is no way to establish a relation between this index and its assigners, violating (42) and ruling the structure ungrammatical.

The subject AGR, the highest AGR, never bears an anaphoric index, so (42) will not apply to it. A lower AGR, however, will bear an anaphoric index, assigned by any higher AGR. Therefore, it cannot be included with the verb unless upper AGR is also included in the verb. What of AGRs in embedded clauses? I do not want the AGRs of one clause to interact with the AGRs of another clause, so I will assume that a COMPLETE FUNCTIONAL COMPLEX (CFC; Chomsky 1986a:169ff) is opaque to anaphoric indexation. But if there is another AGR within the same clause, (42) will apply to it.

Let me repeat the intuitive content of this proposal: the CDAP is a parsing strategy grammaticalized in UG which requires local determination of whether for a given AGR there are higher AGRs in its clause. This latter notion requires the anaphoric index in order to keep track of other AGRs.

But what of ergative languages? For those languages, I propose that the m-subcategorized agreement is coindexed with a theta-role, as in (35) above. I must allow this to override the CDAP. This would mean that, contrary to Chomsky and Anderson, ergative languages are more marked than nominative-accusative languages, in the sense that they must override the most economical type of agreement pattern, one based

solely on the CDAP (which applies even in ergative languages to some degree) with one based on theta-coindexation. For an ergative language, then, we must interpret the CDAP as in (46).

(46) CDAP (revised due to ergative languages): an anaphoric index must be recoverable unless AGR is theta-coindexed by m-subcategorization.

This raises the issue of how certain grammatical operations, e.g., antipassive, are performed in ergative languages. I will follow Williams (1981) and assume that part of what happens in a grammatical function- changing operation is that the thematic grid of the relevant verb is altered. With regard to my proposal on agreement in ergative languages, I claim that the coindexation in (35) will be reversed so that the verb will now agree with the agent and fail to agree with the object. This is not the whole story, however. The reader is referred to Baker (1988) for further discussion. The incorporation analysis he proposes for the antipassive is not incompatible with the notion of indexing just introduced, and in fact it may depend on it.[22]

Another question to be answered is what happens if a language has two agreement nodes. The CDAP will guarantee the outcome in a nominative-accusative language. But what of an ergative language? Could there be a language like (35), except where the external theta-role is coindexed with the m-subcategorized AGR instead of the internal theta-role? In fact, general principles of grammar will insure that AGR can be coindexed with the external theta role only if AGR is optional, as in (47).

(47) $[_{V^0}$ stem + $([_{AGR} \ldots]_i)]$
$<q_i, q_j>$

The reason for this is that clauses must always have subjects (the EXTENDED PROJECTION PRINCIPLE) yet some verbs, such as weather verbs, lack theta-roles. An AGR would therefore not be able to be coindexed with such a verb. If I built this principle into the morphology of a given language, I would have to list weather verbs as exceptions in language after language. More serious yet are verbs like psych-verbs (Belletti and Rizzi 1988) which have no external theta-roles at all, such that subject agreement must be guaranteeable for such a verb, even though it has multiple theta-roles and none would be linked to AGR via theta-coindexation. Therefore, the only way that the m-subcategorized AGR could be coindexed with the external

[22]The relationship between m-subcategorization and incorporation is briefly touched on again in chapter 4.

theta-role as in (47) would be if AGR were optional, which might account for the numerous languages which, although otherwise nominative-accusative, lack a passive structure. Object-to-subject movement would be blocked in such languages due to the coindexation of a single AGR with the external theta-role. Alternatively, such a language could have a passive, but the passive would lack subject agreement, since no AGR would be generated. I have not investigated these implications in any detail yet, however.

An interesting prediction of this model is that a nominative-accusative language could have subject agreement and object clitics, and an ergative language could have subject clitics and object agreement, but the reverse Cases would never be possible.[23]

In the next chapter, I consider the CDAP and its implications in more detail. It turns out that the CDAP offers important insights into the phenomenon of clitic doubling. For now, I can summarize the effect of the CDAP on agreement by assuming that the verb in English m-subcategorizes for a single AGR and that the CDAP guarantees that this will be the subject AGR. No notions like AGR_S versus AGR_O or innermost versus outermost are needed.

2.12. Clitics as adjuncts. This section discusses how an AGR can appear as a complement to a verb stem. A clitic is an AGR position which is not m-subcategorized for and thus can only show up on X^0 via adjunction. In general, functional categories are phonologically weak and must either cliticize to a lexical category or another functional category. This may take place in the syntax or the phonology. The former option produces what Zwicky (1977) calls SPECIAL CLITICS, whereas the latter option produces SIMPLE CLITICS. The latter will not concern us here except as I formalize in (48b) to show the contrast with (48a). The parentheses in (48b) indicate phonological boundary.

(48) a. Special clitic formation
$[_{AGR}]\ [X^m] \rightarrow [X^m\ [_{AGR}]\ [X^m]]$

b. Simple clitic formation
$([_{AGR}])\ ([X^m]) \rightarrow ([_{AGR}]\ [X^m])$

[23]This is a possible analysis for Pirahã (cf. §§3.19–3.22) if I adopt an analysis suggested by Keren Everett (p.c.) in which intransitive subject and direct object agreement is m-subcategorized by the verb and obligatory in some dialects (contrary to my claim in §§3.19–3.22 that it is always optional), while transitive subject agreement is optional and mobile, i.e., may appear in second position or attached as a proclitic to the verb.

That is, in (48a) a clitic has adjoined syntactically to a host, whereas in (48b) it has adjoined only phonologically.

These considerations lead to another language universal stated in (49) which, so far as I have been able to determine, is valid and predicted in no other model. Again, clitic refers to special clitic in Zwicky's sense.

(49) Subject clitic → Object clitic

The statement in (49) means that if the upper AGR in a language does not occur as a complement to the verb (and hence will show up as a clitic), then neither will that language allow lower AGR to appear as a complement, meaning that it too will appear as a clitic, modulo the ergative versus nominative differences just discussed. One immediate application of this characterization of clitics and affixes is the fact that it actually derives the various distinctions between so-called clitics versus affixes noted by Zwicky and Pullum (1983).

2.13. The Zwicky and Pullum diagnostics. In this section I claim that PRONs are epiphenomenal and that phi-features are stored independently in the lexicon. Phi-features are inserted into syntactic positions, and spell-out rules of the PF component will then interpret them as pronouns, clitics, or affixes depending on which of the configurations in (7)–(9) above they are found in. Clitics are adjuncts and affixes are complements of X^0. This particular characterization of clitics and affixes has the desirable result of deriving the well-known set of diagnostics proposed by Zwicky and Pullum (1983) for distinguishing clitics and affixes. Their diagnostics are as follows.

1. Clitics can exhibit a low degree of selection with respect to their hosts, while affixes exhibit a high degree of selection with respect to their stems.
2. Arbitrary gaps in the set of combinations are more characteristic of affixed words than of clitic groups.
3. Morphophonological idiosyncrasies are more characteristic of affixed words than of clitic groups.
4. Semantic idiosyncrasies are more characteristic of affixed words than of clitic groups.
5. Syntactic rules can affect affixed words, but cannot affect clitic groups.
6. Clitics can attach to material already containing clitics, but affixes cannot.

Each one of these diagnostics is exactly what is predicted if affixes are word-internal complements and clitics are word adjuncts. Complements are subcategorized for, and hence are lexical requirements, leading us to expect that they, i.e., affixes, will have closer attachment to their host (1), exhibit lexically idiosyncratic gaps (2), be included within the root/stem by spell-out rules (3), enter more closely into the semantics of the element which subcategorizes for them (4), be included in an X^0 node (5), and always precede clitics (6).[24]

In the next section, I consider the principles which govern the various syntactic configurations in which PRONs may occur, looking especially at the clitic-affix distinction. These principles have to do with visibility and argumenthood.

2.14. Visibility. The definition of visibility in (50) is taken from two of my earlier publications (Everett 1985; 1989a).

(50) Visibility

a. position-visibility: alpha is position-visible iff for some beta ($=X^{max}$), beta is in a Case-marked chain (Chomsky 1981) or in a proper predication relation (Rothstein in 1983, 1985) and beta equals alpha or beta is a projection of alpha.

b. morphological visibility: alpha is morphologically visible iff for some gamma ($=X^0$), gamma is position-visible and gamma includes alpha or gamma covers alpha.

Put more simply, (50) says that a word must get Case if it is not a predicate and that it must be predicated of something if it is. A subword unit may be visible if it is attached to a word which has Case, if it is a nominal, or if it is attached to a verb predicated of some nominal. Languages vary as to how they understand the notion part of a word. For some, simple adjunction is enough. For others, an item is only part of a word if it is dominated by all of the word's boundaries.

The concept of visibility in (50), first proposed by Everett (1985, 1986b) and further developed by Baker (1985, 1988) and Rizzi and Roberts (1989), differs significantly from the notion of visibility discussed by Chomsky

[24]The idea that affixes are complements does not preclude feature-percolation, in spite of the fact that proposals on this phenomenon crucially take the affix to be the head of the word (Lieber 1980; DiSciullo and Williams 1987). In fact, my hypothesis that the affix is the complement of the stem is not incompatible with the proposal that the affix is the head of the word.

(1981). Chomsky's proposal on visibility was an attempt to derive the Case filter from theta-theory by claiming that all theta-roles must be visible at LF and that a theta-role is visible if and only if it has Case. As defined above, however, visibility requires every node to be visible at LF, either through Case or predication. This in effect redefines visibility as a well-formedness condition on internodal relationships. Under this definition, gamma features (Lasnik and Saito 1984; Epstein 1991) might also fall under visibility theory, such that a trace is not visible if it has no gamma feature.

(51) IDENTIFICATION: The reference of N, a nominal, must be adequate and determinable. The reference of N is adequate iff N is specified for at least as many phi-features as AGR or N is locally governed by and coindexed with N^2, where the reference of N^2 is adequate. The reference of N is determinable if it is adequate and phonologically recoverable (i.e., hearable).[25]

Identification as defined in (51) is crucial to the theory of reflexives, as argued below (see also Reuland and Reinhart 1990). As used here, identification is an expanded version of the principle of identification familiar from PRO-theory (cf. Rizzi 1986b). I have more to say about identification and visibility in following chapters. First, however, consider the relationship between phi-features and argumenthood.

2.15. How many phi-features are inserted? Crosslinguistically, the set of phi-features which compose pronominals is often a subset of the set of phi-features which compose pronouns. In all of the examples above, for example, the clitic or affix contains as many or fewer phi-features as the corresponding pronoun, never more. This relationship can be derived via theta-theory and the separate storage of phi-features, by the following reasoning.

First, recall that there is a relationship between referentiality and theta-role assignment. In the default Case, theta-roles are assigned only to expressions capable of independent reference. Thus, Chomsky's (1981) R(eferential)-expressions are prototypically arguments, whereas nonreferential expressions, e.g., *there* and *it* (as in 'It rains there') in English are prototypically expletives. Since theta-roles are assigned only to referential expressions, I derive the default insertion principle in (52).

[25]Identification cannot be satisfied by altering phi-feature values in the course of a derivation, since this would violate the projection principle.

(52) Theta-positions are maximally specified for referentiality.[26]

This principle requires that all features (syntactically, semantically, and pragmatically) compatible with a node be inserted in that node. For any theta-position, therefore, a language will require that all relevant phi-features of the language in question be inserted into that position, or that it have some other way of specifying the referentiality of the position, as with Romance *se*, cf. chapter 5. Consider how this derives the expletive or argumental status of the words in (53)–(55).

(53) *there* [–def, +loc, Øgender, Ønumber, Øperson] (expletive)

(54) *it* [Øgender, Ønumber, Øperson] (expletive)

(55) *it* [neuter gender, sg. number, 3person] (argument)[27]

These word forms are used to spell out the following feature combinations: [3person, neuter gender, sg.] and [3person]. Since (54) lacks specifications for gender and number, it cannot be an argument. But because (55) has these specifications, it must be an argument. So, cf. 'It is raining' versus 'It is a boy'. The spell-out rules of English do not distinguish between the two feature combinations noted. Note further examples of this in following sections.

2.16. Criteria for argumenthood. Pronouns are almost always arguments if they have positive specifications for phi-features (although I argue in §3.17 that Welsh is an exception to this tendency). It is relevant to ask if there are languages in which clitics and affixes may serve as arguments. According to Jelinek (1984) and Everett (1986), there are indeed such languages. Jelinek labels such languages "pronominal argument languages." In the present model, languages in which clitics or affixes serve as arguments (i.e., theta-role bearers) must allow theta-role assignment to

[26]Where specified means coindexed with another node, or maximum number of phi-features is inserted.

[27]That these two *its* are homophonous, in spite of the fact that they have different values for the relevant phi-features, may be explained if we assume that English has a single spell-out rule for nonlocative, nonmasculine/nonfeminine third-person. A separate question one might ask is how English expletives are identified. The answer is that they need not be identified since they bear no theta-role and are independently required by the extended projection principle (EPP). Thus, EPP may override identification.

AGR. I propose here that some languages allow theta-assignment within the EXTENDED PROJECTION of V, whereas others only allow theta-assignment within the PERFECT PROJECTION, using terms introduced by Grimshaw (1991).[28] If this is correct, then, again, various questions come to mind.

These issues are considered in the context of specific empirical problems later in the study. They are raised here as desiderata for a clitic theory—desiderata and issues which have rarely, if ever, been considered previously in the literature.

[28]Extended projection means the v plus all the functional categories which dominate it and which are not separated from it by a nonfunctional category which also dominates it; perfect projection includes only the projections of v as per standard x-bar theory.

[blank]

3
Clitic Doubling

In this chapter[29] I provide an analysis of the crosslinguistic manifestations of the phenomenon known as CLITIC DOUBLING, based on the model outlined in the previous chapter. The definition of clitic doubling assumed here is given in (56).

(56) Clitic doubling: The co-occurrence of a tautophrasal, coreferent NP-AGR^0 pair which refers to a single theta-role and where AGR^0 is adjoined to its host, i.e., not m-subcategorized by it.

(57) a. [$_{XP}$ [X^m [X^m . . .] AGR^0_i] NP$_i$]

b. *Juan* [$_{VP}$ [$_V$ *lo*$_i$ [$_V$ *vió*]] *a Daniel*$_i$] where (*lo* corresponds to AGR^0 in (57a)

Note the example in (57), where X^m is the host, NP is the double or doubled NP, and AGR^0 is the clitic.

Interestingly, this definition of clitic doubling is very much like the formal definition of agreement in this model. That definition is given in (58) and formalized in (59).

[29]This chapter is dedicated to the two people who have taught me most about clitics, Alfredo Hurtado and Osvaldo Jaeggli.

(58) AGREEMENT: The co-occurrence of a tautophrasal, coreferent NP-AGR^0 pair which refers to a single theta-role and where AGR^0 is included within its host, i.e., m-subcategorized by it.

(59) $[_{XP}\ [_{X^0}\ AGR^0_i]\ NP_i]$

This is, I think, quite an important and felicitous result. This definition provides us with an interesting characterization of the relationship between agreement and clitic doubling, a relationship which most researchers on clitic doubling have vaguely perceived but which no one has until now successfully formalized. The definitions in (56) and (58) have numerous consequences for the analyses of clitic doubling and agreement which make up the remainder of this chapter.

Not all languages with clitics allow clitic doubling. Moreover, among languages which do allow clitic doubling, there is considerable variation as to the kinds of restrictions imposed on the double. For example, standard French has clitics but prohibits clitic doubling. Standard Spanish allows doubling of indirect objects, River Plate Spanish allows doubling of indirect objects and animate direct objects, Porteño Spanish allows doubling of any object, and all dialects of Spanish require doubling of pronouns. Pirahã allows doubling of any Case-marked position, placing no restrictions on the double other than that it be in a Case-marked position. Other doubling-related restrictions are taken up in this chapter.

I argue here that such differences result from the parametrization possibilities for visibility, as discussed in the previous chapter, as well as whether or not theta-role assignment takes place within the perfect or extended projection of the head. Assuming that clitics are AGR^0, the basic analysis to be defended in this chapter is given in (60).

(60) a. If visibility is set for inclusion, and theta-assignment is within the perfect projection, then clitics and agreement morphemes will not be arguments and clitic doubling will be allowed only if the clitic or the double can achieve position-visibility in some way (Romance).

b. If visibility is set for inclusion, and theta-assignment is within the extended projection, then clitics and affixes will bear theta-roles and doubling will not be allowed. Clitics will need to be assigned Case, but affixes, even though arguments, will not need Case (Celtic).

c. If visibility is set for COVER and theta-role assignment is within the extended projection, then clitics and affixes will bear theta- roles and doubling will not be allowed. Neither clitics nor affixes will need to be assigned Case, since they will both be morphologically visible (no examples).

d. If visibility is set for COVER and theta-role assignment is within the perfect projection, then clitic doubling will be allowed freely from any AGR^0 position, with no language-specific restriction on the double (Porteño Spanish and Pirahã).

This chapter is primarily a series of case studies, applying the model of the first chapter and the summary in (60) to a variety of languages. Spanish and French lead off the discussion because they were the first languages in which clitics were seriously analyzed in the generative tradition.

I begin with a review of previous work in the generative tradition on clitic doubling, focusing especially on the importance and influence of the so-called KAYNE'S GENERALIZATION, which has been perhaps the most influential single hypothesis on clitic doubling of the last decade. I show that this generalization is in fact false and that while we must be able to account for the phenomena it sought to characterize, it must ultimately be abandoned. I do this by offering a detailed analysis of clitic doubling in various Romance languages and dialects, showing how they differ according to the notion of required visibility defined above. Then I turn to consider further examples of the importance of visibility, looking at data from Pirahã and Yagua, whose clitic systems were first analyzed in detail in Everett 1987 and 1989, respectively. Finally, I look at examples from Celtic languages.

3.1. Case study one: French. In perhaps the most influential generative study of any Romance language, Kayne (1975) provided an impressively detailed study of what he considered to be the most interesting aspects of French syntax. In his discussion of French pronominal forms, he distinguished between strong and weak pronouns (66ff).

(61) a. *Marie **les** connait*
Marie knows them.

b. *Marie ne connait qu'**eux***
Marie does not know them.

Kayne says: "let us call the form of the pronoun that occurs in these environments [i.e., postverbal] its "strong" form. In this class will fall *eux*,

nous, moi, toi, lui, elle, vous, elles. Conversely, let us call the form of the pronoun which occurs . . . preposed to the verb, its 'weak' or clitic form or simply 'clitic' " (1975:66). The latter would include *me, te, le, la, nous, vous, les.*

Kayne argued that the weak or clitic forms originate at deep structure in the same position as their strong counterparts, namely, in direct and indirect object positions. The clitic forms then undergo an obligatory transformation of clitic placement, which move them to the left of the verb. With minor changes and the requisite terminological translations, this still represents Kayne's view on French clitics (Kayne 1990).[30]

Kayne recognized that one might instead claim that the clitics originated at deep structure in their preverbal positions. However, he rejected this alternative because it fails to predict the fact that, in French, clitics and NPs are in complementary distribution, as in (62).

(62) a. *Jean les mange*
John eats them.

b. *Jean mange les pommes*
John eats the apples.

c. **Jean les mange les pommes*

Kayne's transformational account of clitics successfully predicts the ungrammaticality of (62c), since it claims that the clitic *les* 'them' and the NP *les pommes* 'the apples' would be competing for a single insertion site in a deep structure. An account which generated clitics in preverbal position would fail to account for this, given the theoretical apparatus available at that time.

On the other hand, Kayne did note that there were languages in which sentences somewhat like (62c) seemed to be grammatical. However, he further observed that in such languages the coreferent NP was apparently always preceded by a preposition. While he did not propose an analysis of this fact, he assumed quite reasonably that if only prepositional objects could be doubled by clitics, then the clitic and the PP containing the double would presumably not be competing for a single deep structure position, so that his analysis might in fact extend to these languages. Subsequent to this

[30]I am anachronistic in all my discussions, using current terminology, rather than the terminology of the original study, unless this would misrepresent the author or cause confusion.

pioneering study, and largely motivated by it, Kayne's analysis of clitics was challenged by researchers analyzing Spanish clitics.

3.2–3.7 Case study two: Spanish

3.2. Clitics in standard Spanish. Standard Spanish is like French in that it prohibits clitic doubling of nonpronominal direct objects; note (63).

(63) *lo_i *vimos a Juan*$_i$
We saw John.

However, standard Spanish differs from French in that it allows the optional doubling of indirect objects, as in (64); and requires that all pronoun objects and possessor NPs be doubled as in (65)–(66).

(64) *Miguelito (le$_i$) regaló un caramelo a Mafalda*$_i$
Mickey gave (her) a candy to Mafalda.

(65) a. **vimos a él*
We saw him.

b. *lo vimos*
We saw him.

c. *lo_i vimos a $él_i$*
We saw him.

(66) a. *le duele la cabeza*
His head hurts.

b. *le duele la cabeza a Juan*
John's head hurts.

c. **duele la cabeza (de Juan)*

d. **su cabeza duele*
His/her head hurts.

The doubling possibilities for standard Spanish are summarized in the chart in (67), taken from Jaeggli 1982.

(67) Clitic doubling in standard Spanish

	pronominals	**possessor NPs nonpossessor NPs**	**nonpronominal**
indirect objects	obligatory	obligatory	optional
direct objects	obligatory	n/a	prohibited
subjects	n/a	n/a	n/a

With regard to these examples, I ask the questions why does standard Spanish require doubling for possessors and pronominal objects, why does it allow optional indirect object doubling, and why does it prohibit direct object doubling. It seems unlikely that the D-structure sources of the clitic and the double could give the whole answer to these questions. The empirical issues become even more complex when two other dialects of Spanish are considered, i.e., River Plate Spanish (Jaeggli 1982, 1986) and Porteño Spanish (Suner 1988). Before going into these other dialects, however, and before I propose a rather complex formal analysis of the facts, I would like to consider an alternative analysis which is both simple and intuitively appealing based on a discourse-functional motivation for clitic doubling. Since such an analysis is in principle compatible with my formal assumptions, I consider it to be the null hypothesis.

3.3. A functional proposal. Within his functionalist framework, Givón (1984:364ff) argues that the clitic doubling phenomenon of standard Spanish is a type of agreement phenomenon.[31] This, he claims, is all one needs to know, given universal typological properties of agreement. In his book, Givón argues that there are four different types of hierarchies related to discourse topicality and that these predict what type of NP is more likely to develop or display grammatical agreement on the verb. His hierarchies are given in (68) (1984:364).

(68) a. Semantic case-role: AGT(agent) > DAT(ive)/BEN(efactive) > PAT(ient) > OTHERS

b. Pragmatic case-roles: SUBJ(ect) > D(irect)-OBJ(ect) > OTHERS

c. Humanity/animacy HUM(an)/AN(imate) > NONHU(man)/INAN(imate)

d. Definiteness: DEF(inite) > INDEF(inite)

[31]This observation was subsequently made by other researchers although, so far as I can tell, Givón was the first to make this claim.

Givón (1984:365) claims that there are synchronic and diachronic typological predictions with regard to agreement which can be derived from these hierarchies, as in (69).

(69) a. Synchronically: A language is more likely to display obligatory grammatical agreement with a NP higher on the scales in (68) than with one lower on the scales.

b. Diachronically: Grammatical agreement is likely to develop first in NP types higher on the scales in (68) than in ones lower on these scales.

Givón then makes the following claim with regard to Spanish:

> In Spanish, next, if one combines the two facts, (a) that human-definite objects display obligatory agreement, and (b) that DAT/BEN objects are overwhelmingly human and definite in discourse (while PAT objects are prototypically inanimate, though of course not obligatorily so), one can see how agreement for AGT/SUBJ NP's [sic] and DAT/BEN objects but impossible for human PAT objects. (1984:366)

Givón's analysis appears to account for the facts about clitic doubling in standard Spanish and requires none of the formal apparatus that has been developed in this book. It is very simple and based on some easily accessible discourse and semantic facts. These are no doubt reasons for giving his proposal serious consideration. However, there are some hard problems that this functionalist proposal fails to come to grips with and which it is ultimately unable to account for, as I will discuss further on. First, however, consider the facts from River Plate Spanish and how Givón's analysis compares there with a more formal account.

3.4. River Plate Spanish. Jaeggli (1982) summarizes the clitic doubling facts of River Plate Spanish as in (70). Note that the crucial difference between River Plate Spanish and standard Spanish is that the former allows doubling of direct objects.

(70) Clitic doubling in River Plate Spanish

		possessor NPs	
	pronominals	**nonpossessor NPs**	**nonpronominal**
indirect objects	obligatory	obligatory	preferred
direct objects	obligatory	n/a	preferred
subjects	n/a	n/a	n/a

Recently, some researchers have cast doubt on the facts Jaeggli describes with regard to clitic doubling in River Plate Spanish (cf. Suner 1988). However, in my own research and in conversations with other researchers, I have concluded that both Jaeggli and his critics are correct, that is, that the facts in dispute come from two geographically close, but distinct, dialects. I therefore accept Jaeggli's facts as valid, although they no longer represent the only option to standard Spanish. The newer facts adduced by Suner (1988, inter alia) of Porteño Spanish, and via my own elicitation, are discussed in §3.7.

River Plate Spanish is unlike standard Spanish in that it allows doubling of direct object NPs. Curiously, however, it allows doubling only of animate direct objects, as in (71)–(72).

(71) a. *lo*$_i$ *vimos a Juan*$_i$
We saw John.

b. *la*$_i$ *vimos a María*$_i$
We saw Mary.

(72) a. **lo*$_i$ *vimos (a) el carro*$_i$
We saw the car.

b. **la*$_i$ *vimos (a) la camisa*$_i$
We saw the shirt.

3.5. A functional analysis. For a purely formal theory, this is indeed a curious set of facts. However, for Givón's theory (1984), they are straightforward. Givón need merely claim that agreement with HUM/DEF NPs has now been extended to PAT NPs. The facts still accord well with his hierarchy. If a dialect of Spanish was found in which agreement also occurred with inanimate NPs, he would merely need to say that agreement has been pushed further down the hierarchies.

I find this approach unsatisfactory, however, since the equation of clitic doubling with incipient agreement is difficult to evaluate. Givón never gives any rigorous definition of the two, nor does he explain why the agreement affix imposes fewer restrictions on the nature of its coreferent NP than does the clitic. For example, he never explains the fact that clitic doubling but not verb agreement is sensitive to animacy and definiteness. He also fails to offer any account for the fact that dative and accusative clitics differ from agreement and from each other with regard to WH-extraction (cf. §§3.8–3.14). As will be seen in the course of this discussion, the functional account also fails to predict nonfunctionally motivated effects on the

morphosyntax produced by clitic doubling. Perhaps the clearest example of this type of fact is presented in §§3.23–3.26 on Yagua. There are other problems with this type of approach which will become clearer as the discussion proceeds. I will therefore abandon an attempt to account for these facts functionally and pursue a more formal approach. However, in so doing, I want to make it clear that Givón's observations are important and that they must be accounted for within any account of Spanish clitics. Moreover, other researchers have frequently pointed out the similarity between clitic doubling and agreement, often failing to acknowledge Givón's important pioneering contributions in this area. Therefore, it is important to consider his analysis here, even though I have concluded that it is inadequate.

3.6. A formal analysis. Jaeggli's (1982, 1986) careful and detailed discussion of the Spanish facts reveals that a functional account of the facts will not work. First, such an account does not explain why it is that inanimate indirect objects may be doubled in all dialects, although it is often difficult to find a satisfactory context in which their acceptability is clear, for independent reasons; see (73).

(73) ??*le*$_i$ *puse la tapa* [PP *a la caja*$_i$]
I put the top on the box.

Note, crucially, that indirect objects are the only PPs which may be doubled, in any dialect. PPs not theta-marked by the verb cannot be substituted for or doubled by a clitic as seen in (74).

(74) a. *Juan fue al cine*
John went to the movie-theater.

b. **Juan le fue*
John went there.

Jaeggli (1986:36) further notes that while it is indeed true that clitic doubling exploits the independently required animacy marker *a*, this does not mean that only animate or definite objects can be doubled, as Givón would appear to claim. Jaeggli notes that the examples in (75), though strange, are not completely ungrammatical.

(75) a. *?las aves la*$_i$ *saludan a la aurora*$_i$
The birds salute the dawn.

b. *?los ácidos los*$_i$ *atacan a los metales*$_i$
Acids attack metals.

c. *?el entusiasmo la*$_i$ *vence a la dificultad*$_i$
Enthusiasm defeats difficulty.

Without the marker *a,* all of these examples are clearly ungrammatical, even though none of the doubles are animate; cf. (76) with (75).

(76) a. **las aves la*$_i$ *saludan la aurora*$_i$
The birds salute the dawn.

b. **los ácidos los*$_i$ *atacan los metales*$_i$
Acids attack metals.

c. **el entusiasmo la*$_i$ *vence la dificultad*$_i$
Enthusiasm defeats difficulty.

Jaeggli admits that it is unclear what motivates the presence of *a* in these examples. However, only when *a* is present may any NP be doubled in River Plate Spanish. This fact is not predicted by Givón's functional account. Jaeggli concludes that *a*'s principal role in clitic doubling constructions is not the functional role of indicating animacy, but rather the formal role of assigning Case to the doubled NP. He claims that it has not developed this formal role in all dialects; in these other dialects, it maintains only its semantic, animacy-marking properties. Jaeggli goes on to base his entire analysis of indirect object and direct object doubling on the notion of Case. Specifically, he argues that the clitic absorbs the Case of the verb which would normally have been assigned to the double, thus forcing the double to get Case some other way. I discuss in more detail how this analysis works. It is important to consider Jaeggli's analysis first since Jaeggli is the first to really lay out all the pertinent facts and propose an analysis of them. This will serve as a necessary backdrop to my own analysis in §§3.8–3.14 below.

Indirect object doubling. If I follow Jaeggli, I assume that a clitic must receive Case from the verb on which it appears. Then I further assume that the verb can assign both dative and accusative Cases. It is also necessary to assume, based on the ungrammaticality of examples

like (74) above, that the clitic's D-structure source is somehow licensed by a theta position on the verb.[32] It then follows that clitics in Spanish may only be associated with direct and indirect object positions since benefactives, locatives, etc. are not theta marked directly by the verb.[33]

Since Jaeggli's analysis of doubling involves Case absorption by the clitic, how then is Case assigned to the indirect and direct object NPs? The direct object is assigned directly by the verb, at least in the model of Chomsky 1981, which Jaeggli assumes. Jaeggli argues, convincingly I believe, that Case is assigned to the indirect object position by both the verb and the preposition together. To see why, first consider the possibility that the Case of the indirect object is assigned exclusively by the preposition, as in (77).

(77) *le*$_i$ *entregué el libro al profesor*$_i$
I gave the book to the professor.

If the only source of dative Case in (77) were the preposition *a,* we would not be able to say how the dative clitic, *le,* receives Case. Jaeggli (1982) argues that dative Case is assigned by the verb and the preposition together, so that the doubled NP gets Case from the preposition and the clitic gets Case from the verb.

Interestingly, Jaeggli (1986) rejects this approach, arguing instead that Spanish dative clitics do not require Case at all. They are like so-called ethical dative clitics (cf. 3.11 below) in not requiring Case. Jaeggli's main source of evidence for this claim comes from facts about extraction from clitic-doubled positions. Note in particular the contrast between (78) and (79) (EC equals phonologically empty category).

(78) **a quién*$_i$ *lo*$_i$ *viste* EC$_i$
Who did you see?

(79) *a quién*$_i$ *le*$_i$ *regalaste flores* EC$_i$
To whom did you present flowers?

[32]My own analysis eventually derives this fact from the base generation of clitics in AOR positions.

[33]Jaeggli never asks why it is that Spanish lacks nominative clitics. In my model, this is because it has a subject agreement affix on the verb, meaning that the only source for a nominative special clitic, upper AGR, has been m-subcategorized for by the verb. Further discussion of nominative clitics is found in chapter 4.

Jaeggli (1986:40ff) argues that direct object clitics must always receive Case. Therefore, according to Jaeggli, the empty category in (78) must be pro, due to the rule in (80), proposed by Jaeggli as a universal condition on pro-identification.

(80) EC equals pro if it is governed and coindexed with [alpha person, beta number, (gamma gender), delta Case]

One might have assumed instead that (80) would not be a sufficient condition on pro-identification, but merely a necessary one. However, Jaeggli makes the very strong claim that (80) is both necessary and sufficient for pro-identification and thus he is forced to conclude that the EC in (78) is pro. This will then rule out examples like (78) since, according to Jaeggli, most dialects of Spanish manifest the restriction in (81).

(81) A pronominal must be operator free.

In (78), the operator must not bind the empty category due to the fact that the EC satisfies (80) and thus would violate (81). So, since the operator cannot bind a variable, the sentence is ungrammatical, because it produces a VACUOUS QUANTIFICATION. In example (79), however, principle (81) does not apply. This is because the dative clitic does not require Case, thus failing to satisfy the requirement in (80) for pro-identification. Therefore, the EC in (79) is a variable, allowing operator binding and thus accounting for the contrast between the two examples.

As neat as Jaeggli's analysis seems, however, there are significant problems with it. First, it does not hold in all dialects, since as Jaeggli himself notes (1986:41), it does not hold in some subdialects of River Plate Spanish. It also requires the manipulation of Case and conditions on operator binding to account for what would appear superficially to be a single fact about extraction. Moreover, other languages, as argued in May (1988) do allow operator binding of pronouns. Most importantly in the present context is the fact that this analysis relies quite heavily on lexical distinctions between clitics (Case-absorbing versus non-Case-absorbing), resulting in transferring the explanatory burden from the syntax to the lexicon and thus giving little insight into the nature of clitics. This approach is thus unavailable to the present model. Before proposing an alternative analysis, however, I consider Jaeggli's analysis of pronominal and possessor doubling facts.

Pronoun doubling. In all dialects of Spanish, pronoun objects must be doubled. Jaeggli's (1982) analysis of this fact is that it is a result of Chomsky's proposed AVOID PRONOUN principle, a purported pragmatic restriction to the effect that overt pronouns are avoided whenever an alternative EC is available.[34] Consider again the contrasts in (82).

(82) a. **vimos a él*
We saw him.

b. *lo*$_i$ *vimos a él*$_i$
We saw him.

c. *lo*$_i$ *vimos* EC$_i$
We saw him.

Example (82a) is ungrammatical because the pronoun is used instead of the alternative clitic$_i$ . . . EC$_i$ strategy (that is, because a pronoun has been chosen when another derivation without the pronoun was available for the same meaning). Example (82b) is grammatical, however, because the pronoun is being used for special emphasis, in which case the pragmatics are in some unclear fashion allowed to override the syntactic prohibition. Example (82c) is fine because it obeys AVOID PRONOUN.

In §3.12 an alternative analysis of obligatory pronominal doubling is proposed which makes no direct appeal to pragmatics. However, even if Jaeggli's analysis of why pronouns must be doubled is accepted, this analysis does not say how such constructions are grammatical. For example, it fails to account for the contrast in (83), found in standard Spanish.

(83) a. *lo*$_i$ *vimos a él*$_i$
We saw him.

b. **lo*$_i$ *vimos a Juan*$_i$
We saw John.

How is it that (83a) is grammatical when (83b) is ungrammatical? If we adopt Jaeggli's analysis, where *el* receives Case from *a,* it still does not account for the ungrammaticality of (83b). Moreover, as seen in the discussion of Welsh in §3.17, this contrast between clitic doubling of pronouns

[34]This principle also fits well in Chomsky's (1992) more recent work on economy. One might claim in fact that any expression is avoided if there is a more economical expression. But I will not take this issue up here.

and R-expressions (fully referential NPs) is not limited to Romance, indicating that a principle of UG may be involved in favoring clitic-pronoun pairs (AGR^0-D^0 pairs in the present model), over clitic-R-expression pairs. A more detailed and crosslinguistically valid account is therefore called for. I return to this problem in §§3.8–3.14 below. First consider some additional facts, however, the so-called ethical datives and possessor datives, as well as a set of facts which Jaeggli did not consider.

Ethical datives. Many Romance languages, including all dialects of Spanish, have a type of clitic which appears to indicate that the speaker and occasionally, a referent encoded by a clause-internal constituent have been adversely or positively affected by the event recorded in the clause. This type of clitic is illustrated in (84).

(84) *(tu) te me ensuciaste el pantalón mi hijo*
You dirtied your pants for me (negative implication), my son.

In (84), *te* (second person, singular, dative) is interpreted as the possessor of *el pantalón* 'pants' and *me* is the ethical dative clitic. The subject of (84) is pro or *tu* (second person, singular, nominative). Other examples are given in (85)–(87).

(85) *Juan me le*$_j$ *arruinó la vida a esa chica*$_j$
John ruined for me the life of that girl.

(86) *voy a arruinar-le*$_i$ *la fiesta (a él*$_i$*)*
I am going to ruin the party for him/her, *or* I am going to ruin his/her party.

(87) *mi hijo le arruinó la vida para mí*
My son ruined his/her life for me.

In (85), *me* is the ethical dative and *le* the possessor clitic (possessor of *vida* 'life'), doubling the NP, *esa chica* 'this girl'. In (86), the ethical dative is *le*. In (87), there is no ethical dative, but the prepositional phrase *para mi*, receives the same translation.

Some relevant facts about this ethical clitic are that it usually indicates the speaker's perspective on the event of the clause; it is found only in less formal, colloquial registers; in examples like (86), it is often difficult to distinguish from the possessor dative or, alternatively, it is ambiguous between possessive and ethical readings.

Jaeggli's analysis of the ethical dative is reminiscent of his analysis of other clitics, i.e., he puts the burden of explanation on the lexicon. He assumes that ethical dative clitics come from the lexicon with their own ethical theta-role and that they do not need Case, thus failing to explain why they appear exclusively in dative Case. Again, this type of analysis is unavailable in the present model. Moreover, the idea that clitics could bring their own theta-role to the syntax is at odds with Jaeggli's own analysis of the ungrammaticality of examples like (74b) above, claiming in effect that a clitic is licensed by a theta-position on the verb.

My analysis of this phenomenon is given in §§3.8–3.14. Before going into this, however, I want to consider what I believe to be a related manifestation of dative clitics, the possessor dative.

Possessor doubling. A possessor dative clitic is obligatory in nonequative clauses in all dialects of Spanish, note examples (88)–(90).

(88) a. *su cabeza es larga*
His/her head is long.

b. *?la cabeza de Juan es larga*
John's head is long.

(89) a. *le*$_i$ *duele la cabeza a Juan*$_i$
John's head hurts.

b. *le*$_i$ *sacaron la muela del juicio a Juan*$_i$
They pulled John's wisdom tooth.

c. *le*$_i$ *lavaron las manos a Luis*$_i$
They washed Luis' hands.

(90) a. **duele la cabeza a Juan*
John's head hurts.

b. **sacaron la muela del juicio a Juan*
They pulled John's wisdom tooth.

c. **lavaron las manos a Luis*$_i$
They washed Luis' hands.

Unlike the ethical dative already discussed, this possessor clitic construction is found in all registers and dialects of Spanish. Jaeggli (1982) claims

that the clitic is obligatory because possession is expressed in Spanish via a process of theta transfer, whereby the clitic first absorbs then reassigns or transfers the possessor theta-role to the indirect object position. Without the clitic, the indirect object could be interpreted only as a goal. For verbs which allow possessor indirect objects (most verbs) but which disallow goal indirect objects, the absence of the clitic, according to Jaeggli, would leave the NP position without interpretation, resulting in ungrammaticality.

Once again, unfortunately, Jaeggli is unclear on exactly how a particular part of his analysis is to be executed. Before turning to my own analysis of the possessor-doubling construction, and how I think it is related to the ethical dative, it is necessary to introduce yet another set of facts, this time from the dialect of Porteño Spanish. These facts, first pointed out by Suner (1988) do not conform to Jaeggli's account of clitics as (optional) Case absorbers. They thus lead to a reconsideration of the very foundation of Jaeggli's approach, a salutatory effect as it turns out.

3.7. Porteño Spanish. Suner (1988) introduces some important new data into the discussion of Spanish clitic doubling. She observes that, contrary to the predictions of Jaeggli's model, examples like (91) and (92) below are grammatical in Porteño Spanish (i.e., Buenos Aires Spanish). I have subsequently confirmed Suner's judgments with other native speakers of this dialect.

(91) a. *la*$_i$ *vimos la camisa*$_i$
We saw the shirt.

b. **la vimos una camisa*$_i$
We saw a shirt.

(92) *yo la*$_i$ *tenía prevista esta muerte*$_i$
I would have predicted this death.

What (91) and (92) illustrate is that any direct object can be doubled in Porteño Spanish, so long as it is specific, (91b). To account for this, Suner rejects Jaeggli's account and analyzes Spanish clitics as agreement morphemes.[35] They differ from subject agreement in that, according to Suner, they include the feature [+specific] and thus, due to a principle of matching she invokes, require that their doubles be specific.

While my approach is clearly sympathetic with Suner's attempt to relate clitic doubling to agreement, her analysis suffers from a number of problems.

[35]Obviously similar to Givón's analysis of the phenomenon.

First, it does not clearly address the problem of the optionality and mobility of Spanish object clitics. Why are these clitic-agreement elements optional, when subject agreement in matrix clauses is not optional? If they are agreement markers, why are they able to appear away from the verb or on different sides of the verb, depending on whether it is finite or not? Note example (93).

(93) a. *voy a ver-lo*
I am going to see him.

b. *lo ví*
I saw him.

c. *voy a ver a Juan*
I am going to see John.

An additional problem with this analysis is that Suner never provides a formal definition of agreement (as was also the case with Givón), as I have attempted to do in (58) above. Therefore, it is difficult to evaluate her claim that clitics in Porteño Spanish are agreement markers, since she does not make clear what such a marker would be. In this same vein, she does not make clear why other Spanish dialects do not allow this kind of agreement.[36] Moreover, so far as I can tell, Suner's analysis can no more handle the facts of River Plate Spanish that Jaeggli discusses than his analysis can handle the Porteño Spanish facts she addresses. Each one seems to assume, crucially, that the dialect spoken by the other does not exist.

I conclude, therefore, that there is no unified theory of Spanish clitics available currently in the literature. In the next section, I attempt to remedy this problem.

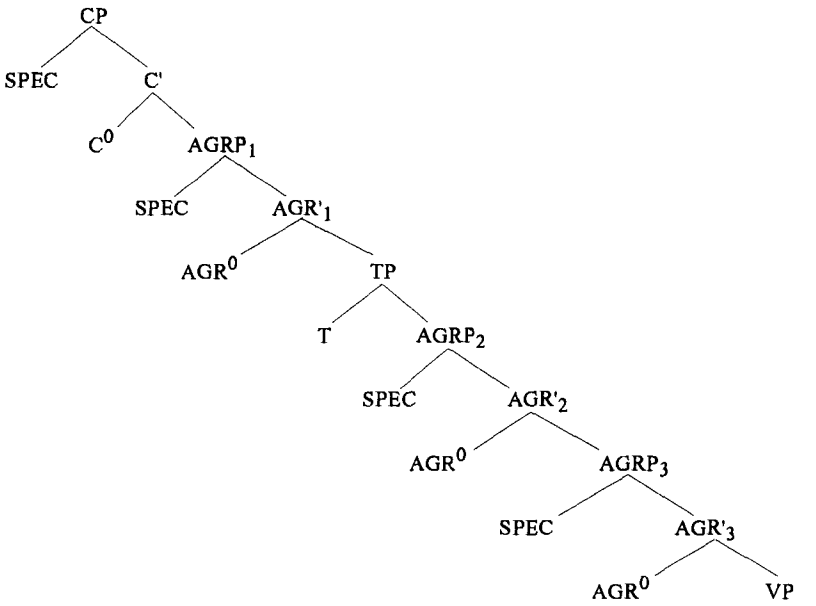
3.8–3.14 A phi-feature analysis of Spanish

3.8. Phrase structure and the indirect theta-role. The analysis in this section not only purports to provide a unified treatment of clitics in all Spanish dialects, it also serves as the basis for the analysis of clitic phenomena in the other languages discussed here: Irish, Breton (Celtic), Welsh, Pirahã (Muran), and Yagua (Peba-Yaguan). Again, my analysis crucially

[36]Although, to be fair, she could simply say that the diachronic process of agreement formation from clitic doubling has not gotten as far in these dialects, much as Givón would also say, if I understand him correctly.

relies on the distinction between functional versus lexical categories (Abney 1987) and their X-bar structures in Spanish. I therefore need to begin the analysis of Spanish clitics with an overview of the phrase structure of Spanish that I will be assuming.

(94) Graph summary of Spanish phrase structure



$AGRP_1$ (i.e., agreement within AGRP between its head and specifier) assigns nominative Case and is the subject agreement marker. It appears in an m-subcategorized position on the verb, conforming to the CDAP. Only one AGR position is m-subcategorized, so that $AGRP_{2-3}$ can appear only as clitics. I agree with Bonet's (1991) thesis that clitic ordering in Romance cannot be syntactically derived, so that I have nothing to say here on the relative surface orders of each of the two non-m-subcategorized AGRs. Nevertheless, the hierarchical relation between the non-nominative AGRPs should be more or less as given in (94), which reflects the relative hierarchical positions of direct versus indirect objects suggested by Larson (1988). As to the ethical dative versus goal dative and object orders, while one cannot be certain at this point since so little investigation has been done in anything like the current framework, I will hazard a proposal, (95), for the sake of exposition, knowing that it is likely to be incorrect, but also

knowing that the precise ordering is relevant but not crucial to the core issues here.

(95) a. $AGRP_2$ will correspond to an ethical dative position.

b. $AGRP_3$ will correspond to the second dative position, available for ethical, possessor, or indirect object clitics.

Again, these relative positions are chosen somewhat arbitrarily and it may be that they will vary. Their D-structure order is likely to be unrelatable syntactically to the order that they are found in at PF. My analysis of Spanish relies on the assumption in (96).

(96) Referents necessarily affected by an action are identified within the extended projection of the verb.

Affected is indeed a vague term, but it seems to reflect the relative range of certain indirect object interpretations. It includes those given in (97) in addition to agent and theme.

(97) Affected referents

a. speaker or hearer (indirect adverse or beneficial effect)

b. possessor

c. goal

I further assume that an affected argument in the sense of (97) involves theta assignment by the verb. The claim is that Spanish verbs are all able to assign up to two affected or indirect theta-roles, in addition to any other theta-roles they may assign. These theta-roles will then be interpreted as (97a), (97b), or (97c). Goal will be treated as an indirect theta-role, but it will be independently required by the verb and is therefore not optional. If a verb assigns a goal, then it will only be able to assign one of (97a) or (97b).[37] For each theta-role assigned by a verb, there must be an AGRP generated to correspond to that theta-role, in order to identify or Case mark the relevant theta-role bearing argument. Both indirect and direct roles may be present lexically on a verb.

This hypothesis will account for the possessor and ethical datives. However, more must be said about this affected or indirect theta-role in order to account for why the clitic is obligatory or optional, and why it

[37]As Jaeggli notes, verbs which assign an affected possessor theta-role usually do not happen to assign goal.

may not allow doubling, depending on the nature of the theta-role assigned, as shown in (98)–(100).

(98) a. *le regaló un caramelo (a Juan)* (GOAL)
S/he gave a candy to John.

b. *regaló un caramelo a Juan*
S/he gave a candy to John.

(99) a. *le duele la cabeza (a Juan)*
John's head hurts.

b. **duele la cabeza*

c. **le duele su cabeza (a Juan)*

d. **su cabeza duele (a Juan)*

e. **duele su cabeza (a Juan)*

(100) a. *te me ensuciaste el pantalón mi hijo*
You dirtied your pants for me, my son.

b. **te ensuciaste el pantalón para mí mi hijo*
You dirtied your pants for me, my son.

c. *??te me ensuciaste el pantalón para mí mi hijo*
You dirtied your pants for me, my son.

3.9. Goal doubling. The goal theta-role is obligatorily assigned since it is a nonoptional part of the verb's theta-grid (Stowell 1981). This obligatory nature of the goal theta-role can be exploited to account for the fact that the clitic in (98) above is optional. According to the model of this essay, the clitic is a phi-feature bundle in AGR. AGR's function is to mark the relationship between the verb and the grammatical functions associated with it. As already seen, the need for AGR to be overt will increase in direct proportion to the configurational distance of the grammatical function from the phrasal head. By this reasoning, an overt AGR will be less important if a grammatical function is configurationally close to the verb, although, of course, nothing prevents it from overtly agreeing with the verb. Let us also relate overt AGR to the type of theta-role assigned in a similar manner. Other things being equal, a

required theta-role will need overt agreement less than an optional theta-role if LF first tries to interpret NPs to satisfy the verb's obligatory theta-assignment properties and only after satisfying these looks at optional theta-role assignment. Such agreement will appear then only if motivated by pragmatic or morphosyntactic requirements, e.g., m-subcategorization or theta-assignment. The number of AGRs may vary across languages, such that GOAL and THEME may be placed in separate AGRs or be forced to compete (the more common case), resulting in a state where one will trigger agreement on the verb while the other does not if they co-occur.

A NP object of a preposition which is semantically bleached, e.g., *a* in Spanish, will be interpreted as a goal unless there is information that it should not be. So although there is no reason that an overt AGR could not occur with goal indirect objects, neither theta-assignment or configurational distance require it. It is not surprising then to find that overt AGR is optional with goal roles. However, this is not the case with the possessor dative clitic, which is required.

3.10. Possessor datives. In all dialects of Spanish, indeed in most Romance languages, the possessor dative clitic is obligatory in nonequative clauses. This can be accounted for if we require that any referent necessarily affected by the action of the verb be theta-marked within the extended projection of the verb. If an object is possessed, especially if it is inalienably possessed, then any action which affects it affects, necessarily, its possessor. If John's head hurts, for example, then John is necessarily affected (which is reflected in English by saying, 'John has a headache'). Unlike Jaeggli, therefore, I do not see the possessor dative as absorbing the possessor role but as referencing a necessarily affected individual. By this reasoning, the possessor dative is directly related to the ethical dative.

What is the theta-status of the clitic? Is the AGR position of the possessor theta-role itself an argument, unlike any other AGR position, or is the relevant theta-role assigned to a position which may then be doubled or referenced by the clitic which surfaces in that AGR position? I assume the latter.

Moreover, because it refers to an indirectly affected individual, the indirect theta-role will be assigned to a NP by the V indirectly, via a preposition. So the affected theta-role is assigned to a PP. Is this PP overt or covert? Consider (101).

(101) a. *le duele la cabeza*
His head hurts.

b. *le duele la cabeza a Juan*
John's head hurts.

c. *?le duele la cabeza a él*
His head hurts.

Just as with agreement and nonpossessor pronoun doubling, the doubled pronoun in (101c) is overt only if pragmatic salience is desired, since phi-features are inserted first into the functionally required AGR position of the clitic. The pronoun in effect adds only additional phonological emphasis to the same phi-features by repeating them, manifested by the clitic. The R-expression *Juan* adds information beyond the phi-feature composition of the clitic. Therefore, it is generally the case that the doubled NP will be covert unless it is an R-expression, and unless special emphasis is desired. If the NP is covert, the preposition will also not surface since the only function of the preposition is to signal the role of the NP or give it Case. If it is covert, then all the relevant phi-information is available in the clitic and the pro will not need Case.

This explains why the clitic is obligatory with the possessor dative and why the double of the clitic is optional. The absence of the possessor pronominal (D^0) of the NP still needs to be discussed. Why is it necessarily covert, as illustrated in (102)?

(102) **le duele (la) su cabeza a Juan*

The same fact holds true of other Romance dialects, such as Brazilian Portuguese shown in (103); compare it with the equative construction in (104).

(103) a. *lhe cortou a cabeça*
It cut his/her head.

b. **lhe cortou a sua cabeça*

(104) a. *a sua cabeça é feia*
His/her head is ugly.

b. **lhe é feia a cabeça*

The explanation of the contrast in (104) is that no action affects the owner of the head, i.e., the verb assigns no affected theta-role in (104), so no clitic can be expressed, i.e., there will be no corresponding AGR in the extended

projection of the verb. So why is the possessive pronoun not possible? The answer is found in the fact that (1) the clitic needs to form a phi-chain with the D^0 of the possessed NP in order to link the possessor and affected theta-roles; but (2) if the possessor is overt (but, crucially, not if it is covert) there will be a Case conflict, prohibiting the formation of a phi-chain.[38] The next section discusses the ethical dative.

3.11. Ethical datives. The ethical dative is found only in colloquial Romance registers, whereas the possessor dative is found in nearly all dialects and registers. There is apparently no dialect or register of Romance which has an ethical dative without a possessor dative. It is relevant, I think, that they both share the role of indicating an affected referent. What I claim is that the ethical dative is a conceptual and morphosyntactic extension of the affected theta-role that is used to account for the possessor dative construction. The possessor dative is necessarily affected by the action of the verb, however, the arguments usually referenced by the ethical dative are affected indirectly or not at all. The ethical dative is usually, but not always, used to provide a speaker- or hearer-oriented evaluation of the action's effect. I claim that it is analyzed exactly like the possessor dative except that there is no chain formed with a D^0 possessor position. Moreover, for independent reasons, a NP doubled by the ethical dative almost never surfaces.

I must claim that the ethical dative is also a morphosyntactic extension of the affected theta-role of the possessor dative, meaning that an additional AGR position, corresponding to a second indirect theta-role, is added, since the possessor and ethical datives may co-occur as in (105)–(106).

(105) te_{pd} me_{ed} *ensuciaste el pantalón mi hijo*
You dirtied your pants for me, my son.

(106) me_{ed} le_{pd} *arruinó la vida a esa chica*
He/she/someone ruined this girl's life for me.

[38]An overt NP requires Case. But a chain can be formed only if there is no feature conflict, ruling out the appearance of the possessive pronoun. In this sense, a phi-chain is quite reminiscent of the notion of INTERPRETIVE UNIT given in (18) above. I take the two notions to be related in assuming that an interpretive unit may be a point (i.e., formed under a single node) or a discontinuous unit, a phi-chain. To clarify when I believe that AGRs are present: I assume that AGR projections are not generated unless forced to by independent principles and otherwise allowed by the specific language.

That is, I claim that in addition to the directly or thematically affected NP-AGR (the possessor dative), there is another AGR for a second indirect theta-role to account for affected interlocutor roles in (105) and (106). The verb will then theta-mark a PP with this theta-role. By the very nature of the theta-role, however, almost exclusively the speaker, first person, or hearer, second person, the doubled NP will usually remain null. This is because when the argument is speaker or hearer, the only possible double would be a pronoun and as seen in §3.12, Spanish always avoids pronouns if a relevant AGR is available to spell out the same phi-features. Pragmatic salience may nevertheless be marked, however, by rendering the double overt (personal elicitation); note (107).

(107) *?Juan me*$_i$ *le arruinó la vida a esa chica a mí*$_i$
John ruined this girl's life for me.

3.12. Pronoun doubling. Pronouns are obligatorily doubled in all dialects of Spanish.[39] As I address the issue of pronoun doubling in Spanish, there are two questions that must be answered. First, why are pronouns obligatorily doubled? Second, how do doubled pronouns satisfy visibility (i.e., in earlier terminology, the CASE FILTER) in standard Spanish, which otherwise prohibits direct object doubling?

As stated earlier, Jaeggli attempts to answer the first question by appealing to Chomsky's (1981) suggested AVOID PRONOUN principle. There are two problems with this principle, however: (1) it is too vague to be of much use, i.e., there is no theory of the interaction between pragmatics and syntax and this principle crucially assumes such an interaction; and (2) it fails to account for languages in which pronouns are preferred to clitics or even pro, as in colloquial Brazilian Portuguese, as shown in (108).

(108) a. *João viu ele* (pronoun)
John saw him.

b. *?João o viu* (clitic)
John saw him.

Moreover, even if I accept the avoid pronoun analysis for River Plate Spanish and Porteño Spanish, it fails to account for standard Spanish, since it does not state how doubled pronouns get Case or satisfy visibility in standard Spanish. Therefore, I reject Jaeggli's account.

[39]Moreover, this same restriction is found in Welsh.

I begin my own analysis of the facts by noting that there are five basic distributions of pronouns, agreement affixes, and clitics in the world's languages. These distributions are given in (109).

(109) a. Some languages have pronouns but no agreement or special clitics (e.g., Chinese);

b. Some languages have pronouns and verbal agreement affixes, but no special clitics (e.g., English);

c. Some languages have clitics and agreement affixes but no V^0 governed pronouns for some or all persons (as in standard Romance languages) or they lack pronouns almost completely (Pirahã);

d. Some languages have pronouns, V-governed simple clitics, and V-agreement (Pacaas-Novos);

e. No languages have special clitics and agreement for the same theta-role, unless independent evidence suggests that they have multiple AGR positions for these theta-roles (as in Roberts' 1991 analysis of Valdotain).

These generalizations likely have other twists across languages and indeed the facts are complicated enough so that no single principle is likely to account for them. No doubt other morphological, phonological, and syntactic principles in each language work together to determine how phi-features are manifested. Nevertheless, I hazard a hypothesis in (110) that will partially account for different phi-feature manifestations.

(110) Phi-features are spelled out first in:

a. Functionally required positions

b. Lexically required positions

Functionally required positions are FCs which are required by principles independently of theta marking. They include AGR nodes but not D nodes, since although the latter is a functional category, it is not ever functionally required. Rather it is required by semantic or theta-related principles.

What kinds of languages does (110) predict and what kinds does it prohibit? It prohibits mixed languages, e.g., languages which have dative clitics and accusative pronouns but no accusative clitics. This is so because if there is a dative AGR, there must also be an accusative AGR position. These may differ as to which if any is included in the verb, but a language must be consistent with regard to (110). It need not spell out all lexically or functionally related positions, but it will not spell out some of one type and some of another type. It will spell out all of one and part of the other but never only part of each type. Moreover, (110) always privileges subject agreement. This is because a position is lexically related if it is theta-related or morphologically subcategorized. The upper AGR is thus likely to be lexically related, since it is likely to count as morphologically subcategorized via the CDAP. But the upper AGR node is also a functionally required position. Thus this model predicts that subject agreement will be more frequent than any type of clitic or pronoun crosslinguistically, since it potentially falls under both (110a) and (110b).

This of course does not mean that subject agreement must occur. If there is no AGR m-subcategorization, and if (110b) is selected, then a language could have pronouns and simple clitics with no agreement affixes or just pronouns. If (110a) is chosen, a language could have only special clitics or clitics and agreement affixes, if some AGRs are m-subcategorized. Of course, independent principles could interact with (110) to privilege certain grammatical positions or, perhaps, even override (110). So the EXTENDED PROJECTION PRINCIPLE could force a language to spell out subject pronouns if it cannot identify PRO.

What about Spanish, however? If I assume that Spanish is set for (110a), then a pronoun cannot appear in a clause unless the corresponding AGR is also spelled out. On the other hand, the spelling out of AGR would not require the spelling out of D^0, i.e., the pronoun position. So consider once again the sentence in (111).

(111) a. **vimos a él*

b. *lo*$_i$ *vimos a él*$_i$

c. *lo*$_i$ *vimos* EC$_i$

Examples (111b) and (111c) are grammatical because they obey (110a). Example (111a) is ungrammatical, however, because it spells out the D^0 position of *el*, a lexically required position, before it spells out the AGR^0 position of the clitic, a functionally required position. This accounts

for obligatory doubling of pronouns in Spanish (and Welsh; cf. below) without appealing to any nebulous pragmatic notion such as avoid pronoun, which is violated in Brazilian Portuguese, among other languages.

It remains only to explain how (111c) is grammatical in standard Spanish, which otherwise does not allow direct object doubling. This, again, is an issue overlooked by previous analyses of clitics. My suggestion is that in Spanish, positions which refer to a single theta-role and are composed exclusively of phi-features are interpreted as a single entity at LF, an interpretive unit (cf. (18) above). This was already seen to be independently necessary for possessor dative clitic phi-chains in order to account for why the genitive possessor pronoun cannot occur with the possessor dative clitics. One way to formalize this is to say that two functional categories (e.g., AGR and D) are allowed to share a Case in Spanish if they form a chain, i.e., where they are coindexed and one c-commands the other; and the phi-features of one are a subset of the phi-features of the other; i.e., they are allomorphs. This will not apply to N-AGR pairs, i.e., to R-expressions and agreement/clitics, but only to pronoun-AGR pairs. The nature of this chain is that the head has no more or less features than the tail. Another possible instantiation of this type of chain is the expletive-argument pair, as in *There*$_i$ *was a man*$_i$ *in the room*. If I am correct that *there* has no phi-features, then this may be a further example of the relevant type of chain, except that a phi-feature chain involves two functional nodes (cf. Chomsky 1981:380ff).

3.13. Object doubling. My analysis here is quite simple. In standard Spanish and River Plate Spanish, the setting for morphological visibility is the more conservative INCLUSION, while for Porteño Spanish the setting is COVER. That is, in the first two, clitics must get Case independently of their host, whereas in Porteño Spanish clitics are morphologically visible, just as the subject agreement marker is. I accept Jaeggli's analysis that standard Spanish prohibits clitic doubling because (aside from pronoun doubling) the clitic and the double would compete for a single Case. I also accept Jaeggli's analysis of River Plate Spanish, where in that dialect the pronominal animacy marker *a* can also assign Case. This means that, as Jaeggli argues, only animate NPs may be doubled in River Plate Spanish, since only these NPs occur with an independent Case assigner. Indirect objects in both River Plate Spanish and standard Spanish can be doubled since AGR is able to Case mark

itself and because the indirect object preposition Case marks (and partially theta identifies) the doubled NP.[40]

In Porteño Spanish, however, any direct object NP may be doubled. This is predicted if it differs from River Plate Spanish and standard Spanish in setting morphological visibility for COVER, such that a clitic is visible via adjunction to its host. Since *lo* is covered by V^0 in (112), it satisfies m-visibility and the sentence is grammatical.

(112) $[_V\ lo_i\ [_V\ vimos]]$ *el carro*$_i$
We saw the car.

Only two facts remain to be accounted for, namely, (1) that only specific NPs may be doubled in Porteño Spanish (perhaps all dialects, but this is not clear) and (2) that WH-extraction is not allowed from a doubled direct object position.

Suner (1988) argues convincingly that doubled direct objects must be definite. I account for this by the spell-out rule in (113).

(113) $\begin{bmatrix} \pm \text{MASC} \\ \pm \text{PLURAL} \\ \pm 1,\ \pm 3 \\ +\text{SPECIFIC} \end{bmatrix}_i$ [accusative]$_i \rightarrow$ *lo(s), la(s)*

By (113), an accusative clitic can be spelled out only if it is [+specific], regardless of its values for other phi-features. Thus, accusative clitics will indeed be specific as Suner argues, but in my account this still does not force me to list them in the lexicon, since (113) looks at PF input, by which time clitics have been composed via independent lexical insertion of phi-features. This also predicts the contrast in (114).

(114) a. **a quién*$_i$ *lo*$_i$ *viste* VBL$_i$
Who did you see?

[40]The idea that a node can Case mark itself is not really compatible with Chomsky's recent work and indeed goes against a number of proposals. Nevertheless, this seems to be the best solution for the facts at hand. Any potential conflict with current theoretical proposals is relatively easy to handle, however, if (1) Case is required for all nominals and (2) if AGRs but not NPs/DPs, are allowed to Case mark themselves. Point (2) would follow from the fact that Case is an inherent feature of AGR but a configurational feature for NP/DP. AGR's function is to mark Case. NP's function is to provide arguments and expletives. DP's function is to indicate definiteness. Thus, by its function, the proposal that Case is inherent for AGR, thus allowing AGR to Case-mark itself, seems intuitively sound and need not come at any additional cost to the theory.

b. *a quién*$_i$ *le*$_i$ *viste* VBL$_i$
Who did you see?

There is no [+specific] condition on the spell-out of dative clitics, so that they may be [–specific], allowing extraction. A problem with Suner's account, which does not affect the present analysis, is that she provides no formalization of the relationship between clitic doubling and agreement.

3.14. Summary. I have provided an analysis of Spanish which accounts for all clitic and agreement facts without any appeal to lexical differences between clitics or between clitics and agreement, and which avoids all reference to clitic-specific devices such as theta-transfer, theta-absorption, and CASE-absorption. I have provided the fullest account of clitics in all Spanish dialects available, also accounting for how Spanish and French differ. Moreover, I have provided a simple, yet explicit model of the relationship between agreement and clitic doubling. Now I would like to further investigate the empirical implications of this model by turning to a study of clitic-agreement facts in Celtic.

3.15–3.18 Clitic doubling in Celtic

3.15. Theta assignment and phi-features spell-out in Celtic. Celtic person agreement morphemes and clitic doubling have attracted considerable attention in recent years (Anderson 1982; Stump 1984; McCloskey and Hale 1984; Sadler 1988; Sproat 1985; Bennis 1984; Harlow 1981; Borsley 1983; and others). The phenomenon that has been addressed in most detail is the complementarity between person agreement morphology and overt NP subjects in these languages. In this section, I consider facts from Irish, Breton, and Welsh, and argue that these facts are predicted and straightforwardly characterized by the phi-features model of this essay.

Irish, Breton, and Welsh all distinguish analytic from synthetic verb forms. The analytic form is uninflected or given a superficial third-singular inflection regardless of the actual person or number of the subject. The synthetic form is fully inflected for person and number. The interesting observation for purposes here is that the synthetic and analytic forms are in complementary distribution. Oversimplifying for the moment, the analytic form is used with overt subjects and the synthetic form is used with covert subjects, or in the absence of a subject, according to Anderson's 1982 and Sadock's 1991 incorporation-style analyses. This is summarized in (115)–(116).

(115) Summary of Irish and Breton verb form alternations

a. Subject (upper) AGR: (1) m-subcategorized so that it appears on the verb when present (i.e., if phi-features are inserted; cf. below), producing the analytic form; (2) always use the analytic form with nonpronominal NP subjects; and (3) use the synthetic form for null subjects and instead of pronominal subjects, if possible. That is, only if there is no synthetic form for a particular person or special emphasis is desired can an analytic form plus pronominal subject be used.

b. Object (lower) AGR: (1) not m-subcategorized, so will appear as a clitic; and (2) no clitic doubling permitted; clitics and overt NPs are in strict complementary distribution.

(116) Summary of Welsh verb form alternations

a. Subject AGR: (1) m-subcategorized so that it appears on the verb when present (i.e., if phi-features are inserted; cf. below), producing the analytic form; (2) always use the analytic form with nonpronominal NP subjects; and (3) use the synthetic form for null or overt pronominal subjects.

b. Object AGR: (1) not m-subcategorized, so will appear as a clitic; and (2) clitic doubling is allowed with pronominal objects and prohibited with nonpronominal NPs.

These facts are presented and exemplified in the relevant sections below. Before discussing each language separately, however, I first summarize in (117) the analysis I will be pursuing in this chapter.

(117) Celtic AGR generalizations

a. Phi-feature insertion is optional;

b. Theta assign all interpretive units;[41]

[41]That is, any nominal will be an argument if it is syntactically or morphologically subcategorized, whether it is included in V, adjoined to V, or excluded from V (i.e., in an independent theta position). Celtic behaves like many American Indian languages (cf. Jelinek 1984) in having V^0-internal arguments.

c. Spell out functionally required positions first (where only one phi-feature stack per interpretive unit may be spelled out);

d. Discontinuous overt interpretive units are allowed in Welsh only.

The parenthetical qualification in (117c) will apply in Irish and Breton but not Welsh. It is stated here, in spite of the fact that it may be unintelligible at this point, in order to demonstrate from the outset that there is a simple, unitary analysis for these Celtic languages which fits in very well with the other clitic doubling phenomena that we have seen.

3.16. Irish and Breton. Irish and Breton both prohibit any overt NP from occurring with a synthetic verb form; overt NPs may occur only with the analytic or uninflected forms. Anderson (1982:575ff) gives the data in (118) for Breton.

(118) a. *bemdez e lenn Yannig/ar vugale eul levr*
every^day PRT 3s^ANAL^reads Johnny/the kids a book
Johnny/the kids read a book every day.

b. **bemdez e lennont ar vugale eul levr*
every^day PRT 3p^SYN^read the kids a book

Since the analysis I provide for Irish carries over without exception for Breton, so far as I can tell, I will have no more to say about Breton here, focusing on Irish, with the understanding by the reader that what is said about Irish will apply to Breton in all the relevant aspects.

According to McCloskey and Hale (1984), Irish also has a defective paradigm for synthetic forms, in that there are no synthetic forms for some persons, with some variation depending on the tense of the verb. The general rule, however, is that the analytic form with nonpronominal NP subjects and the synthetic form with null subjects should be used instead of pronoun subjects wherever possible. That is, only if there is no synthetic form for a particular person, or special emphasis is desired, can an analytic form plus pronominal subject be used.[42] Consider the sample paradigm for the verb *cuir* 'put', in (119) from McCloskey and Hale (1984:489).

[42]I do not know what allows special emphasis to override this syntactic requirement.

(119) a. first sg: *chuirfinn*

b. first pl: *chuirfimis*

c. second sg: *chuifea*

d. second pl: *chuirfeadh* ***sibh***
you

e. third masc. sg: *chuirfeadh* ***se***
he

f. third fem. sg: *chuirfeadh* ***si***
she

g. third pl: *chuirfeadh* ***siad***
they

Forms (119a)–(119c) are synthetic forms. Forms (119d)–(119g) are analytic forms. McCloskey and Hale observe that "verbal paradigms in Irish typically have this gapped look to them" (1984:489).

Although the analysis of paradigm gaps is not directly relevant to the analysis of Celtic AGR, it is important for the sake of completeness to say how they are handled in my model. Therefore, I briefly detour from the main discussion to discuss them.

In the present model, paradigm gaps are accounted for by allowing morphological subcategorization to target either morphological categories (e.g., AGR) or lexical entries (e.g., individual phi-features). For Irish, I propose morphological-subcategorization frames along the lines of (120).

(120) $[_{V}{}^{0}$ stem + $([_{AGR}$ {[1person]/[2person]} ([+plural])$])]$[43]

Such gaps are possible only if phi-features are indeed separate lexical categories and thus able to be targeted by m-subcategorization. If a particular phi-feature is excluded from the m-subcategorization frame, then that feature can only surface off of (i.e., not included within) the verb, either as

[43]The optional AGR must be assigned the external theta-role if it occurs, accounting for the fact that no overt NP can occur with it. If no phi-features are inserted, however, which is suggested above as an option in Celtic, then there is no AGR on the verb at all and an overt NP subject may occur, presumably Case-marked by the verb via SPEC-head agreement within TP (tense phrase).

a clitic (an adjoined AGR) or a pronoun, i.e., a D^0. Celtic pronominals are complex and numerous enough, however, so that I do not attempt here to say whether non-m-subcategorized phi-features will surface as independent pronouns, or clitics, or both. In any case, as I have already said, Irish, like other Celtic languages, prohibits the co-occurrence of synthetic forms and overt subjects; note (121).

(121) **chuirfinn me isteach ar an phost sin*
put^CONDIT^1s I in on that job
I would apply for that job.

As McCloskey and Hale observe, "there is in Irish an absolute complementarity between the appearance of person-number morphology on the verb, and the appearance of an independent phonologically-expressed subject" (1984:491).

McCloskey and Hale analyze the covert subject which occurs with Irish synthetic forms as a null pronominal, PRO. Their evidence includes the fact that particles and suffixes, e.g., *fein*, the reflexive-emphatic particle, and demonstrative suffixes, e.g., *-seo* 'proximate', *-sin* 'distant', and *-siud* 'more distance', which normally may appear only following pronouns, in fact appear following the synthetic form of the verb. This is illustrated in (122) for *fein*.

(122) *chuireadar fein an litir sa bhocsa*
put^PAST^3p REFL the letter in^the box
They themselves put the letter in the box.[44]

The questions that must be answered in the context of the present model are (1) why overt subjects are never allowed to occur with synthetic forms, and (2) how to guarantee that the synthetic form will appear instead of the pronoun. For some exceptions determined partially by the tense of the verb, cf. McCloskey and Hale (1984:491).

The inability to double an overt pronoun in Irish would seem to be exactly the opposite of the situation discussed earlier in this chapter for Spanish, and discussed below for Welsh. Recall that in Spanish an overt pronoun may only occur with an overt AGR, where AGR is either subject agreement or an object clitic; see example (123).

[44]The reader is referred to McCloskey and Hale (1984) for further exemplification of the phenomena discussed here.

(123) a. *él*$_i$ *la*$_j$ *ama*$_i$ *a ella*$_j$
He loves her.

b. **él la amar a ella*
(verb form not inflected for person of subject)

c. **él ama a ella*
(pronoun is not doubled by a clitic)

But in Irish an overt pronoun may appear only in the absence of an overt AGR. Nevertheless, I claim here that this fact about Irish pronouns and agreement is the result of a variant of the same principle given in (117) above. The Irish-specific manifestation is given in (124).

(124) Irish phi-feature spell out: Spell out only one set of phi-features.

That is, both (124) and (117) prioritize the spell-out rules for phi-features. This ranking tells the grammar which phi-features to spell out, which is necessary since phi-features never have their own context-dependent spell-out rules since their form at PF depends on their position in the syntax. In Spanish, phi-features in D^0 may only be spelled out after phi-features in AGR^0 are spelled out. Irish also prioritizes phi-feature spell-out rules, but it differs from Spanish in that whereas Spanish will allow lower-ranked phi-features (D^0) to be spelled out if higher-ranked features are already spelled out (producing the forms in (119) above), Irish allows only the most highly ranked phi-feature position to be spelled out in a given phrase. We can derive this fact if we assume that it is a result of the ELSEWHERE CONDITION (Kiparsky 1973). An m-subcategorized AGR is the result of a more specific rule than a clitic or a pronoun (D^0) since this information is given in a lexical entry and thus more specific than information that is given by general syntactic rule. Only if there is no m-subcategorized AGR can a non-m-subcategorized phi-feature node be spelled out, resulting in either a pronoun or a clitic.

McCloskey and Hale analyze these same facts by claiming that the pro subject which occurs with the synthetic form must be covert because (1) the person-number marking on the synthetic form is a clitic, and (2) Irish prohibits clitic doubling. This analysis is unsatisfactory, however. Why should anyone believe that the synthetic verb form in Irish has anything at all to do with the clitic plus verb complex in Spanish, for example? That is, while the appeal to clitic doubling may have some initial appeal, it is useful in the long run only if independent, theoretically motivated definitions between clitics and affixes can be established. It is thus somewhat arbitrary

to classify the agreement marking on Irish synthetic verb forms as clitics, rather than affixes. But if they are affixes, then there is no explanation for the observed complementarity between synthetic forms and overt NP subjects since such complementarity is generally absent in agreement paradigms.

In the present model, this latter fact is derived from the notion of morphological visibility, which always renders visible an included affix, which is what an agreement affix is, by definition. Moreover, the Irish verb forms would certainly not be analyzed as clitics by the Zwicky and Pullum diagnostics given above. Their degree of phonological fusion with their hosts, the arbitrary gaps in synthetic verb paradigms, and other facts make these forms look extremely different than what most linguists think of as clitics.

The present account, however, embeds the Irish facts within a theory in which phi-features are always inserted into D^0 or AGR^0, but which are usually spelled out in a particular order of priority, with most languages choosing to spell out functionally required phi-features or m-subcategorized phi-features first, just as Irish does. However, Irish is much more restrictive than, say, Spanish in that (1) it only allows one phi-feature node per clause to be spelled out, and (2) the order of priority is determined largely by the elsewhere condition.

I now address the other fact about Irish agreement, namely that overt NPs may not occur with inflected forms. In McCloskey and Hale's account, this follows from the fact that Irish lacks clitic doubling. But as noted, this is not really a solution since they provide no clue as to why Irish might lack clitic doubling, nor why the Celtic agreement systems should be analyzed in the same terms as Romance clitic constructions in the first place. In other words, this analysis does not follow from anything and is largely stipulative. Thus another approach is called for. I have given a partial answer to this problem already by arguing that functional categories receive higher priority in terms of spell-out rules. To this I add the principle in (125).

(125) Irish theta-assignment: Theta assign all interpretive units.

This principle requires that any node dominating nominal features in Irish be theta marked, whether it is a functional node or a lexical node. In minimalist terms, this means that in Irish, theta-assignment can take place within both the complement domain of alpha and the maximal extended domain (MED) of alpha, where I intend MED to refer to Grimshaw's notion of extended projection. Principle (125) means that in Irish nominal features (whether from independent phi-features or R-expressions) can only be inserted in either the AGR node or its structurally corresponding complement node, never both. In more familiar terms, both AGR and NP positions are

potential theta-positions and only one can be filled per theta-role or the theta-criterion will be violated. The exception to this is that both positions can be filled in any Celtic language if they form a single interpretive unit. AGR nodes can form interpretive units only with D^0 nodes (where both nodes share all features or where one is a subset of the other and there is no feature conflict), since a condition on IUs is that they be under a single node or that they form a chain. In the latter case, relativized minimality will require that both nodes be of the same type—functional or lexical. Two lexical nodes can form an IU if one is an expletive, i.e., where one has no phi-features (as seen in examples like *There was a man named Bat Masterson*). This is no doubt because a D^0 node with phi-features would bind or be bound by a lexical node, violating binding theory.[45] Otherwise, IUs are formed strictly between functional nodes. For Irish I claim that this explains the fact that a covert pronoun, pro, can co-occur with an overt AGR. However, this pronoun cannot be overt because only one node of phi-features can be spelled out per theta-role and functionally required nodes have priority.[46]

3.17. Welsh.[47] Welsh is like Irish and Breton in that it prohibits the occurrence of nonpronominal NP subjects with synthetic verb forms as in (126).

(126) a. *mae y plant yn canu*
is^3s^ANAL the children PROG sing
The children are singing.

b. **maent y plant yn canu*
is^3p^SYN the children PROG sing

Moreover, Welsh, like Irish and Breton, does not allow a pronoun to occur with an analytic form if there is a corresponding synthetic form; see (127).

(127) a. **mae hwy yn canu*
is^3s^ANAL they PROG sing
They are singing.

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[45]Of course, it is tempting to analyze reflexive antecedent pairs as IUs, except that in such cases more than one theta-role is involved. Therefore I will not attempt to assimilate reflexives to IUs here.

[46]This requirement does not hold in Welsh so that it, like Spanish, allows independent pronominal forms to co-occur with overt AGRs, although it does not allow these pronouns to occur without an overt AGR.

[47]All my data in this section come from Sadler 1988.

b. *maent yn canu*
is^3p^SYN PROG sing
They are singing.

However, Welsh is unlike Irish and Breton in at least two ways. First, it allows pronouns to occur with synthetic forms as in (128).

(128) *maent hwy yn canu*
is^3p^SYN they PROG sing
They are singing.

Second, Welsh differs from Irish and Breton in that it allows clitic doubling. Like Pirahã and Porteño Spanish, Welsh clitic doubling violates Kayne's generalization. Unlike Pirahã and Porteño Spanish, however, Welsh does not allow a nonpronominal NP to be doubled by a clitic. Compare (129a) and (129b) taken from Sadler (1988:74).

(129) a. **mae Rhys yn ei gweld Megan*$_i$
is^3s Rhys PROG 3s^FEM^CL see Megan
Rhys is seeing Megan.

b. *mae Rhys yn ei*$_i$ *gweld ef*$_i$
is^3s Rhys PROG 3s^MAS^CL see him/it
Rhys is seeing him/it.

In the current framework, the facts are straightforward and the relationship between Welsh and other Celtic languages can be derived from more enlightening principles than merely saying that one language but not another allows clitic doubling. I propose here that Welsh AGR facts are exactly like Irish and Breton except for the single difference noted in (130).

(130) Welsh pronoun spell-out: Lexically required categories may be spelled out if functionally required categories are also spelled out.

Carrying over the analysis from Irish, Welsh AGRs (whether m-subcategorized or not; i.e., whether found as clitics or on synthetic verb forms) are theta assigned. Moreover, they must be spelled out before nonclitic pronouns (i.e., D^0 phi-feature stacks which are lexically rather than functionally required). Like Irish and Breton, Welsh allows AGRs and Ds to form interpretive units. In all these languages, a pronoun occurring with a synthetic form will not be an independent argument. I take it that this is due to the fact that in Welsh a single interpretive unit needs but a single Case. In

Breton and Irish, each node requires its own Case. So Welsh behaves more like standard Spanish, and Breton and Irish like standard Italian and French (cf. §§3.1 and 7.1). But only in Welsh, via (130), may the D^0 be overt, when it forms an interpretive unit with AGR. Like Breton and Irish, phi-feature insertion is optional in Welsh, accounting for the optional analytic form, resulting when no phi-features are inserted.

3.18. Conclusion. In this section I have shown that some rather minimal assumptions on phi-feature spell-out and interpretive units, as well as a less minimal but nonetheless independently justified proposal on theta-assignment within extended projections, is able to account for, and in fact derive all the Celtic facts within, the overall theory that I have been developing, without reference to different lexical properties of clitics or affixes. I now consider some facts from the Amazonian language of the Muran family, Pirahã.

3.19–3.22 Clitic doubling in Pirahã

In this section, I want to recast the analysis of Pirahã clitics first proposed in Everett (1987) in terms of the framework of the current essay. I will argue that the Pirahã facts fit well into the current framework and that this framework offers an interesting integration of facts from Romance and Muran.

The doubling characteristics of Pirahã are (1) that doubling is possible from direct object, subject, possessor of NP, and object of postposition positions; and (2) that doubling is optional. Before providing a reanalysis of the facts, I will summarize here the arguments presented in Everett (1987) that Pirahã PRONs are indeed clitics and that the relevant structures do illustrate clitic doubling. In Pirahã examples, an acute accent over a vowel indicates high tone, no accent indicates low tone. The basic facts are illustrated in (131)–(133):

(131) Subjects and direct objects

a. *Kóʔoíᵢ* (*hiᵢ*) *sigíhiíⱼ* (*ʔísⱼ*) *ohoiáipí*
NAME (3^CL) meat (3^AN^CL) eat
Koʔoi eats meat.

b. *Kóʔoíᵢ sigíhiíⱼ* (*hiᵢ*) (*ʔísⱼ*) *ohoiáipí*
NAME meat (3^CL) (3^AN^CL) eat
Koʔoi eats meat.

(132) Possessor

[NP *Kohoibiíhai*$_i$ (*hi*$_i$) *kaiíi*$_j$]$_j$ (*ʔi*$_j$) *bigíkaobíi*
NAME (3^CL) house (3^INAN^CL) fell
Kohoibiihai's house fell down.

(133) Postpositional object

ti [PP *ʔíbaisi (ʔi) ʔigío*] *ʔopítahá*
1 wife (3^FEM^CL) with depart
I departed with my wife.

Unlike River Plate Spanish and Celtic, the Pirahã clitics impose no restrictions on their doubles. Kayne's generalization is clearly inoperative in this language, much as it is in Porteño Spanish.

3.19. Doubles are in A-positions. Clitic-doubled NPs are in A-positions at D-structure by definition (cf. (56) above). Therefore, I must show that Pirahã doubled NPs are in A-positions. There are two sources of evidence which support this claim, namely binding and crossover effects. Consider first the binding facts as illustrated in (134) and (135).

(134) *Paigí hi obáaʔáí Paigí*
NAME 3^CL sees^well NAME
Paigi is really smart/talented, Paigi (is).

(135) **Paigí hi Paigí hi obái*
NAME 3^CL NAME 3^CL sees
Paigi sees Paigi.

Example (134) is good because the second occurrence of the proper name, *Paigi*, appears in a postverbal emphatic position (cf. Everett 1986 for more details on Pirahã grammar). In fact, the proper name can be repeated one more time as in (136), and still produce a well-formed, natural sentence.

(136) *Paigí Paigí hi ʔobáaʔáí Paigí*
Paigi is really smart/talented, Paigi (is).

Neither (134) nor (136) is ungrammatical because no proper name is A-bound. Everett (1987) argues that the binding condition in (60c) should be interpreted as a prohibition against A-binding of R-expressions, not

A'-binding. Any binding which might take place in (134) and (136) is A'-binding. However, in (135), the subject position, an A-position, binds the object position, leading to a violation of the binding condition in (60c). Thus, evidence from binding theory supports my analysis of these facts as clitic doubling, since it indicates that doubled NPs are in A-positions.

Another source of evidence for my analysis comes from crossover; consider (137).

(137) ***kaoʃ***$_i$ *Kóʔoʃ*$_i$ *hi*$_i$ vbl$_i$ *hi*$_i$ *ʔogibaʃ*
Who$_i$ likes Koʔoi$_i$?

Example (137) is ungrammatical, just like its English counterpart, because the variable in object position is A-bound by subject position. This is a binding condition (60c) violation known as STRONG CROSSOVER. So-called WEAK CROSSOVER also results in a deterioration in grammaticality in both English and Pirahã, as shown by the contrast in (138).

(138) a. ?/***pro***$_i$ (*hi*$_i$) *baíʔi* *kaoʃ*$_i$ (*hi*$_i$) *ʔibíbihaʃ*
(3^CL) parent who (3^CL) send
Who$_i$ did his$_i$ parent send?

b. ***pro***$_i$ (*hi*$_i$) *baíʔi kaoʃ*$_j$ (*hi*$_j$) *ʔibíbihaʃ*
Who$_i$ did his$_j$ parent send?

I assume that (138a) is ungrammatical due to the BIJECTION PRINCIPLE (Koopman and Sportiche 1983) which states that there is a bijective correspondence between variables and A'-positions. That is, a single A'-position can only bind a single variable. According to Koopman and Sportiche, when a quantifier locally binds a PRON, the PRON is interpreted as a variable. Therefore, in (138a), the quantifier *kaoʃ* (in SPEC of COMP, an A'-position) binds two variables at LF, the PRON *hi* and the EC (i.e., variable) it leaves after movement in logical form. Important for the present discussion is that the EC left after movement, and hence the D-structure position of the quantifier *kaoʃ* must be an A-position for weak crossover to result. Sportiche summarizes weak crossover structures as:

> structures containing a pronoun P referentially dependent on a **wh**-trace or a QR-trace when **wh**-movement has taken place **from some A-position** A* [emphasis mine] to some A'-position A'* such that A'* c-commands both P and A* and neither P nor A* c-commands the other. (1985:467)

Therefore, in order to account for the weak-crossover effect in (138a), I must assume that the doubled quantifier originates in an A-position. Weak crossover thus supports my doubling analysis in Pirahã. Another source of evidence that this is clitic doubling comes from the position of the clitic itself.

3.20. Movable PRONS. In the model I have been developing in this monograph, the distinction between clitics and affixes is purely epiphenomenal. Nevertheless, some skeptical readers may be unwilling to grant this assumption in the present context and might prefer to analyze Pirahã clitics as nothing more than verbal agreement affixes. If this were the case (and if I had a theory of the difference between clitics and affixes other than the present one), then these examples would be little more than run-of-the-mill illustrations of verbal agreement. However, as is well known, agreement affixes cannot move. They are rigidly held to a single PF/S-structure position. Thus, the variation in the linear placement of the PRON, as shown by the subject clitic in (131), would be a mystery under this affix account. I therefore take the movement of the subject clitic as yet more evidence that the phenomenon in question is what is traditionally known as clitic doubling and not merely agreement. Other arguments to this effect are found in Everett 1987 and 1986. In the present framework, this means that no X^0 in Pirahã m-subcategorizes for AGR^0. Having established that the phenomenon under consideration here fits the traditional characterization of clitic doubling, I now turn to consider how the linear orders in the above examples are derived.

3.21. AGR-placement and surface orders. Everett (1987) argued that the alternate orders of the subject clitic seen in (131) above are derived by INFL-lowering, as it was there assumed that the subject clitic was dominated by $INFL^0$. That work assumed that all other clitics were generated in situ. It is easy enough to demonstrate that the subject clitic lowers. Consider the evidence in (139)–(140) from Pirahã that affixal order is not derived via raising of non-AGR material.

(139) a. *Kaioá*$_i$ *hi*$_i$ *báíhiigí-o* *kabatíí*$_j$ *?ís*$_j$ *?iboítopí*
NAME 3^CL slow-OBLIQUE tapir it cut
Kaoia slowly cuts up the tapir.

b. *Kaioá*$_i$ *báíhiigí-o kabatíí*$_j$ *hi*$_i$ *?ís*$_j$ *?iboítopí*

To derive (139a) from (139b) via raising of the nonclitic material, I would have to move the words *báíhiigío kabatíí.* But these words do not form a

constituent, so that they cannot be moved by a single rule. A claim that they are moved by two applications of the same raising rule (whatever this might be motivated by) is not valid since a sentence in which they are separated by the subject clitic is ungrammatical; note (140).

(140) **Kaioá*$_i$ *báíhiigí-o hi*$_i$ *kabatií*$_j$ *?ís*$_j$ *?iboítopí*

Another alternative to AGR^0 lowering would be to generate the clitic immediately to the left of the object agreement PRON and then raise it to postsubject position, deriving (139a) from (139b). However, the only way to derive such a D-structure would be to either abandon the attempt to assimilate agreement PRONs to AGR behavior or to generate a left-headed AGRP, options which I reject as unattractive for conceptual and empirical reasons (most of the empirical reasons coming from other chapters of this essay). A left-headed AGRP in an otherwise right-headed (SOV) language like Pirahã would entail an undesirable weakening of X-bar theory.

This section accepts the analysis that subject clitics undergo lowering, but it offers an alternative analysis of nonsubject clitics and it updates the overall analysis so as to conform to current assumptions about grammatical theory that are different than those held at the time Everett (1987) was written. The analysis I argue for in this section is summarized in (141).

(141) Pirahã clitic doubling

a. Case realization and AGR^0 spell-out are optional

b. Case assignment is to the left, via adjacency

c. AGR^0 lowers to the head of VP or TP

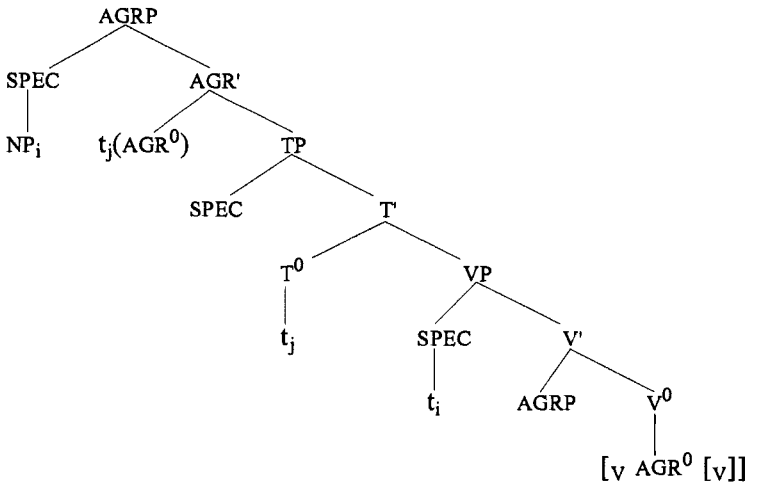
d. The subject NP raises to the highest (functional) SPEC available

e. SPEC ingestion occurs (i.e., no AGR is m-subcategorized)

f. Setting for m-visibility is COVER

This analysis produces the surface form in (142) for sentences like (138) above, in which there is no overt subject AGR, i.e., no clitic.

(142)



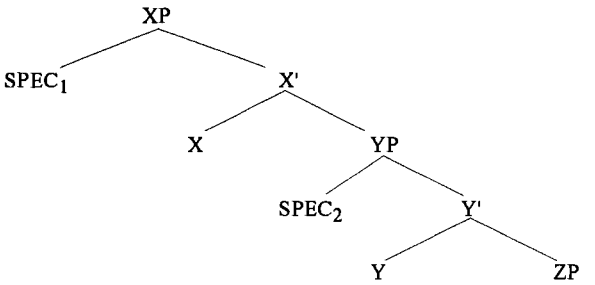
In (142), the SPEC of AGRP receives Case from AGR^0, which subsequently lowers to either T^{0}or V^0. This choice of T or V as possible adjunction sites for AGR is possible because AGRP is an immediate functional projection of TP and part of the extended projection of VP (Grimshaw 1991). In all other phrase types (VP, NP, PP) in Pirahã which project an AGRP, there is only one possible head for AGR-adjunction, such that the mobility of AGR^0 observed in examples like (131) is found only with subject clitics.

Before introducing the remaining phrasal structures, it is necessary to define and justify the notion of SPEC ingestion. This principle is important in order to understand why certain AGRs fail to project a SPEC, a matter which becomes even more crucial in the next section in my analysis of Yagua.

Chomsky argues that all Case-assignment is a manifestation of the "SPEC-head relation (NP-AGR)" (1992:10ff). While I agree that this is the simplest analysis of the unmarked case under a minimalist theory, it is not the only option available, even within such a theory, given the relationship of AGR to clitics being developed here. What the present model forces us to consider, a consideration which does not arise under Chomsky's immediate assumptions, is the case of non-m-subcategorized AGR nodes. These nodes are the source of nominal special clitics in my theory and thus represent a variation on the possible conditions for AGR manifestation and functions. For example, an overt AGR^0 will always need to satisfy some version of visibility. I assume then, following Speas (1989), that phrase projection is derivational, in the sense that it is dynamic. Whether a node, alpha, will or will not project is determined as part of the process "introducing alpha into the derivation" in Chomsky's (1992:17) terms.

Now if a given AGR^0 is not m-subcategorized (i.e., if morphology and the CDAP do not conspire to predetermine that it will be included within an X^0 at some stage in the derivation), I say that it refuses to project, greedily keeping its Case for itself. This happens even if the AGR^0 will ultimately satisfy visibility without Case, since AGR has no way of knowing whether it will or will not unless it is m-subcategorized. This means that no overt, non-m-subcategorized AGR^0 will project a SPEC position.[48] If this restriction on SPEC projection is correct, then without a SPEC position, agreement and Case-assignment between AGR^0-NP cannot take place unless the head of NP's phrase, X^0, and AGR^0 are adjoined somehow, either by raising X^0 to AGR^0 or by lowering AGR^0 to X^0. If X^0 raises, then by either Baker's (1988:63ff) GOVERNMENT TRANSPARENCY COROLLARY or by Chomsky's (1992:24ff) notion of MINIMAL DOMAIN, the SPEC dominating the NP can be assigned Case via agreement (i.e., feature-checking) with AGR^0 in AGR's newly expanded domain. I will pursue this notion of minimal domain for my purposes here. Consider first an abstract structure like (143) from Chomsky (1992:22).

(143)



Chomsky argues that "in the abstract case, (143) [numbering mine], if Y adjoins to X forming the chain (Y, t) with the minimal domain {SPEC$_1$, SPEC$_2$, ZP}, then SPEC$_1$ and SPEC$_2$ are equidistant from ZP" (1992:24). He defines MINIMAL DOMAIN as follows: "For any set of categories, let us take Min(S) (minimal S) to be the smallest subset K of S such that for any

[48]It will either not project at all as per Everett (1987, 1989), or project only to AGR', or project to AGRP but not license a SPEC under AGRP. I will assume the latter option, much like Chomsky's (1991, 1992) representation of TP, although this choice is admittedly arbitrary.

$\gamma \in S$, some $\beta \in K$ reflexively dominates γ" (Chomsky 1992:16).[49] This means that, in perhaps more familiar terms, Y's movement to X in (143), extends Y's government domain, as per the GOVERNMENT TRANSPARENCY COROLLARY.

Now in the scenario I am describing where a non-m-subcategorized AGR^0 has ingested its SPEC (i.e., failed to project/license one), X^0 adjunction to AGR^0 will nevertheless extend the domain of X^0 to include the node projecting AGRP, TP, or VP. I claim that this also extends the domain of AGR to allow AGR^0 to check/assign Case and agreement features to the SPEC of the chain $([_{X^0}\ [AGR^0]]_i \ldots t_i' \ldots t_i)$. If AGR^0 has a SPEC filled by an NP, ungrammaticality will result if it Case-marks or agrees with any other NP. But if AGR^0 lacks a SPEC of its own, possibilities for agreement and Case-assignment via AGR^0 vary, subject of course to independent principles of LF. Different applications of these ideas are found in Pirahã and Yagua.

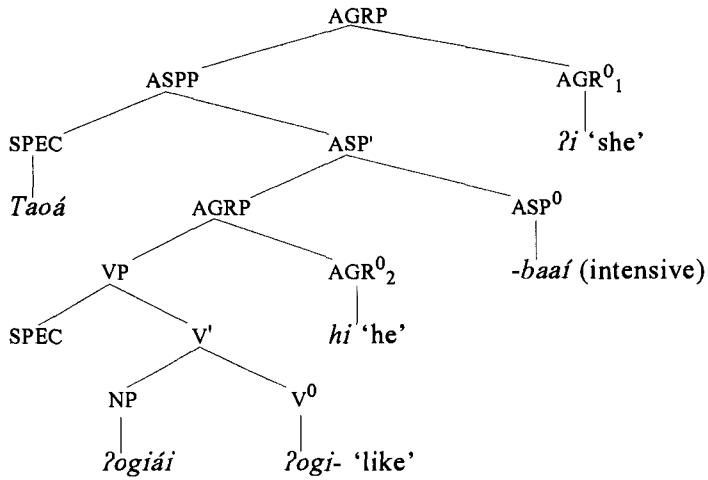
For Pirahã, AGR^0 lowers to V^0 via ASP^0. In Yagua (cf. §§3.23–3.26), V^0 raises (overtly) to AGR^0. Consider how this derives Pirahã subject doubling facts, i.e., where AGR^0 is overt as shown in (144). A partial surface structure for (144) is in (145).

(144) a. *Taoá* *ʔi* *ʔogiái* *hi* *ʔogi-baaí*
FEM^NAME 3^FEM^CL MAS^NAME S^MAS^CL likes-INTSV
Taoa loves ʔogiai.

b. *Taoá* *ʔogiái* *ʔi* *hi* *ʔogi-baaí*
FEM^NAME MAS^NAME 3^FEM^CL S^MAS^CL likes-INTSV
Taoa loves ʔogiai.

[49]Throughout Chomsky (1992) the expression "reflexively dominates" is used. I think that what Chomsky actually means is transitively dominates, since domination is not usually understood as a reflexive notion, but rather a transitive one, such that if X dominates Y and Y dominates Z, then X dominates Z. However, he may mean that X reflexively dominates Y if the projection of X dominates Y. I cannot ascertain this from my reading of his text.

(145)



Neither AGR projects a SPEC because both are overt and because there is no m-subcategorization for AGR^0 in Pirahã.[50] In (145), *Taoá* has raised to SPEC of ASP. The object, *?ogiái*, will not raise out of VP, since the lower AGR, being overt, fails to project a SPEC. The raising to SPEC of ASP is presumably due to the EXTENDED PROJECTION PRINCIPLE in GB terms, the requirement that the VP be predicated of a nominal external to VP. No such principle forces the object NP to raise, so it may remain where it is, so long as it eventually receives Case. What remains to be accounted for in this derivation is how ASP^0 and each of the AGRs are moved to their surface orders, seen in (145).

If AGR$^0_1$ lowers to ASP^0, then the NP in SPEC of VP must move to SPEC of ASP^0, where it will receive Case and check agreement features from the adjoined AGR^0/ASP^0. AGR^0 can subsequently lower to V^0 (via AGR$^0_2$, as required by relativized minimality), leading to (144b), or AGR$^0_1$ may remain in ASP^0, leading ultimately to (144a).

While this account derives the relative hierarchical positions of AGR$_1$ and AGR2, it does not yet indicate why aspect appears on the right of V^0 at PF (i.e., as a suffix), while both AGR^{0}s appear adjoined to the left of V^0 (i.e., as

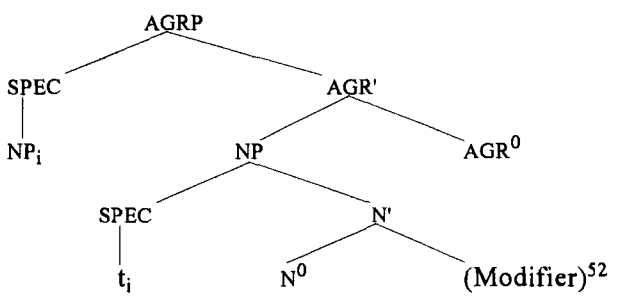
[50]There are some data to suggest that Pirahã has subcategorized for the lower AGR^0 position. That is, that Pirahã has developed an ergative agreement system. This is indeed Keren Everett's analysis of the facts. If so, then there would be a SPEC generated for the lower AGR, since this AGR position, unlike the higher AGR, would be m-subcategorized, in violation of the CDAP, as is typical for ergative languages. However, I will not attempt to sort this out here, treating both AGRs uniformly, since whether Pirahã is ergative or not is orthogonal to my present concerns.

proclitics). Now, a priori at least, clitic placement in Pirahã may be nothing more than a "trivial morphological fact," as once suggested to me by Chomsky (p.c.). But I would like to pursue an analysis in which the ordering restrictions on ASP^0 and AGR^0 reflect syntactic conditions. In particular, I want to suggest that their placement is at least partially determined by Case theory.

I have assumed, that Case in Pirahã must be assigned to the immediate left Everett (1987). This would mean that SPEC-head agreement is a necessary, but not a sufficient, condition on Case assignment and that Case assignment may also be subject to other conditions such as adjacency (cf. Stowell 1981 for the first sustained discussion of Case and adjacency). Then after AGR^0 lowers to ASP^0 and after SPEC-head checking takes place, AGR^0 moves once again to adjoin to the left edge of the first word (X^0) to the right of SPEC of ASP^0, either an object NP (either object of VP or PP) or V^0.[51] After Case has been assigned via adjacency, it will lower to V^0. However, the structure may be fed to PF at any time after Case assignment, either before or after lowering to V^0, leading to the alternate orders in (131).

This proposal has a number of interesting typological implications, as will be seen. First, however, I will consider how this same analysis extends to doubling within NP and PP. The relevant derivations are shown in (146) and (147) where AGR^0 is covert (cf. examples (132) and (133) above).

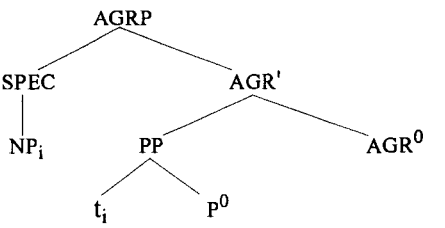
(146)



[51]As will be seen in chapter 4 in my discussion of French complex inversion, economy of derivation will ensure that an X^m which adjoins to a Y^m will adjoin to the first edge of Y^m it encounters, other things being equal. The first edge of V^0 for ASP^0, for example, will be the right edge. The first edge for each AGR^0, following Case-assignment via adjacency, will be the left edge.

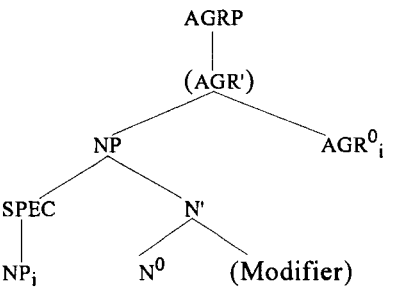
[52]The order of modifiers is rather unexpectedly to the right of the head here. However, this is a well known fact about modification in SOV languages and is quite common. See Hawkins (1990) for some discussion.

(147)

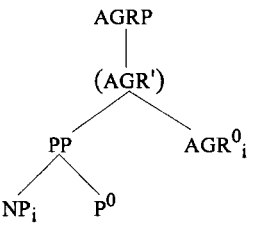


In each of these examples, a SPEC of AGR is generated and the NP sister of the lexical head, N^0 and P^0, raises to this SPEC, where it receives Case and is checked for agreement, following the same adjunction of AGR^0 to the immediate right of the NP in SPEC that we saw earlier for subject and object NPs. Now, consider overt AGRs[53] in NP and PP shown in (148) and (149).

(148)



(149)



In these cases, no SPEC has been projected. Since there is no intermediate functional projection in NP or PP corresponding to ASPP in (142), the adjacency requirement on Case assignment requires that AGR lower directly to the lexical head, P or N.

One of the typological implications of this proposal is that it is able to express the fact that Pirahã subject agreement is optionally HEAD-MARKING

[53]Again, whether AGR is overt or covert is subject to inter- and intralanguage variation.

or DEPENDENT-MARKING in Nichols' (1986) terminology. That is, it allows agreement to be marked on what Nichols would likely consider the head of S, V^0, or, at least in terms of string adjacency, on the relevant dependent of the head (i.e., SPEC or complement). More generally, however, this analysis relates Pirahã sentence structure constraints to a well known fact about SOV languages in general, namely, that tense and aspect tend to surface as suffixes in such languages, while agreement tends to surface as a prefix or proclitic. Givón (1984:228ff) and Comrie (1981:209ff), among others, offer suggestions to account for these facts based on diachrony. If we accept a well known Givónian maxim that today's morphology is yesterday's syntax (Givón 1971 and p.c.), then subject agreement (and object agreement, if any) develops from pronouns, and tense-mode-aspect markers develop from verbs. Since pronouns precede the verb and verbs are clause-final in a SOV language, items developing from pronouns, i.e., agreement affixes, will be preverbal, and items developing from main verbs or auxiliaries will be postverbal, assuming as Givón (1971) does, that bound morphemes will maintain more or less the same surface order as the free words they derive from.

The problem with Givón's intuitively simple account is twofold: (1) there are numerous exceptions where affix order does not reflect historical order of free forms (Comrie 1981:209ff), and (2) there must be a phrase-structure position (at least within the confines of any generative grammar) for pronouns to be generated into subsequent to their development into bound agreement affixes or clitics. If this type of position is given by X-bar theory (itself deriving from UG), then knowing the previous surface order of the free-form pronouns which developed into today's agreement affixes may turn out to be irrelevant to their current affix order. That is, if we must constrain ourselves by worrying about X-bar theory, then there is no way to guarantee that yesterday maps isomorphically into today.

Therefore, I suggest here that there is an alternative account of the facts and that Givón's observation, to the degree that it holds true, is concerned only with an epiphenomenon, and that the real explanation for affixal orders is to be found in Case theory and X'-bar structures.

For example, if I adopt structure (142) and assume movement of AGR^0, motivated by Case theory, then agreement morphemes will be preverbal in SOV languages, unless these languages have some Case-assignment peculiarities. However, since nothing motivates ASP^0 or T^0 movement to the right of the subject in these languages, then I expect these nodes to remain where they are expected to be, i.e., on the right of V^0, and that they will surface as suffixes or postverbal auxiliaries, depending on the m-subcategorization properties of the verb.

This entire account, however, crucially relies on the assumption that AGR^0 movement takes place in the syntax, not at PF, since the principles which would be involved under this account are all syntactic. By my proposal, then, not only do I account for Pirahã clitic and affix order, but also for a well known typological property of SOV languages generally and in an explicit formal grammar. Moreover, I lay the basis for formalizing a hypothesis about the diachronic development of agreement affixes and pronominal clitics from free-form pronouns. For example, one possible hypothesis based on the present model is formalized in (150).

(150) PRON diachrony (parentheses represent phonological boundaries and brackets represent morphosyntactic boundaries)

a. $([D^0 \ldots]) ([X^{0 \cdots}]) \rightarrow ([_D{}^0 \ldots] [X^{0 \cdots}])$

b. $([_{AGR}{}^0 \ldots] [X^{0 \cdots}]) \rightarrow [X^0 [_{AGR}{}^0 \ldots] [X^{0 \cdots}]]$

c. $[X^0 [AGR^0 \ldots] [X^{0 \cdots}]] \rightarrow [X^0 [_{AGR}{}^0 \ldots]]$

That is, in the present model the development of agreement affixes from pronouns first involves phonological attachment of the pronoun to another word (directionality irrelevant), as in (150a). This common process (as in English *I like* ***'em***) of formation of simple clitics from pronouns may then lead to reanalysis of the pronoun as an adjoined AGR (i.e., a clitic), as in (150b), a natural enough hypothesis, given that AGR and D are composed of the same type of features. As per the hypothesis on clitic acquisition in chapter 8 below, children will interpret clitics as affixes, other things being equal, leading to the potential reanalysis in (150c).

Now consider how this analysis is able to account for the doubling of covert NPs in Pirahã.

3.22. Doubling covert NPs. In this section I argue that the analysis of Pirahã clitics just presented allows understanding of some otherwise puzzling facts about the doubling of covert NPs. This section departs significantly from the analysis of Everett (1987), which was based on the hypothesis that clitics were the spell-out of the Case index of the phrasal head. This analysis also differs from my earlier analysis in rejecting Chomsky's (1982:78ff) typology of empty categories since the feature pairs [± pronominal], [± anaphor] are not available in the current model.

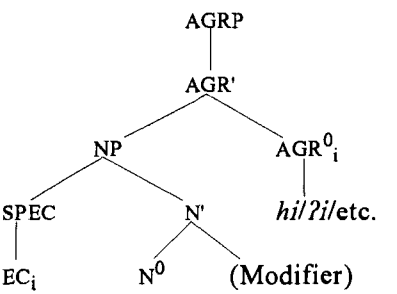
The basic fact which must be accounted for in this section is the disambiguating effect that the clitic has. Consider first the effect of overt versus covert AGR in NPs, as seen in the contrast between (151) and (152).

(151) (EC) *baf?i*
his/her/its parent *or* the/a parent

(152) EC *hi baf?i*
his/her/its parent *not* the/a parent

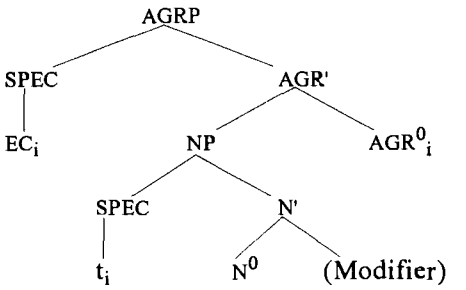
That is, if the clitic is present, as in (152), then the noun is obligatorily possessed. If the clitic is absent, as in (151), then the noun is only optionally possessed. I have indicated this in the examples by listing the EC possessor as optional in (151) and obligatory in (152). This effect of the clitic is straightforward if I follow my earlier assumptions and generate an AGR position only if a theta-role is assigned. Moreover, I must continue to distinguish the syntactic presence of AGR from its phonological presence, i.e., that its presence in the syntactic component is independent of whether or not it has been spelled out (introduced into PF). The proposal is that if no overt AGR is present, then the possessor theta-role may or may not have been assigned by the N^0. If it has, there will be a covert AGR in the structure. If it has not, there will be no AGR in the structure at all. These options are shown in (153) and (154).

(153)



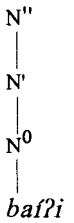
The EC possessor is forced in (153) because the overt presence of AGR^0 signals the assignment of the possessor theta-role, as per the independently required assumptions on the role of AGR and its relation to theta-assignment in UG. But now consider (154).

(154)



In (154) I assume that there is a covert AGR doubling a covert possessor NP, resulting in a possessive reading in (151) above. Remember that I am assuming that AGR is always present if a theta-role is assigned, regardless of whether or not it is pronounced, following the spirit of Chomsky (1991, 1992). However, when AGR is not heard, then structure (155) is also an option.

(155)



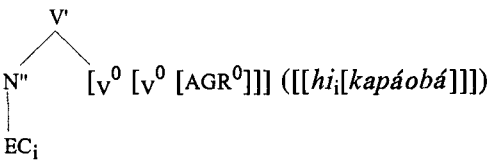
In this example there is no AGR at all and therefore no SPEC position, since if AGR is not present there was no possessor theta-role assignment and hence no covert SPEC/possessor. Of course, my analysis predicts that there can be an overt SPEC with a covert AGR, just as there can be a covert SPEC with an overt AGR, as in (154). This prediction is borne out in numerous examples, since, as was noted at the outset of this section, clitic doubling in Pirahã is optional. In my terms, this means that AGR spell-out is optional.

This same phenomenon is observed with direct objects as well; note the contrast between (156) and (157). The relevant structures to account for this contrast are in (158), (159), and (160).

(156) *ti*$_i$ (EC$_j$) *kapáobá*
I shot it. *or* I shot.

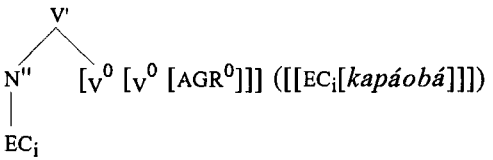
(157) *ti*$_i$ EC$_j$ *hi*$_j$ *kapáobá*
1s EC 3s shot
I shot it. *not* I shot.

(158)



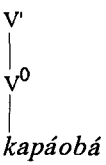
In (158), like (152) above, the overt AGR signals that the phrasal head has assigned a theta-role. Thus, the EC object in (158) is obligatory. However, when the clitic is not heard then there are two possible structures, (159) and (160).

(159)



In (156) and (159), as in (151) above, the covert NP argument is doubled by a covert V' clitic/AGR position.[54] However, the AGR position could be absent, not merely covert, just in case V^0 assigns no theta-role, as in (160).

(160)



In summary, the present analysis of clitics as AGR accounts for the Pirahã facts without positing any Case-absorption or Case-realization function peculiar to clitics. I consider briefly now the binding properties of doubled ECs in Pirahã. Consider first the contrast between (161) and (162).[55]

(161) *Kó?oí*$_i$ (*hi*$_i$) EC$_j$ *hi*$_j$*? ogí-koí*
NAME (3s) EC 3s like-EMPH
Ko?oi really likes him.

[54]Although space does not permit a detailed consideration of their analysis here, I assume that the abstract clitic of Keyser and Roeper (1992) is an AGR position which has not made it to PF, presumably due to the fact that English gives priority to lexically required categories in spell-out rules.

[55]This section is taken largely from Everett (1987:269ff).

(162) *Kó?oí*$_i$ (*hi*$_i$) EC$_i$ *hi*$_i$ *?ogí-koí*
NAME (3s) EC 3s like-EMPH
Ko?oi really likes himself.

As the glosses show, transitive structures with a covert object doubled by a clitic may be interpreted as reflexive or nonreflexive. However, when the clitic is absent, the reflexive interpretation is not possible as shown in (163).

(163) *Kó?oí*$_i$ (*hi*$_i$) EC$_j$ *?ogí-koí*
Ko?oi really likes him/*himself.

Admittedly, (162) and (163) sound alike in certain cases, depending on whether or not the subject clitic (shown in parentheses) is realized.[56] However, the contrast in interpretation is clearly signaled at PF when both clitics are present or absent. When both clitics are present, the reflexive reading is always available. When both are absent, this reading is never available.

I assume here that the EC in (162) is a covert reflexive, with the properties of an English pronoun-plus-self form. If so, then I need to explain why this reflexive may never be overt and why it needs to be doubled by a clitic. The first question has an easy answer. Pirahã rarely spells out free form pronouns and I hypothesize that it lacks spell-out rules for reflexive clitics. This is compatible with what I know independently about Pirahã pronouns synchronically and diachronically. Synchronically, Pirahã makes no number distinctions for its pronouns, distinguishing them (overtly at least) only for class distinctions (cf. K. Everett, in preparation). Thus, it is not surprising that it simply lacks spell-out rules for reflexive forms. By this reasoning, there is no principled explanation for the absence of overt reflexives in Pirahã, it simply makes no overt distinctions aside from [class] and [person]. Diachronically, there may be some motivation for this fact. Everett (1986) speculates, following Nimuendaju (1948), that Pirahã has borrowed its pronominal forms referring to humans, *ti* 'first person', *gi* [ni] 'second person', and *hi* 'third person', from the former Creole trade language of the Brazilian Amazon, Nheengatu (or *Lingua Geral*).[57] Other forms, e.g., *ao* 'plant', *?is* 'meat', *?i* 'inanimate objects', are clearly derived from the

[56]When the subject clitic is not realized in (163), there will be one *hi;* the same is true when the subject clitic is realized.

[57]Cf. Everett (1993) for a discussion of the implications of this fact for certain proposals on the genetic classification of Amazonian languages.

first syllable of the respective prototypical full noun forms, although they are used as clitics, just like those discussed earlier in the text. Note the illustrations in (164)–(166).

(164) *ti ʔísi ʔís ʔohoáipí*
1 meat meat eat
I eat meat.

(165) *ti ʔáohoí ʔáo ʔohoáipí*
1 manioc plant eat
I eat manioc.

(166) *ti kahóíʔoí ʔáo ʔohoáipí*
1 pineapple plant eat
I eat pineapple.

Thus, there is good reason to suppose that Pirahã's pronominal system is in an early stage of development and that while it indeed has reflexives (since these are available from UG), it lacks spell-out rules for them.[58]

The remaining question is why these covert reflexives must be doubled. I assume that the basic form of the covert reflexive in Pirahã is similar to reflexives in English as in (167).

(167) pro + *self*

The *self* morpheme will mark the PRON as reflexive. However, the pro portion needs to have its reference determined just like any null pronominal crosslinguistically (cf. chapter 5 below). To determine the reference of a pro, it must have its own phi-features and it must be governed by a uniform AGR (cf. Safir and Jaeggli 1989:29ff). Since Pirahã AGR is uniform, it allows pro. English lacks such anaphors because it lacks

[58]Prior to the borrowing of its PRON forms from Nheengatu and the development of new class markers from the first syllables of basic lexical items, Pirahã may have used tone to distinguish pronominal categories. I have no information on this, however. Note that my account makes the differences in basic forms of pronouns a fact about spell-out rules, not about the inherent morphosyntactic or semantic features of different PRONs. While the latter is also possible, I expect greater and more frequent variation at PF.

a uniform AGR.[59] Then the reason that the null reflexive in Pirahã must be doubled is so that the pro portion of the anaphor in (167) may be identified. That is, although null AGRs do not need to be identified because they are not in lexically related or lexically required positions, D^0 positions must always be IDENTIFIABLE and have their reference DETERMINABLE (both of these notions are discussed in chapter 5 below).

However, if it is true that Pirahã requires an overt AGR to identify pro, how do I classify the ECs in examples like (156) and (163), where there is no overt AGR to identify the EC? In these cases, I claim that the EC is in fact a variable, exactly the analysis that was argued for in Everett (1987). The evidence for this analysis is as follows.

The EC in the relative examples cannot be a PRO, since it is governed. It cannot be a trace since there has been no movement. It cannot be pro since there is no identifier (i.e., no overt AGR). It can only be a variable, bound by a covert operator. If this were not true then its interpretation would not be clause-bound but would depend on the surrounding discourse context (cf. Huang 1984). In fact, nondoubled ECs are only found when the context clearly defines the referent, whereas clitic-doubled ECs are common and their referents are usually less contextually salient. I propose therefore (referring the reader to Everett 1987 for more details) that the structure of (163) above is as in (168).

(168) $[X^m\ O_i\ [_{AGRP}\ Kó?oí_j\ (hi_j)\ [_{VP}\ VBL_i\ ?ogíkoí]]]$

The binding contrasts between doubled and nondoubled covert NPs thus strongly support the analysis of Pirahã clitics as manifestations of AGR^0. I turn now to the case of clitic doubling in Yagua, first described in Everett (1989a).

3.23–3.26 Clitic doubling in Yagua

Everett (1989a) analyzes the intricate clitic doubling facts of Yagua, as described originally in D. Payne (1985, 1986, 1987), T. Payne (1983,

[59] I interpret uniform somewhat differently than Safir and Jaeggli, however. What I claim is that, for example, English is just as uniform as any other language with regard to the features found in its AGR positions, but that it differs and is nonuniform in its spell-out rules. Spell-out rules are relevant here since PF must allow for reference to be determinable. So, a covert AGR, as is common in English under the present model, is still not determinable at PF. The fact that English spells out its AGR positions rather asystematically leads to its characterization as a nonuniform AGR system and, therefore, to its inability to allow pro.

1985), and Payne and Payne (1989). The facts which were accounted for in that study, and which must be reexamined in light of the drastically different assumptions of the present discussion, include those in (169)–(188).

I argue here that the Yagua clitic facts all follow from Case-theory, morphological visibility, and m-subcategorization. Unlike Everett (1989a), however, this analysis need not refer to clitics (indeed it may not!) or, a fortiori, any parametrization of clitics. The discussion of Yagua is organized as follows. First, I review in some detail the relevant facts to be accounted for. Next, I propose a reanalysis of these facts within the current framework. Finally, I consider the implications of this analysis for the understanding of phi-features in UG.

3.23. Summary of Yagua clitic facts. The following facts and examples are taken from Everett 1989a:345. Acute accents in the data indicate vowel quality; cf. Payne and Payne (1989) for details on Yagua phonology.

(169) VS order occurs if and only if the subject is doubled; SV order is required for nondoubled, subject NPs.

(170) a. SV, subject is not doubled

Pauro$_i$ *púúchu-níí*$_j$
Paul carry-3s^CL
Paul carries her.

b. VS, subject is doubled

sa$_i$*-púúchu Pauro*$_i$*-níí*$_j$
3s^CL-carry Paul-3s^CL
Paul carries her.

c. VS, subject is not doubled

**púúchu Pauro*$_i$*-níí*$_j$
carry Paul-3s^CL
Paul carries her.

d. SV, subject is doubled

**Pauro*$_i$ *sa*$_i$*-púúchu-nÍÍ*$_j$

(171) a. The genitive NP obligatorily precedes its phrasal head (N) when the genitive NP is not doubled.

b. When the genitive is doubled, the required order is clitic, head N, doubled genitive NP.

(172) a. Genitive-N^0, no doubling

Alchico rooriy
Alchico house
Alchico's house

b. N^0-Genitive, doubling

sa$_i$*-rooriy Alchico*$_i$
Alchico's house

c. Genitive-N^0, doubling
**Alchico*$_i$ *sa*$_i$*-rooriy*

(173) For all clitics, the host must immediately precede the double.

(174) The host of a subject clitic (henceforth, set I) theta marks the clitic's double.

(175) The host of an object clitic (henceforth, set II) need not theta mark the clitic's double.

(176) a. *Rospita suuta(-nÍÍ*$_j$*) Anita*
Rospita washes Anita.

b. *sa*$_i$*-suuta Rospita*$_i$*-nÍÍ*$_j$ *Anita*$_j$
Rospita washes Anita.

(177) a. Subject and possessor clitics form a single class (set I) and are proclitics.

b. Set II clitics are enclitics.

(178) A clitic is obligatory when no double is present and optional otherwise (unlike Pirahã, in which a bare head may appear without either an overt clitic, SPEC, or complement NP).

(179) a. *sa-júuy*
3s^CL-fall
He/she falls.

b. **júuy.*

(180) a. *sa-sííy*
3s^CL-run
He/she runs.

b. **sííy*

(181) The clitic may be omitted when an NP is present.

(182) a. *Anita júuy*
Anita falls.

b. *Davi sííy*
David runs.

(183) Set I clitics undergo otherwise word-internal phonological processes with their host (D. Payne 1987:7; T. Payne 1983, 1985).

For example, D. Payne (1987:7) observes that, when the third singular set I clitic *sa* is attached to an /h/-initial root whose first vowel is not /o/ or /e/, the root-initial /h/ is dropped (as it always is in such environments) and the vowel of the clitic is changed to "a vowel of the quality of the first root vowel." If the first root vowel is /o/ or /e/, no change occurs (/h/ is orthographic *j*). Example (184) shows that nonclitic arguments cannot undergo vowel harmony with their phrasal head, even when the phonetic conditions are met.

(184) a. *sa-rupiiy* (no change)
He/she walks.

b. *sa-jimiiiy* → *siimiiy*
He/she eats.

c. *sa-junaay* → *suunaay*
He/she cries.

d. *Anita junaay*
Anita cries.

e. **Anituunaay*

(185) Set II clitics are not affected by the word-internal processes on their host which set I clitics undergo.

I assume that this is because they adjoin to their host at PF to their left, but form a syntactic constituent with the NP to their immediate right. The result is what T. Payne (1983) terms wrong way cliticization as in (186) where brackets indicate syntactic boundary and parentheses phonological boundary.

(186) a. *Rospita* (*suuta*[*-nĺĺ*$_j$) *Anita*]
Rospita washes Anita.

b. *sa*$_i$*-suuta* (*Rospita*$_i$[*-nĺĺ*$_j$) *Anita*$_j$]
Rospita washes Anita.

As pointed out in Everett (1989a), reflexivization facts in Yagua are also relevant to the analysis here. The facts in this case are somewhat shocking, at least for configurationally based theories of binding which assume notions like c-command as I assume here.

(187) Yagua reflexives may be bound by the subject, possessor, or possessed NP, but never by the direct object NP.

As I noted in my earlier study (Everett 1989a), Yagua apparently has no true prepositions, so that prepositional objects are structurally identical to NPs, differentiated by different Case-marking suffixes. Examples of reflexives are given in (188).

(188) a. Subject as antecedent

[$_S$ *nuuda*$_i$*-jiya-numaa* [$_{NP}$ *jíy*$_i$*-rooriy-mu-ju*]]
1p^EXC-go-now REFL-house-LOC-DIR
We are going to our house.

b. Genitive as antecedent

[S *sa*$_i$-*jumutyo*$_k$ *jiita* *naana-daa-nu*$_j$ [VP **t**$_k$-*yú*]]
3s^CL-answer (?) 2d-little-person **trace**-REFL
Her$_i$ son answered her$_i$. (Naana is idiomatic here.)

c. Oblique as antecedent

[s[NP *naada-jinchaju* *pro*] [VP *jíyi-tiryo*
2d-upon pro REFL-lie

[NP *sa*$_j$-*viimu* *koodiy*$_j$]]]
3s^CL-inside snake
Those two lie upon each other inside the snake.

d. Direct object may not be antecedent

**sa*$_i$-*púúchu-nii*$_j$ *Anita*$_j$ *jíy*$_j$-*rooriy-mu*
3s^CL-carry-3s^CL Anita REFL-house-LOC
He carries Anita$_i$ into her$_j$ house.

3.24. Visibility and phrase structure. I now argue for the following analysis of Yagua, which is like the analysis of Pirahã except for directionality of Case assignment and Case realization.

(189) Yagua clitic doubling

a. Case is assigned to the immediate right in the syntax and realized to the immediate right at PF;

b. SPEC ingestion (i.e., no AGR is m-subcategorized);

c. NP subject moves to highest available functional category SPEC;

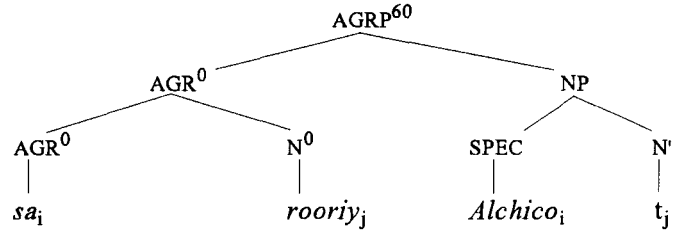
d. AGR spell-out is optional, Case realization is obligatory;

e. Setting for m-visibility is COVER.

It is also true that the head of the (extended) projection which includes AGRP raises to AGR^0, rather than lowering AGR^0 to the head, as is the case in Pirahã. But this latter fact is a result of condition (189a) above, that is, Case is assigned to the immediate right in Yagua.

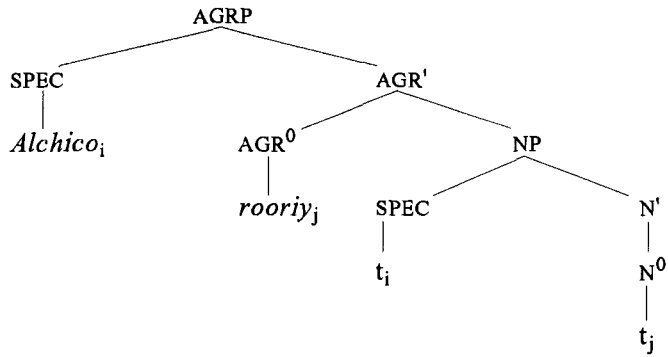
Now consider how to derive the relative orders of clitic, head, and SPEC for NP-possessor and subject-verb pairs. The AGR positions here correspond to what Payne and Payne (1989) call set I clitics. I begin with a sample surface structure in (190), with more detailed discussion to follow.

(190)



Since Case assignment must take place to the immediate right of AGR^0, the clitic cannot lower but must remain in place. This forces raising of N^0 to AGR^0. AGR^0 and N^0, as adjoined X^0s, will now, as per earlier discussion, share all domains, including their CHECKING DOMAINS (Chomsky 1992), such that now AGR is allowed to check the features on SPEC of NP, producing agreement with the possessor, and AGR-N is able to Case-mark the same SPEC. When AGR^0 is not overt, the derivation will be as in (191).

(191)

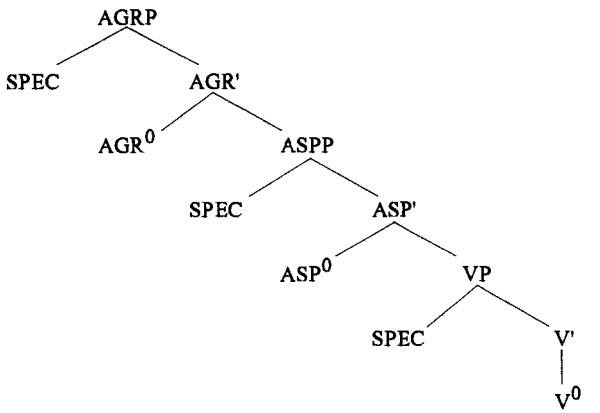


That is, when the AGR is covert, a SPEC is generated under AGRP, and Case-assignment and agreement proceed as expected in the unmarked case, as per Chomsky (1992). Now consider the derivation of subject and

[60]I use the label AGRP rather than DP here since (1) the same forms are found here as are found in subject agreement, suggesting that they may form a natural class, and (2) Yagua lacks any other kind of functional element in NPs, i.e., it lacks determiners as does Pirahã.

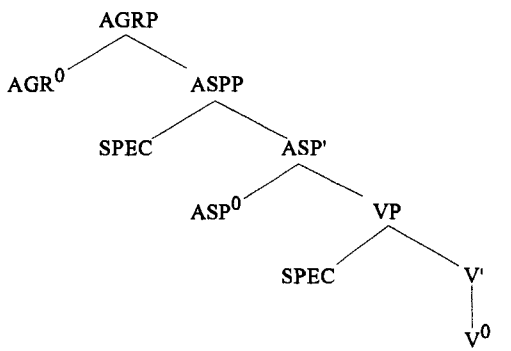
subject clitic orders. The derivation of subject order when AGR^0 is covert is shown in (192).

(192)



The subject NP raises to SPEC of AGRP (i.e., the highest SPEC of a functional category, as per (189) above, and the verb raises to AGR^0, via ASP^0, as always. This derives the SVO order, as seen in (170) above. When AGR^0 is overt, however, there will be no SPEC of AGRP and the subject will raise instead to SPEC of ASPP which is now the highest SPEC of a functional category. This derivation is shown in (193).

(193)



The VSO order which is obligatory with clitics is correctly derived here. Again, AGR^0 cannot lower because of the restriction that Case must be assigned to the immediate right. Since V^0 is adjoined to AGR^0, it will not block Case assignment. Also derived is the fact noted in (175) above if I adopt, as seen in the analysis summary in (189), the stipulations in (194).

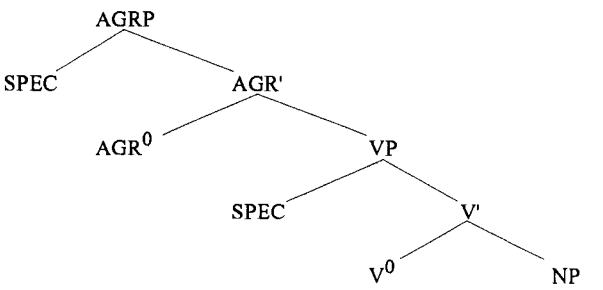
(194) a. Case realization is obligatory in Yagua;

b. Case realization (a PF phenomenon; cf. Chomsky 1986a:200ff) requires the Case-assigner to be to the immediate left of the assignee at PF.

That is, a Case relation must be hearable at PF, either on an overt AGR or on a NP argument. Unlike Pirahã, they cannot both be null. Moreover, the syntactic Case assigner, AGR, must appear adjacent to the assignee at PF. When AGR is overt, i.e., when a clitic is present, the clitic must be adjacent to the double. For set I clitics, this is satisfied by the syntactic movements just described. The story is a bit more complex with set II clitics, however, as will now be seen.[61] A similar restriction is suggested for pro-drop languages generally by Safir (1982).

I now consider the set II clitic facts. Recall that set II clitics are those which exclusively double direct objects.[62] The derivations in (195a) and (195b) show what happens when AGR^0 is covert (195a) or overt (195b) (only the relevant structures are shown).

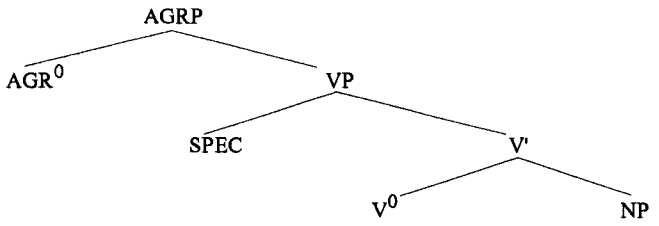
(195) a.



[61]Since the verb is also involved in Case-assignment, perhaps the principal source of Case assignment (the AGR-V pair) itself satisfies (194b). For the set II clitic, as will be seen directly, only the clitic can be adjacent, i.e., no other material may intervene.

[62]They also double unaccusative subjects, as per Everett 1989, although I will not address this directly here. The analysis goes through as outlined for both cases. I only need to add that a set II clitic is used whenever the relevant NP is part of a chain originating in the complement domain of the verb (Chomsky 1992).

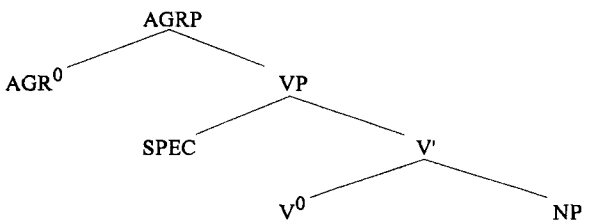
b.



The verb will raise to AGR^0 and then the entire AGR-V node will raise to the upper (subject) AGR position (as in (192) above), via ASP^0, which is adjacent to the SPEC of the lower AGR. It is at this point that Case-assignment from AGR occurs, satisfying the requirement that Case be assigned to the immediate right. After the verb plus lower AGR^0 (set II clitic) reaches the upper AGR^0, if an overt subject NP is present, or if there is any other XP intervening between the verb and the direct object NP, then the Case realization requirement will force the object AGR^0 to attach to the right edge of the head X of that XP (NP in the case of the subject), in order to satisfy Case realization. I adopt the approach taken in Everett 1989a and claim that this latter movement is a PF restriction on Case realization, namely that the NP must immediately follow its Case assigner, even subsequent to Case assignment in order to satisfy this PF condition. As a PF condition, this is much like clitic-ordering requirements in a variety of languages, which are governed by a combination of phonological, morphological, and syntactic conditions. Of course, I now recast this as a condition not on clitics but on syntactic nodes (e.g., AGR), syntactic principles (e.g., Case realization), etc. There are no clitics to refer to anymore.

When AGR^0 is overt, there will be no SPEC of the lower AGRP, as expected, producing the derivation in (196). Again, the same PF restriction on clitic-double adjacency applies here.

(196)



Before moving on to discuss Yagua reflexivization facts, it would be useful to see if I have successfully derived all the clitic doubling facts listed above. In fact, I have indeed done so, without need for any

language-specific stipulations, aside from the normal need to provide language-particular conditions on headedness of XP and directionality of Case assignment. Each point with its derivation is listed in (197).

(197) Summary of clitic doubling facts and their derivation

VS order occurs if and only if the subject is doubled; SV order is required for nondoubled, subject NPs (169)	Derived from the SPEC ingestion principle and the fact that Yagua clitics are not m-subcategorized, plus UG requirements about NP-VP predication and V-AGR amalgamation.
a. The genitive NP obligatorily precedes its phrasal head (N) when the genitive NP is not doubled. b. When the genitive is doubled, the required order is clitic, head N, doubled genitive NP. (171)	Derived by the same principles as those in (189).
For all clitics, the host must immediately precede the double. (173)	Derived by the requirement that Case be assigned via adjacency.
The host of a subject clitic (set I) theta marks the clitic's double. (174)	This is epiphenomenal, produced by raising of the head of the phrase to its highest AGR^0.
The host of an object clitic (set II) need not theta mark the clitic's double. (175)	This results from the raising of the verb to the upper AGR^0, requiring the lower AGR to cliticize (presumably at PF) to any word immediately preceding the object.
a. Subject and possessor clitics form a single class (set I) and are proclitics. b. Set II clitics are enclitics. (177)	Set II clitics are those which are coindexed with a chain extending into the V's complement domain. Set I clitics are the elsewhere class.
A clitic is obligatory when no double is present and optional otherwise. (178)	This is because Case in Yagua must be realized.

Set I clitics undergo word-internal phonological processes with their host. (183)

Set II clitics do not undergo word-internal processes with their hosts (at least not those which are restricted to the morphosyntactic word); they adjoin phonologically to their left, but form a syntactic constituent with the NP to their immediate right. (185)

Facts (183) and (185) can be derived if the word-internal phonological processes illustrated in (184) above affect the host and any X^0 the host is included in, as in (198) below.

(198) P-rule (e.g., vowel harmony
$[_{AGR}{}^0\ [_{AGR}{}^0\ [v^0\ ]]]$

3.25. Reflexivization. Yagua reflexivization is shown by two reflexive clitic forms, one from each of set II and set I clitics, representing object binding and nonobject binding, respectively, as discussed in the following paragraphs. Before going into detail about how binding takes place in Yagua, however, I want to make plain exactly what is bound by the antecedent in a Yagua reflexive structure. I have argued above that Yagua clitics are not arguments, since they are AGR^0 positions, and in Yagua theta-assignment is only done within the perfect projection, the unmarked option. Then, since reflexivization in general relates two arguments, an AGR^0 must always license an empty category (EC) argument in the position of its double when no overt NP is present (also required according to the theta-criterion). For nonreflexive clitics, this EC will be pro (phi-features without any specification for reflexivity). But for reflexive clitics this EC will be, as I claimed for Pirahã as well, the covert counterpart of lexical reflexives such as 'himself' and 'themselves' (cf. Everett 1987 and Saxon 1986). The pro plus self in (199) refers to the covert reflexive double of the clitic.

(199) . . . clitic_i . . . pro_i + self . . .

As stated, Yagua has two anaphoric clitics. The set I coreference clitic, *jiy-/yi-*, indicates obligatory binding of a possessor, subject, or oblique NP. The set II coreference clitic, *-yu*, indicates binding of the direct object (T. Payne 1985:44). The only possible antecedents for either clitics are possessors, obliques, and subjects. The examples (200)–(206) which follow illustrate each of the possible antecedents for the coreference clitics.

Examples (200)–(202) show subjects as antecedents.

(200) [S *nuuda*$_i$-*jiya-numaa* [NP *jiy*$_i$-*rooriy-mu-ju*]]
1p^EXC-go-now COR-house-LOC-DIR
We are going to our own house.

(201) [S *sa*$_i$-*puuchu-ni*$_i$ *Anita* [NP *jiy*$_i$-*rooriy-mu*]]
3s^CL-carry-3s^CL Anita COR-house-LOC
He$_i$ carries Anita into his$_i$ own house.

(202) [S *sa*$_i$-*juvay*$_j$ *Davi* *yi-bay* [VP t$_j$-*yúi*]]
3s^CL-hit David himself-hit TRACE-COR
David hit himself.

Examples (203) and (204) illustrate genitive antecedents.

(203) a. [S *sa*$_i$-*jumutyo*$_k$ *jiita* *naana-daa-nu*$_j$ [VP t$_k$-*yu*$_i$]]
3s^CL-answer PART 2d-little-person TRACE-COR
Her$_i$ son answered herself$_i$.

b. [S *sa*$_j$-*jumutyo*$_k$ *jiita* *naana*$_i$-*daa-nu*$_j$ [VP t$_k$-*yu*$_i$]]

(204) [S[NP *sa*$_i$-*rooriy-mu* pro$_i$]
3s^CL-house-LOC pro

[VP *jiy*$_i$-*puuchi* pro-*nii* *Anita*]]
COR-carry pro-3s^CL Anita
Into his$_i$ house he$_i$ carries Anita.

Example (205) illustrates an oblique NP as antecedent; recall that I am not analyzing these as PPs but as NPs; cf. Everett 1989 for details.

(205) [S[NP *nadda*$_i$-*jinchaju* *pro*$_i$]
3d-upon PRO

[S *jiyi-tiryo* [NP *sa*$_j$-*viimu* *koodiy*$_j$]]]
COR-lie 3s^CL-inside snake
(Those) two lie upon each other inside the snake.

Example (206) shows that direct objects may not serve as antecedents.

(206) a. *sa*$_i$*-puuchi-nii*$_j$ *Anita*$_j$ *jiy*$_j$*-rooriy-mu*
3s^CL-carry-3s^CL Anita COR-house-LOC
He$_i$ carries Anita into his$_i$ house.

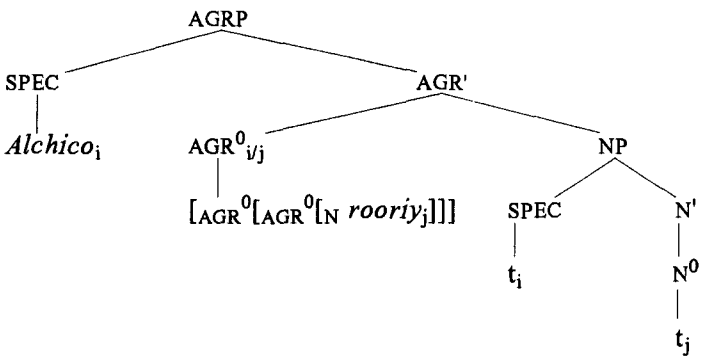
b. **sa*$_i$*-púúchi-níí*$_j$ *Anita*$_j$ *jiy*$_j$*-rooriy-mu*
3s^CL-carry^(Paul)-3s^CL Anita COR-house-LOC
Paul carries Anita into her house.

3.26. Implications for understanding phi-features. I am going to deviate from the involved analysis presented in Everett 1989, based on Kayne's (1983b) CONNECTEDNESS PRINCIPLE, and claim that (207) is all that is needed.

(207) SPEC of AGR^0 takes the binding domain of the syntactic host of AGR^0.

This principle in (207) will correctly single out genitives and ignore objects by the following reasoning. First, recall that the syntactic host of all object and subject clitics is V^0. The object clitic only has a non$_V$ host at PF, as per my discussion above. I have already shown that when an X^0 raises to AGR^0 the X^0-AGR^0 amalgamate shares a checking domain. I claim that this is partially due to the fact that they share indexes, as seen in NPs; note (208).

(208)



If it is assumed that these indexes percolate, as in (208), then (207) above can be derived. Notice, though, that only in NPs does AGR share indexes with a nominal host (N^0). If I take BINDING DOMAIN to mean what the syntactic host could bind, then I immediately account for the failure of set II clitics to bind: V^0 has no binding domain at all, since it is [–N] and nonnominals do not have referential properties, except for events,

perhaps. But if V^0 cannot be a binder and thus has no binding domain of its own, then the object NP can never bind anything unless it itself c-commands it. This means that the object cannot bind outside of VP. Since no anaphoric element is ever found in indirect object position, an object will never have anything in VP to bind. Notice, however, that the index of the possessor is, by my reasoning here, found on the AGRP projected by its NP head. If I assume that an NP's binding domain can be everything c-commanded by its index, then the possessor NP by this reasoning will be able to bind anything that the possessed N^0 can bind. Nothing need be said about subject NPs, since the subject c-commands all other NPs anyway and thus can bind objects, just as in most any other language (cf. Everett 1989a for more detailed discussion).

Of course, the Yagua binding facts are bizarre enough from the perspective of what is known about binding crosslinguistically, that I would not want to elevate (207) beyond the status of a language-specific stipulation. Therefore I now reject the attempt made by Everett (1989a) to derive these reflexivization facts from UG. Nevertheless, since these facts can be accounted for only via the structures I have presented for Yagua, Yagua reflexivization offers strong support for my analysis of clitic doubling. Other facts about this language can be found in Everett 1989, but the reader is especially referred to the works of the Paynes listed in the bibliography.[63]

[63]This account of Yagua reflexives is arguably unavailable to any other theory of the AGR-head relation. For example, we cannot analyze these facts in terms of indirect binding (Haik 1984). Haik allows an NP to indirectly bind a pronominal that it fails to c-command if the antecedent NP falls within the scope of another NP which does c-command the pronominal. But indirect binding does not apply here, since there is no other NP involved.

4

Subject Doubling in French and Northern Italian Dialects

In this chapter I show how the notions of visibility and m-subcategorization account for the heretofore unnoticed mirror-image manifestations of clitics in French and certain northern Italian dialects. I first review the analysis of French complex inversion presented in Rizzi and Roberts (1989) and then offer a counterproposal in which this phenomenon is analyzed as a form of subject clitic doubling, licensed by m-subcategorization. Next, I show how a single different setting for visibility accounts for the mirror-image contrasts in northern Italian dialects.

4.1–4.2 French complex inversion

4.1. Rizzi and Roberts' analysis. Rizzi and Roberts (1989) explore an analysis of the so-called French complex inversion (FCI) structure first studied by Kayne (1983a). This structure is illustrated in (209) and (210).

(209) *personne*$_i$ *n'est-il*$_i$ *venu*
Didn't anyone come?

(210) *quel livre Jean*$_i$ *a-t-il*$_i$ *lu*
Which book has John read?

The clitic *il* in both (209) and (210) doubles the NP subject. This is interesting because French is otherwise thought to lack clitic doubling (cf. chapter 3 for a detailed study of this phenomenon). It raises questions about theta-theory, Case, and phrase structure in French and also presents an excellent testing ground for the minimalist theory of phi-feature insertion, storage, and spell-out being developed here. I begin this chapter by reviewing Rizzi's and Roberts' lucid and enlightening account of FCI, showing how the present model also predicts these structures. I also show that the present model is able, as is the Rizzi and Roberts account, to explain why doubling is not allowed in noninterrogative structures.

(211) a. **personne*$_i$ *il*$_i$ *n'est venu*

b. **personne*$_i$ *n'est-il*$_i$ *venu*
No one is coming.

However, I will argue in the final section of this chapter that my approach is superior to Rizzi and Roberts' because it is able to unify the analysis of FCI, the lack of object doubling in French, as well as the analysis of subject and object clitics in northern Italian dialects within a general theory which does not appeal to the notion clitic.

Rizzi and Roberts account for the contrast between (209) and (210) versus (211) by arguing that (1) the clitic must incorporate into the auxiliary in order to satisfy the Case filter;[64] this allows *personne* to receive nominative Case from *est*; (2) the auxiliary must c-command the clitic as a precondition for incorporating; (3) the auxiliary must raise to C^0 to c-command the clitic; and (4) the auxiliary can move only in interrogatives. However, although this analysis does account for most of the French facts, it fails to rule out alternative analyses available in UG, but which are apparently not exploited by French. So, for example, cliticization (read FC movement) does indeed take place in many languages to a non-c-commanding host, contrary to Rizzi's and Roberts' assumptions. That is, cliticization often involves lowering of the clitic to its host. Another common strategy, also not considered by Rizzi and Roberts, is raising of the host to the clitic. Consider clitic doubling facts from Yagua, Pirahã, and English in examples (212)–(214) (from chapter 3).

[64]This idea is similar to the definition of m-visibility proposed above. Still, the first proposal on m-visibility and incorporation as a way of satisfying the Case filter is Everett 1985, 1986b. It is this proposal which has influenced, directly or indirectly, all others (e.g., Baker 1988 and Rizzi and Roberts).

(212) Yagua—raising of host (Everett 1989a)

a. *Pauro puuchu Anita*
Paul carries Annie.

b. *sa*$_k$*-puuchu*$_i$ *pauro*$_k$*-nii*$_j$ t_i *Anita*$_j$
Paul carries Annie.

(213) Pirahã—lowering of clitic in AGR (Everett 1987)

a. *Kohoi*$_i$ *hi*$_i$ *kagáíhiaí*$_j$ *?ís*$_j$ *?íbáobáhá*
NAME he jaguar it arrowed
Kohoi arrowed the jaguar.

b. *Kohoi*$_i$ t_i *kagáíhiaí*$_j$ *hi*$_i$ *?ís*$_j$ *?íbáobáhá*
Kohoi arrowed the jaguar.

(214) English—lowering of INFL to V (Chomsky 1991)

a. Bill $[_{IP}[_{I'}[_{I}$ PRES^3s]]] see John.

b. Bill $[_{IP}[_{I'}[_{I}\ t_i]]]$ sees (PRES^3s$_i$) John.

The question then arises, why could the clitic not lower to the auxiliary in French or the auxiliary verb raise to the clitic, in effect deriving noninterrogative FCI structures? The latter possibility could be ruled out if I assume that movement from a functional category (Abney 1987), such as I^0, to a lexical category such as N^0/NP is prohibited. But I still need to account for the failure of the subject clitic to lower to I^0. An equally important desideratum for any proposal on subject clitic facts in French (or any other language) is that it should carry over to other clitics in the language. So, for example, I must ask why there is no structure analogous to FCI with French object clitics. Another important question concerns the failure of the subject clitic to attach to preverbal position in FCI. If it incorporates into the auxiliary, the resultant structure (which Rizzi and Roberts fail to address) must be either (215a) or (215b):

(215) a. $[_{NP}$ *personne*$]$ $[_{V^0}$ *il* $[_{V^0}$ *est*$]]$

b. $[_{NP}$ *personne*$]$ $[_{V^0}$ *il est*$]$

In (215a), the clitic adjoins to its host. In (215b), it moves into V^0. Although Emonds (1985:243) argues that (215b) is the resultant structure

for all inflectional morphology attachment, I am arguing here that whether cliticization (i.e., some form of attachment of one X^0 category to X^0 or X^{max}) produces structures like (215a) or (215b) depends on m-subcategorization, which will in turn bear on the visibility of the clitic. It could be, therefore, that the subject clitic may not precede the verb in FCI because of requirements on its mode of attachment imposed by m-subcategorization. Note that one cannot argue that either (215a) or (215b) is ruled out because the clitic would block Case-assignment of *personne* by *est*, a possible line of reasoning. This argument is not available since, as Everett 1989 argues, in adjunction structures like (215a), the clitic will not count in determining adjacency between NP and V^0 (cf. also Marantz 1988), i.e., that the V^0 is adjacent to NP in both (215a) and (215b) and thus could not Case-mark it.

4.2. A counterproposal. Therefore, the Rizzi and Roberts account of the facts is inadequate. It neither explains why the clitic may not lower to V^0, nor does it provide an account of why French object clitics do not undergo CI. Ideally, I would like the explanation of this fact to be connected to other clitic facts in French, e.g., the fact that French allows only subject clitic doubling but not object clitic doubling, another fact which the Rizzi and Roberts account fails to explain. The present model is able to account for these facts in the following way, based on m-subcategorization and the parameterization of visibility.

Assume, as in chapter 3, that the setting for visibility in French is INCLUSION, the unmarked setting. Then, an item can only be visible at LF if it is POSITION-VISIBLE or included in a word, but not if merely adjoined to a word. No item can be included in a word or phrase unless its position is m-subcategorized by the word or phrase. Now, French lacks object agreement. This means that object agreement is not m-subcategorized by the verb. Any attachment of pronominal material to the verb which refers to the object position can only adjoin to the verb. So, a structure which results from object cliticization would look like (216).

(216) *Marie* [$_V{}^0$ *nous* [$_V{}^0$ *connait*]]
Marie knows us.

Preverbal attachment of the pronominal can be accounted for if I assume, as per chapter 2, that the clitic allomorphs are phi-features generated in a lower AGR^0 position. Lower AGR^0 can only adjoin to its host and not incorporate into it, since it is not m-subcategorized. But then, since the setting for morphological visibility in French is inclusion, the pronominal in (216) must be position-visible, receiving Case from the object position and thus ruling out the doubling of object NPs.

On the other hand, French does m-subcategorize for subject agreement, as predicted by the CDAP. M-subcategorization indicates what form the relevant information will take. So, a verb like English *sing* will m-subcategorize for past tense and tell us that its form is *sang*. What about its position? I assume that m-subcategorization will further instruct the phonology to interpret this string as *sang* (cf. Hayes 1990 for a similar proposal), but the past tense of *raise* as *raised*. It is well known that one of the roles that phonology plays is to linearize morphemes.[65] Alternatively, the base form of a word or stem, such as *sing*, may simply m-subcategorize an entire word form for the past tense, as with *sang*. This is possible, again, since by hypothesis, lexical insertion at S-structure follows movement of tense to V^0.

Although it is normally the case that words cannot be doubly marked for a given inflectional category, this follows in my model only if inflectional information for a given category, e.g., subject agreement, has only one D-structure source, e.g., AGR-S. But suppose that inflectional information, i.e., phi-features, had multiple D-structure sources for a single category, as I have been arguing throughout this monograph. This could lead to redundant double marking in some cases—a possibility that seems to be allowed, e.g., the English genitive, *That book of John's*.

Returning to FCI, the notions of m-subcategorization and linearization can be utilized in the following way. If subject pronominal information originates at separate D-structure sources, then under certain conditions it may move into the V^0's m-subcategorized position for subject agreement and stack up there.[66] This will differ, in ways to be made clear, from direct insertion from the lexicon into a single position. As long as no grammatical principles are violated thereby, this stack will be interpreted and linearized at PF. Like other phi-feature pairs (as with object clitics and object pronouns in Welsh and Spanish), the two phi-feature stacks will form an interpretive unit. So, in the case of FCI, suppose that pronominal features may originate in French in upper AGR^0 and SPEC of AGRP, under D^0, at D-structure. Then allow both of these to move into V, either by lowering or raising, depending

[65]Cf. Clements 1985, who argues for this with regard to reduplication and Zwicky (1977:24) and Bonet (1991), who argue that the phonology linearizes clitics in Romance.

[66]Stacking will be outlawed at D-structure, since individual items must be associated one-to-one with syntactic or morphological positions to receive an interpretation at LF. The need for a LF interpretation is also why movement may create stacks only if the stacked material may be traced to distinct positions in the morphology or the syntax. It is not necessary that the syntax be able to distinguish which member of the stack is associated with which D-structure position if stacked material is identical in its lexical semantic features, merely that there be a position accessible to each member of the stack.

on independent and language-specific factors. To illustrate, consider the hypothetical example in (217).

(217) $[_{V^0}$ STEM + $\{AGR^0/D^0\}]$

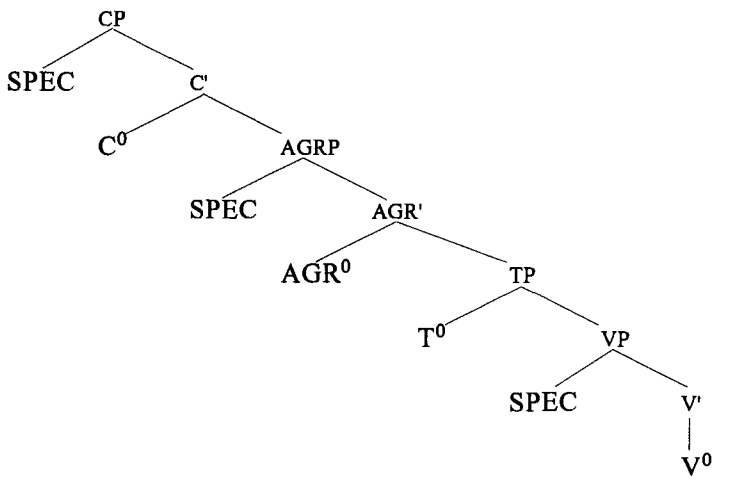
This representation is allowed in the syntax—no grammatical principles are violated if I continue to assume that D^0 and AGR^0 may form a single interpretive unit. The phonological component of French will take representations like (217) and interpret them as in (218).

(218) STEM + paradigmatic inflection + nonemphatic subject pronominal form[67]

The last knot remaining to be tied is how D^0 can move into the AGR^0 position on the verb. This will be allowed only if AGR^0 and D^0 can form a single interpretive unit. While AGR must appear on the verb by m-subcategorization, D^0 may also move there if this is the only way to save the structure.

I assume a structure like (219) for French, following Rizzi and Roberts, except that I have broken IP into AGRP and TP (ignoring irrelevant structures).

(219)



[67]An alternative would be to list different phonological forms for different feature bundles in the lexicon and allow the phonology to select the appropriate form in the PF component, based on whether a feature like [+emphatic] is present or not and whether the bundle is dominated by a functional or lexical category. This still avoids any clitic/affix/pronoun distinction in the lexicon or elsewhere in the grammar.

Since parts of words are not accessible to syntactic rules, this predicts that neither the inflectional ending nor the pronominal (in CI) can be affected by any syntactic rule following AGR attachment or cliticization. This seems correct. Moreover, in (217) and only in (217) does the clitic information satisfy French's inclusion setting for morphological visibility, allowing the pronominal to be visible at LF without Case. This then accounts for why the subject clitic must follow the verb in FCI, a fact which other accounts miss. More importantly, perhaps, this allows us to connect French clitics more closely to those in other languages (cf. subsequent chapters). It also explains why French has no inversion-like structure with object clitics and does not allow object doubling—since object agreement is not m-subcategorized in French, there is just no place for an object pronominal to appear within V^0 and so it can only adjoin to V^0. Since adjunction does not qualify in French for MV, the object clitic must receive Case, prohibiting doubling.[68] I have thus successfully accounted for the placement of the clitic in FCI, as well as the failure of French object clitics to double under any circumstances.[69]

A final fact about FCI constructions must be addressed, however. Rizzi and Roberts observe that FCI structures never allow the subject to be questioned; note (220).

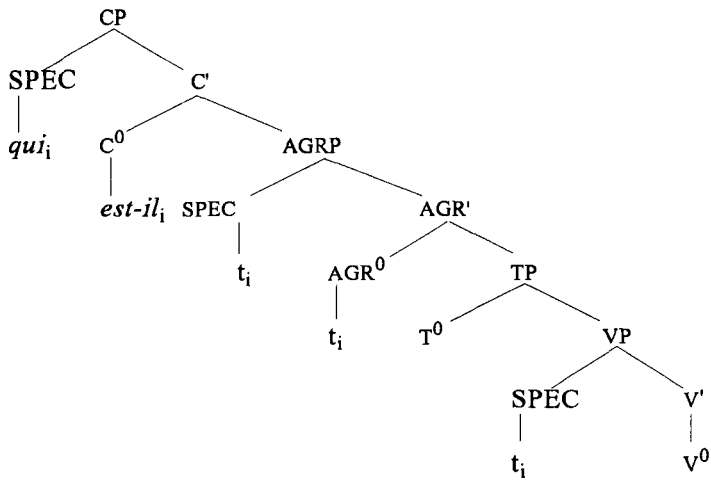
(220) **qui est-il parti*
Who left?

My account, like Rizzi's and Roberts', is able to account for this quite easily. Consider, for example, the S-structure in (221) of sentence (220).

[68]It may also be that French object clitics are arguments, i.e., that French interprets all pronominal features as arguments, unless they are included in an X^0 host or are not in a theta-position at D-structure, as is the Case with the expletive use of *il* with weather verbs in French. If so, this would also rule out object clitic doubling, even if French had a special Case assigning preposition like Spanish *a*.

[69]This now gives more meaning to the claim that subject doubling, CI, involves incorporation, as Rizzi and Roberts claim. Incorporation is interpreted in the present model as movement by substitution into a position licensed on the host via m-subcategorization.

(221)



The WH-quantifier, *qui*, must bind a variable. But *il* binds the Case-marked trace in SPEC of IP. I could say, as do Rizzi and Roberts, that this is because the trace in SPEC of AGRP is an INCORPORATION TRACE. However, I prefer not to complicate the theory of ECs so I will say simply that *qui* may not bind that trace due to RIGID MINIMALITY (i.e., Chomsky's 1986b version, not Rizzi's 1990 relativized version). That is, the clitic-verb complex is a closer potential governor (in the sense of Rizzi 1990) and thus prevents the WH-word in SPEC of CP from binding the Case-marked variable in SPEC of IP. The structure is thus ungrammatical as a VACUOUS QUANTIFICATION violation. Rizzi's and Roberts' account achieves the same result by slightly different means.

Now, however, I must ask why CI is not possible in affirmative, indicative mood sentences. The answer here cannot simply be that the auxiliary must raise for *il* to incorporate and that an AUX in C^0 signals nonindicative mood. Why can *il* not lower to the auxiliary? I suggest that the answer follows from FULL INTERPRETATION (Chomsky 1986a). The node including the clitic will be V, which does not m/c-command the SPEC of AGRP. If the clitic fails to bind the trace in SPEC of AGRP, then that trace will be bound by the NP adjoined to C' (since that NP has the same index as the clitic by definition of CI). This will leave the clitic visible at LF, due to inclusion, but the clitic will have no interpretation. It will fail to be linked to any syntactic position, although it bears its D^0 label and thus LF will look for a position to relate it to. The representation will thus "crash" (Chomsky 1992) at LF. This must be a constraint on pronominal information or I could, for example, freely insert clitics in postverbal position in any French construction. The clitic

will thus fail to govern or bind its trace, leaving the clitic without an interpretation at LF.[70]

So, my account of French CI, while heavily and positively influenced by Rizzi and Roberts, is nonetheless superior to theirs in the following respects: (1) it accounts for the failure of object clitics to undergo CI; (2) it accounts for the failure of the subject clitic to lower; (3) it accounts for the failure of the subject clitic to attach to preverbal position; and (4) it links clitic behavior in French to the independently known fact that French has only subject agreement and that this agreement must follow the verb.

I turn now to consider another set of facts which I argue are related to the French facts, viz. subject clitic doubling in the northern Italian dialects—Trentino, Biellese, and Fiorentino. I argue that these facts provide striking support for the analysis of French just given, as well as for the present model.

4.3–4.4 Northern Italian dialects

4.3. Pragmatic based analysis. Rizzi (1986a) and Brandi and Cordin (1988) discuss the constructions in (222)–(227) in Trentino (T) and Fiorentino (F), two dialects of Italian spoken in northern Italy. Ilari and Franchi (1985) present a pragmatic-based analysis of similar data from Biellese (B).

(222) a. *la Carla/nisun **l'ha** dit niente* (T)
Carla/nobody said anything.

b. *Mario/nessuno **gl'ha** detto nulla* (F)
Mario/nobody said anything.

(223) *Mario/nyn **aj** va maj*[71] (B)
Mario/no one ever goes there.

(224) a. *tut **l'e** capita de not* (T)
Everything happened at night.

[70]The ECP will not explain the failure of the clitic to lower, since the NP in SPEC of VP could raise to C'-adjoined position and bind the trace, satisfying the ECP.

[71]The Biellese data are from Ilari and Franchi 1985. They chose to represent the data in a quasi-phonetic form, rather than orthographically, hence the difference in representation from the other dialects.

b. *tutto **gl'e** successo di notte* (F)
Everything happened at night.

(225) *e-lo vegnu* (AUX inversion) (T)
Has he come?

(226) *icche ha-egli preparato* (F)
What has he prepared?

(227) **icche la Carla ha-ella comprato* (F)
What has Carla bought?

They argue that the subject clitics in these dialects are generated in AGR and that the doubled NPs appear in the normal subject (SPEC of IP) position. In other words, these languages have double subject agreement.

Before discussing the facts in detail, there are at least three problems with this earlier analysis which must be mentioned at the outset. First, it fails to account for the failure of subject clitic doubling in other Romance languages with subject clitics, such as French (outside of CI structures). Second, it fails to seriously consider the implications of generating clitics in AGR when agreement morphology appears on the verb independently of the clitic—where would the verbal agreement originate under this analysis?[72] Finally, their analysis does not explain why clitics must precede the verb in declaratives, as in (225) and (226), but follow the verb in interrogatives.[73] Any account of these dialects must also account for the fact that they lack CI, except in WH-questions of the subject position—the mirror image of French. While Brandi and Cordin do discuss the latter fact, they fail to link it to the other properties just mentioned, and thus fall short, in my opinion, of a successful analysis.

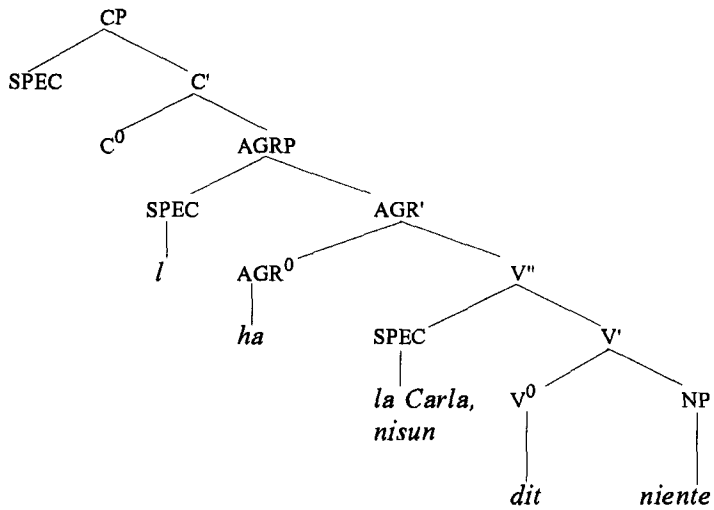
4.4. Phi-feature analysis. The present hypothesis provides a simple, straightforward analysis of these facts. Rather than assume that subject clitics appear in AGR, I claim instead that they appear in SPEC of AGRP position at D-structure, under D^0. Note that this analysis is crucially forced upon me by my assumptions, since there is no source in my framework for

[72]Roberts 1990 does address this problem for similar data in Valdotain, but his analysis requires an enrichment of phrase structure that is unnecessary in the present approach.

[73] Although, to be fair, this could be explained fairly easily in their account by appealing to the same notion of economy of derivation discussed above, i.e., that the clitic adjoins to the first boundary of its host that it encounters in the linear string.

a clitic in AGR, if the verb has AGR on it independently and if I want to avoid enriching phrase structure. Because the AGR on the verb and the clitic are identical feature bundles in the lexicon they differ phonologically and syntactically only as a result of where they are inserted at D-structure. If agreement features are on the verb, they must have originated in AGR-S at D-structure and thus no clitic could also originate there, since each bundle of features must have a unique syntactic source at D-structure in order to receive an interpretation. I propose that the D-structure of Trentino and Fiorentino clauses shown in (228) is identical to that of the FCI structures (again, only relevant structures are shown).

(228)



The NP in SPEC of VP position will then raise to adjoin to C', as in French. The clitic adjoins to the auxiliary by lowering and the auxiliary assigns nominative Case to the NP adjoined to C'. This will correctly derive the Trentino and Fiorentino facts. Of course, this analysis raises several questions. First, why is the same S-structure impossible in French? Second, why is it impossible to raise the auxiliary to C^0 when a NP is adjoined to C' (cf. (225) and (226) above), while it is possible if there is no NP under C' (cf. (227) above)? Why must the clitic adjoin in preverbal position in statements, e.g., (224), but in postverbal position in interrogatives?

To answer these questions, I need to note first that all northern Italian dialects with subject clitic doubling also allow object clitic doubling. So, consider the data in (229)–(232) from Biellese (examples from Ilari and Franchi 1985).

(229) al an chama-me mi
S^CL have called-me me
They called me.

(230) i u purta-lo$_i$ *via al liber*$_i$
I ACC take-it^ACC away the book
I took the book away.

(231) at aj de l'liber al Giuseppe
you DAT^CL gave the^book the Joseph
You gave the book (to) Joseph.

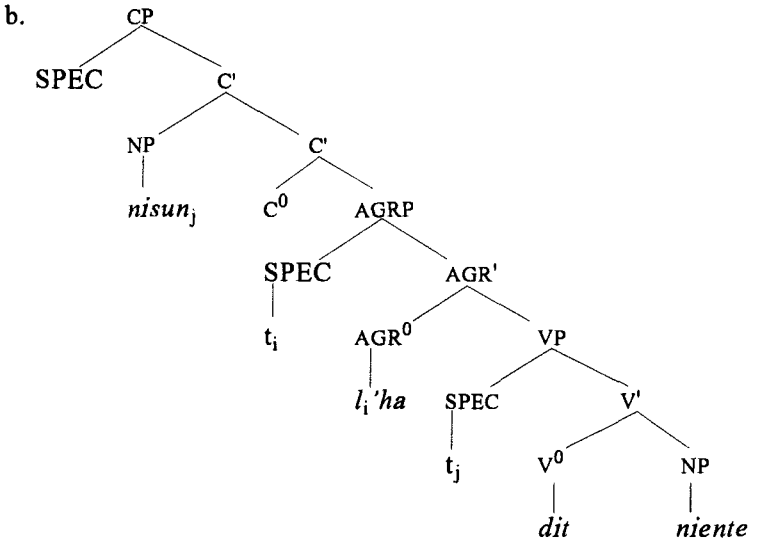
(232) i-j *parlava na fia*
I-DAT^CL used^to^speak the girl
I used to speak (to) the girl.

There are some restrictions on clitic doubling of objects which, according to Ilari and Franchi, are discourse related. Nevertheless, these facts seem to hold with minor variations for all the northern Italian dialects. The presence of object clitic doubling, where the doubled NP is not marked by a preposition, evidently means that doubling produces no Case conflict between the clitic and the double if the clitic is morphologically visible via adjunction to the head.[74] The setting for m-visibility in these languages must therefore be adjunction. Now, consider the surface structure representations in (233) of a sentence like (222), repeated here.

[74]The universal proposed in §2.11 of chapter 2 above predicts that for nominative-accusative languages like the northern Italian dialects, there will be a preference for agreement with the outer argument of a given projection. If I accept recent proposals (e.g., Larson 1988) on the position of indirect objects within the VP, they c-command the direct object position and are therefore outer arguments with regard to the direct object. The agreement universal in (37) thus predicts that indirect objects will show agreement more strictly than direct objects; cf. Dryer 1986 for evidence that indirect object agreement indeed takes priority over direct object agreement crosslinguistically). Thus, for northern Italian dialects, if there is a single AOR-O projection, it could be that it governs only the indirect object position, allowing indirect objects but not direct objects to move into it and accounting for the fact that dative objects precede the verb while accusative objects follow the verb (these are nonemphatic allomorphs of the pronominal morpheme which appear in the direct object position, rather than in a FC). Although this is all too speculative and vague to put much weight on it, it is not implausible.

(233) a. *nisun l'ha dit niente*

b.



I argued that in French, subject clitics may not lower to AGR^0 because, since the clitic must be included in the verb, its m/c-command domain will extend no higher than the verb and it will thus fail to command its trace. The clitic will then have no interpretation at LF or PF, since it is not linked to any V-external position.

But the m/c-command domain of the clitic in (233) will be coextensive with that of AGR^0, since AGR^0 is the first node to include it. Since AGR^0 m-commands SPEC of AGRP, the clitic will m-command its trace (recall that the ECP is not a problem here).

It follows from this difference in command domains that CI with a subject NP adjoined to C' will not be allowed. If the auxiliary moves to C^0, the first node which includes the clitic will be C^0. But then the clitic will c-command the NP adjoined to C', since C^0 does. This results in a binding condition (BC)-C violation (names cannot be bound, i.e., take c-commanding antecedents in their binding domains), ruling out auxiliary inversion when a nonpronominal subject is present. Questioning the direct object, as in (227), will also produce a BC-C violation, but only when a subject is present. So, although (227) above is ungrammatical, (234) is fine.

(234) *icche ha-egli preparato*
What has he prepared?

The clitic will not bind the quantifier *icche*, in SPEC of CP, because C^0 does not c-command it. So, this is not a BC violation.

Thus, my analysis is also able to account for the fact that the syntax of CI in the northern Italian dialects is the mirror image of CI in French. However, my analysis is superior to previous analyses in that it relates the subject clitic facts in CI in French and the dialects to object clitic facts in the same languages. It is also able to predict the location of the clitic better than other accounts. Notice too that in the account defended here, Trentino, Fiorentino, Biellese, and the other dialects have some characteristics of French, namely CI, and some characteristics of Italian, namely absence of CI in interrogatives. In these other accounts, these dialects look much more unusual in that the double agreement proposed for them requires an enrichment of phrase structure that seems otherwise unneeded. Another serious shortcoming of the Brandi and Cordin analysis is that it requires a relaxation of the projection principle. They argue that CI is out in the dialects because "once leftward movement of the NP subject *la Carla* has been applied [in examples like (227)], in the resulting intermediate structure . . . the empty category in subject position is determined as *pro* . . . and consequently the subject clitic *la* acquires argument status" (1989:135). This means that the relevant CI structures in the northern Italian dialects will always result in a theta-criterion violation, since the (now) argumental clitic will enter into a chain with the inverted (argumental) NP. In other words, this account requires that an item and a position (AGR) which were not theta-marked at D-structure become theta-marked at S-structure, a clear violation of the projection principle. My analysis need not appeal to such baroque devices but, rather, is able to account for the facts via binding theory and c-command, modified to refer to the notion of inclusion, which I explicitly claim to apply in UG, and not merely in these dialects.

Two final questions concern the grammaticality of subject extraction in these dialects: the fact that in CI, the clitic must follow the verb, whereas otherwise it must precede the verb. I consider the latter question first. I follow the minimalist assumption that movement is constrained by a grammatical principle of economy (Chomksy 1991, 1992). Under one interpretation, this principle will not allow anything to be moved or otherwise affected and will not move anything or affect anything any more than is necessary. Then the clitic in northern Italian dialects will lower in declaratives to satisfy m-visibility and it will raise in interrogatives (to the V) for the same reason. However, it will attach to the closest edge of its host, where closest may be described as the edge having the fewest intervening morphemes between it and the clitic. Then, the clitic

will always attach to the left edge of its host when it (the clitic) lowers and to the right edge of its host when it raises.

Now consider the second question, namely, how subject WH-extraction is possible in the northern Italian dialects. How is it that examples like (235) are grammatical?

(235) *chi e-gli venuto* (F)
Who came?

This is grammatical, according to Brandi and Cordin, because the WH-element originates in postverbal position. This conclusion is compatible with my analysis as well. Recall that sentences like (235) were ruled ungrammatical in French because the subject clitic counts as a closer governor of the trace in SPEC of IP, leaving the WH-element without a variable and thus out as a no-vacuous-quantification violation. However, in the dialects, because of their rich agreement systems, postverbal subjects are freely allowed. Brandi and Cordin, as well as Suner (to appear), argue that all subject extraction must take place from postverbal position. I claim that the postverbal trace of WH-movement in these dialects counts as a variable for the WH-trace and that the clitic will not count as a closer governor for this trace.[75]

4.5. Conclusion. In this chapter, I have argued that inversion in French and northern Italian dialects are related in interesting ways that the present model, but no other, is able to capture quite naturally. I also link subject inversion and object doubling in the northern Italian dialects—something that other models are unable to unify in a single account.

[75]Suner (to appear) provides an interesting discussion of the different clitic and agreement patterns that appear in the dialects when subject is in postverbal position at D-structure. This is not problematic for the present analysis. I accept Suner's conclusion that the agreement facts are discourse related, but I consider the facts to be caused by matching of features. rather than agreement per se.

[blank]

5
Romance SE

I have chosen to provide an analysis of *se* as an illustration of the empirical value of the model proposed above, because of its reputation as a recalcitrant syntactic problem (cf. Burzio 1986; Zubizarreta 1988; Everett 1985; Cinque 1988; Belletti 1982; Grimshaw 1982). The empirical and conceptual advantages of the present model over earlier analyses will, I hope, emerge clearly in this section as well as in the next section, where I review some of the major alternative analyses of *se*. It is simpler, less stipulative, the only model to unify all uses of *se*, and actually predicts the existence of a *se* morph.[76] The core hypothesis is that *se* is the elsewhere morpheme in terms of its Case-related distribution and that it is referentially inadequate. These two observations account for all of its uses and distribution.

5.1. Constructions with *se*. The form *se* is found in the following constructions throughout Romance, although for reasons of space, I focus here on Brazilian Portuguese and Italian, reserving comment on other Romance languages for the next section.

(236) Reflexive

a. *Sergio matou-se*
Sergio killed himself.

[76]It also links *se*'s behavior to similar morphemes in other language groups, e.g., Montana Salish; cf. Thomason and Everett in preparation.

b. *Sergio se matou*
Sergio killed himself.[77]

The impersonal use of *se* (where *se* refers to an impersonal subject, similar to a passive but without raising of object to subject position) is subdivided by Cinque (1988) into argumental and nonargumental uses. Nonargumental impersonal refers to the appearance of impersonal *se* with tensed unaccusatives and other verbs which fail to assign an external theta-role. Argumental impersonal is the appearance of impersonal *se* with transitives and unergatives. Whereas the argumental impersonal may appear with either tensed or untensed verbs, the nonargumental may appear only with tensed verbs.

(237) Argumental impersonal

a. *se recebe socos facilmente*
One receives blows easily (i.e., one is easily punched).

b. *sembra non essersi ancora scoperto il vero colpevole*
It seems one not to have yet discovered the true culprit.

c. *sembra non essersi lavorato a sufficienza*
It seems one not to have worked sufficiently.

(238) Non-argumental impersonal

a. **sembra essersi arrivati troppo tardi*
It seems one to have arrived too late.

b. *si arriva troppo tardi*
One arrives late.

Passive *se* is like the impersonal, except that the logical object of the verb appears as the surface subject, as determined by word order or verb agreement, rather than *se*.

[77]This may also be translated as a reciprocal, as in *eles se viram* 'they saw themselves/each other'. The difference between these two readings will not concern us here, but cf. Heim, Lasnik, and May 1990 for an important discussion of reciprocals, especially the contrast between clitic versus nonclitic reciprocals. Their discussion is fully compatible with the model developed here, but the nature of their concerns is orthogonal to the present discussion.

(239) Passive

a. *i dolci al cioccolato si mangiano in questa pasticceria (*di Gianni).* (Italian)
Chocolate cookies are eaten in this pastry shop (by John).

b. *macas se vendem por aqui*
Apples are sold around here.

The ergative and inherent uses of *se* are like the passive use, in that *se* appears instead of a full NP agent or actor, except that the external theta-role is syntactically inert or nonexistent with these two uses, as shown by the ungrammaticality of agentive adverbials with these uses of *se* (cf. Zubizarreta 1987). Agentive adverbials may not appear in the absence of a syntactically active external theta-role, leading me to conclude that there is no such role with ergative and inherent *ses*. The ergative differs from the inherent in that it appears on intransitive verbs which have a transitive counterpart, whereas verbs which take inherent *se* have no transitive counterpart.

(240) Ergative

a. *la finestra si rompe*[78]
The window broke.

b. *a janela quebrou-se (*a proposito)*
The window broke (*on purpose).

(241) Inherent

tres meninos se desmaiaram
Three children fainted.[79]

5.2. Phi-feature analysis. Romance languages which are pro-drop (like Brazilian Portuguese and Italian) generally lack subject clitics. Northern Italian dialects are an obvious exception (cf. Everett in preparation for discussion). I assume here that this is due at least in part to the

[78]In my analysis *si* and *se* in Italian are allomorphs.

[79]There is a possible further use of *se*, which I will call reflexive agreement, as seen in examples like *Sergio se matou-se* 'Sergio killed himself' from Brazilian Portuguese. However, I am not sure enough about the nature of these examples to suggest an analysis here.

principles of phi-feature spell-out given above, although there are other ways of achieving this result, e.g., Chomsky's 1981 avoid pronoun principle. So if a language allows a subject pro, it will not use an overt pronominal except for emphasis. Clitics are not appropriate for emphasis, since emphasis nearly always involves phonological prominence and clitics are not generally stressable. So, clitics will be avoided in favor of full nouns when emphasis is desired and will always be avoided if a pro can otherwise be used.[80]

This means that clitics are like other elements of grammar in being partially definable by their complementary distribution with regard to other PRONs. Complementary distribution among other clitics can be seen in Brazilian Portuguese where there are dative clitics (*lhe(s)* 'to him/her/(them)'), accusative clitics (*o(s)/a(s)* 'him(them)'/'her(them)') and *se*. The complementary distribution between the dative and accusative clitics is transparent:

(242) *lhe(s)* if dative; *o(s)/a(s)* if accusative.

This satisfies the definition of allomorphy in chapter 2, §2.1, since Case is a configurational feature. It seems reasonable to ask if *se* can be incorporated into (242), effectively rendering all Brazilian Portuguese clitics allomorphs. I argue that it can, as in (243)–(245) (where alpha and beta are nonnull and ETR is external theta role).

(243) $\begin{bmatrix} \emptyset\text{gender} \\ \emptyset\text{number} \\ 3\text{person}_{i,k,(j)} \end{bmatrix} \rightarrow$ [se] / _____ [nominative case_i, ETR_k (xCase_j)]

(244) $\begin{bmatrix} \text{alpha gender} \\ \text{beta number} \\ 3\text{person}_{i,j} \end{bmatrix} \rightarrow$ [o(s)/a(s)] / _____ [accusative case_i, nonETR_j]

[80]For nonpro-drop languages, nominative clitics may be said to fulfill the pragmatic role of pro, i.e., functioning as nonemphatic subjects. While this is not a full account of why nominative clitics are found more commonly in nonpro-drop languages (cf. also Safir 1982), it does show that a theoretical basis for this distribution is possible in principle.

(245) $\begin{bmatrix} \text{alpha gender} \\ \text{beta number} \\ \text{3person}_{i,j} \end{bmatrix} \rightarrow$ [lhe(s)] / _____ [dative case$_i$, nonETR$_j$]

These rules are intended to state that for Romance languages without subject clitics, *se* fills a default role by associating with the core subject properties: nominative Case, ETR, and SPEC VP position, even when it does not appear in subject position (SPEC IP/AGRP).[81] Moreover, the rules in (243)–(245) are restricted by the familiar principle of multilinear phonology, known as conjunctivity or exhaustivity, which means that if something is not mentioned as connected with the clitic position in the structural description of the rule, it may not be associated with this position. So, by marking accusative Case and no other in (243)–(245), the rule prohibits a clitic simultaneously coindexed with any other Case from being spelled out as an accusative or dative clitic. Rules (243)–(245), in conjunction with identification, visibility, and other independently needed licensing conditions are all the analysis of *se* that is needed. The most relevant licensing principles distinguishing *se* from other clitics are (243) and identification. Since *se*'s phi-feature values are insufficient to determine its reference, it must be identified via a nominal antecedent. I crucially assume that binding is like Case-assignment, movement, and other grammatical operations in that it is an instance of AFFECT-ALPHA (Lasnik and Saito 1984) and that nothing is affected unless it has to be (i.e., forced by independent grammatical principles).

It is important to note that of the entries in (243)–(245), only (243) needs to be identified. Recall that according to (19), if the phi-feature values of a particular node N, are equal to or greater than the maximal expansion of AGR, then it is referentially adequate.[82] Further, assume that if a nominal expression is referentially adequate, it need not be identified externally, unless it is an empty category where its reference must be determined. Since a referentially adequate overt nominal does not need to be identified, it is not allowed to be. If a nominal is referentially inadequate, e.g., if it

[81]There is more to say on this than space available to say it. The basic function of *se*'s default role here is to accomplish a reduction in the transitivity of the verb linked to either the ETR or the subject position. Reduction of transitivity linked to internal theta-roles is accomplished primarily via lexical saturation or {\em pro}, Rizzi 1986, where transitivity does not necessarily mean valency, and is best understood as a scalar value set. Cf. Thomason and Everett in preparation.

[82]Referential adequacy must be linked to a maximal expansion of AOR, since AOR is sufficient to identify referentially inadequate items, such as *se* (cf. below), and pro (as in Rizzi 1982, 1986 and Cinque 1988, among others).

lacks values for features that would be found on a maximal AGR, then it must be identified in one of four ways: lexical saturation (Rizzi 1986), assignment of the external theta-role (ETR), government and coindexation with AGR, or binding. Two important consequences are derived from these considerations as given in (246)–(247).

(246) Referentially adequate pronominals must be syntactically free, unless they are overtly marked as reflexive.

To be syntactically free will usually mean free in the minimal COMPLETE FUNCTIONAL COMPLEX (CFC) (but cf. Reuland and Koster (1991) and other articles in the same volume for discussion of binding domains). Outside of the relevant domain, I assume that all binding is necessarily pragmatic, not syntactic.

(247) Referentially inadequate nominals must be identified within their CFC.

If identification (or any other principle) is the only relevant licensing principle at D-structure for a given nominal, then the nominal must be identified at D-structure. Otherwise, identification may follow D-structure.

Romance *se* falls under generalization (247), whereas all English pronouns fall under (246). For example, *himself* and *themselves* are marked for gender, number, and person and thus would not otherwise be expected to be bound, were it not for the special mark *-self* which requires binding (cf. also Reinhart and Reuland 1991). From this I automatically derive the fact that *o(s)/a(s)/lhe(s)* must all be free (i.e., not bound in their minimal CFC), since (1) they are referentially adequate, and (2) they are not marked as reflexives. Since the allomorphic conditions on their distribution do not include coindexation with more than one theta-role, they cannot bind or be bound in their minimal CFC.

Brazilian Portuguese *se* (or Italian *si/se*), on the other hand, may be bound or free, as long as it is identified, which it must be because it is referentially inadequate.

The analytic task with regard to *se* can be summarized in terms of licensing, insertion, and spell-out rules given in (248)–(250).

(248) Insertion: Where can *se* be inserted?

(249) Licensing: How is *se* made visible? Identified? Assigned a theta-role, etc.?

(250) Spell-out: Under what conditions is the *se* form spelled out, as opposed to some other clitic form?

Each of these questions is relatively simple to answer in the present approach. The question in (250) is answered in (243) above. The answer to (248) will be "anywhere."[83] I reject any analysis which must stipulate a D-structure insertion site for clitics. This is unheard of for other categories and would be completely unenlightening.

The answer to (249) is straightforward, although some discussion of how *se* is identified is warranted. If the feature matrix in (243) above is inserted, it must be identified, since it is referentially inadequate (i.e., it is less than the maximal expansion of AGR). Again, the possible identification mechanisms are binding, lexical saturation, government by AGR, morphological subcategorization, and assignment of ETR.

Consider binding first. If a nominal is bound, its antecedent sets its reference and relieves its referential inadequacy. This is the reflexive use of *se*. Binding can only take place via c-command, so that reflexive *se* can be found only in indirect object and direct object positions. Its subject orientation is explained by the need to be governed by its antecedent, as per Reinhart and Reuland (1991).

Now, consider lexical saturation. A theta-role is lexically saturated if it is assigned an ARB-interpretation in the lexicon (cf. Rizzi 1986). I claim that in Romance the lexical saturation of the ETR is marked by *se* and that the process also serves to identify *se* as ARB. An item whose reference is lexically set to be ARB needs no further identification. All other nominals must be syntactically identified. Lexical saturation of the ETR results in the ergative use of *se*.

Next, consider government by AGR. There is one situation in which a nominal can be identified only by AGR, namely, where there is no external theta-role to be assigned or saturated and no available binder. This will arise only with verbs which fail to assign an ETR, and is in fact Cinque's (1988) nonargumental impersonal *se* (cf. (239b) above). This

[83]That is, anywhere a functional phi-feature stack may be inserted, i.e., D^0 or AGR^0. My model is unable to restrict *se* merely to one of these positions since it is composed only of phi-features and thus has no lexical entry of its own in which to list stipulations on insertion sites. This could in fact lead to a situation in which *se* is inserted in both AGR and D. This seems to occur in some northwestern Brazilian dialects, e.g., *João se machucou-se* 'John hurt himself'. My analysis of this dialect is that the first *se* is an inherent *se*, m-subcategorized for by the verb, and the second *se* is in direct object (D^0) position. The fact that such ambifixing of *se* is absent from most Romance dialects, however, is likely to mean that for those dialects the inherent *se* can appear only on intransitive verbs.

se is interesting because the impersonal can be used only with unaccusative verbs (and other non-ETR-assigning verbs) if the verb is tensed. At D-structure, this *se* may be generated in SPEC of V", binding a trace in the direct object position. Alternatively, it may be generated in the direct object position and raise to the subject or SPEC V" position. However, it must be identified in its CFC, which is the root sentence in which it is generated at D-structure. Only a tensed clause will contain a potentially identifying AGR in most languages although, as Cinque points out, this *se* may appear in the inflected infinitival forms found in Brazilian Portuguese, as predicted by his analysis and mine. By allowing AGR to identify *se* (just as it may identify pro), the nonargumental impersonal *se* is accounted for straightforwardly, in fact predicted by the present analysis since AGR is independently recognized as an identifier, with no special stipulations or separate lexical entries for *se*, as proposed in Cinque's analysis.

Identification by m-subcategorization will derive the fact that AGR is the minimally referentially adequate nominal, because it contains the maximum set of phi-features subcategorized for by regular verbs in a given language. Inherent *se* appears with the small subset of verbs which m-subcategorize for [person] without assigning it a theta-role. It differs from ergative *se* in not saturating a theta-role, but is like ergative *se* in being visible via m-subcategorization. Its D-structure position is discussed below.

There are two residual questions about identification by the ETR that must be answered before proceeding, however, namely (1) how does ETR identify *se*? and (2) why cannot coindexation with other theta-roles identify *se*?

It is clear that other theta-roles cannot identify *se* or examples like (251) would be wrongly predicted to be grammatical.

(251) **João*$_i$ *se*$_j$ *viu*
John saw (some)one.

Moreover, if any theta-role assignment could identify *se*, I would be unable to explain the failure of impersonal *se* to occur, e.g., with nontensed unaccusatives. Yet, the ETR does seem to be an allowable identifier, since (1) impersonal *se* is possible with untensed unergatives (cf. (238b) above), and (2) passive *se* is found with embedded infinitives under raising predicates, as in (252).

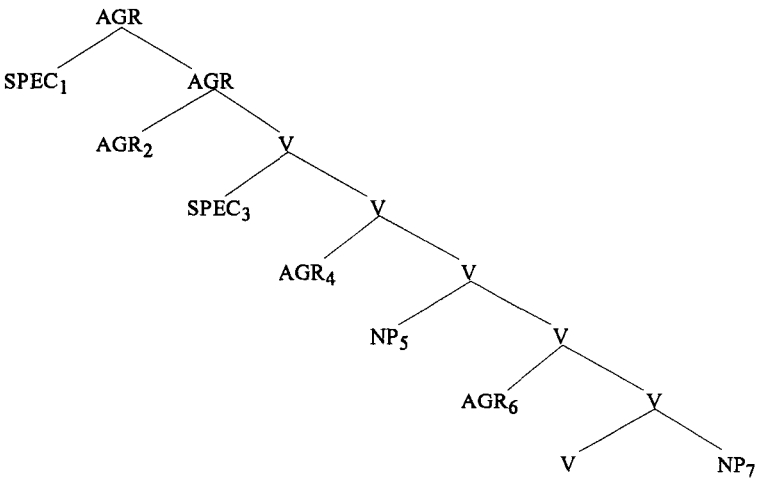
(252) *quei prigionieri*$_i$ *sembra* [t'$_i$-*essersi*$_j$ t$_i$ *liberati*]
One seems to have been freed.[84]

The answer to these questions follows from the allomorphy conditions in (243)–(245) and the notion of referential adequacy. That is, other clitics cannot be coindexed with the ETR, but *se* must be. This distributional restriction seems to have been grammaticized in the form of a privileged relation between ETR and *se* which, so far as I can tell, is derivable only from the allomorphic conditions on *se* throughout Romance, arguably going back to Latin, and not because of any special identifying ability of the ETR itself. Allomorphic conditions require that either *se* be assigned the ETR in the syntax, that it lexically saturate the ETR, or that it be bound by the ETR, since it is the elsewhere clitic in the sense of being neither an object clitic nor a subject clitic yet is still associated with some of the core properties of the subject. This is built into rule (243) by coindexing *se* with the ETR.[85] To sum up the analysis, consider the diagram in (253), which I take to be roughly representative of a common D-structure throughout Romance.

[84]Compare this with **quei prigionieri*$_i$ *vorrebbero* [PRO$_i$ *essersi*$_i$ *liberati*] 'Those prisoners would want to be freed'. This example is bad because although *se* is identified via the ETR, the allomorphy conditions are violated because it receives only accusative Case; *se* must receive nominative Case via chain formation, although in addition it may receive accusative Case. Burzio (1986) and Cinque (1988:558ff) and Chomsky (1986b:217) argue that *se* in fact does enter a chain with nominative Case in (44).

[85]This may present a problem for the work of Reinhart and Reuland (1991) in deriving the subject orientation of *se*, since their analysis cannot show why *se* can only saturate the ETR. That is, it seems that all of *se*'s relations to the ETR are related, but only the present analysis can tell us why, via allomorphy.

(253)



The allomorphic rules in (243)–(245), combined with independent licensing principles, guarantee that D-structure insertion into positions 1–7 will be realizable only as indicated in (254).

(254)

Position	Realization
1	expletive (e.g., French *il* (Rizzi and Roberts 1989))
2	V-agreement
3	*se*, pronoun (or full NP)
4	accusative clitic or *se*
5	*se*, pronoun (or full NP)
6	dative clitic or *se*
7	*se*, pronoun (or full NP)

This *se* is so unrestricted in its insertion possibilities relative to other PRONs because it has no values for gender and number and thus will be distinguishable from pronouns and other clitics by the allomorphic rules. Other clitics versus pronouns are distinguished only according to their

D-structure position, hence their distributions are much more severely restricted via the allomorphy rules.[86]

If [person] is inserted into any AGR or into a nonargumental position, it will be able to be identified by binding only and thus will be interpreted obligatorily as a reflexive, unless it is identified via lexical saturation. If [person] is inserted into SPEC of VP, it can receive the ETR and be identified in that way. If it then raises to SPEC of AGR, an impersonal *se* reading will be produced. If it remains in SPEC and receives accusative Case (perhaps through the verb as it moves through tense), the passive *se* reading will be derived. If *se* in SPEC of VP fails to receive the ETR as in unaccusative and other verbs lacking ETRs, then it must be governed by AGR for identification. This is the nonargumental impersonal. If *se* results from lexical saturation, or is merely subcategorized for by the verb, it will be inserted at SPEC VP, be identified via saturation or m-subcategorization, and be visible at LF, via m-subcategorization by V, resulting in the ergative and impersonal uses.[87] This model thus easily derives the various uses of *se* with no special assumptions or stipulations peculiar to *se*, nor any lexical entries for clitics or affixes.

I now turn to consider some alternative analyses of *se* which have been proposed in the literature over the years and which to some degree remain influential.

5.3–5.6 Alternative analyses

In this section, I summarize some influential alternative analyses to the one just presented which have been seen in the history of generative studies on *se*. For the most part, I do not offer counteranalyses of my own in this section, since that has already been done in the preceding section. Occasionally it is necessary to say how I would handle this or that fact that may not have been covered in the previous section. But for the most part I let my analysis speak for itself and simply summarize the

[86]Perhaps a clearer way of considering this would be that if the features in (38) and (39) are put in a nonAOR position, only a pronoun form may be spelled out, given the link in the rules to AGR. Moreover, in (45) I allow for multiple iterations of some nodal projections (following Speas 1990 in not giving bar labels for nodes) while also allowing for the possibility that other nodes, such as AGR, may or may not project at all, in fact that those nodes will not project unless required to do so.

[87]Insertion of [person] into SPEC of VP at D-structure assumes that the surface subjects of ergative/inherent *se* verbs are underlying objects. If they are underlying subjects, then I claim that *se* is an unattached adjunct at D-structure, adjoined to AGR at a subsequent stage (cf. Lebeaux 1990 on adjuncts).

previous analyses. It is my opinion that the failure of these analyses to unify the manifestations under a single theory is obvious enough.

5.3. Belletti 1982. Belletti's account of Italian SE[88] is based upon the assumptions that SE needs Case and a theta-role and that what Case it receives determines the type of S-structure derived. More specifically, she requires SE to be generated under INFL, proposing that "If INFL is pronominal, INFL has Case and a theta-role" (1982:6).

While this has some initial plausibility, it is difficult to see how something in INFL could receive the internal, accusative Case normally assigned by the verb to its direct object. Belletti recognizes this also, claiming that it is precisely this idiosyncratic fact about SE which explains the contrast between the passive versus impersonal constructions.

To see how this proposal captures the relation between passive and impersonal SE (Belletti does not discuss the other uses of SE), consider the D-structure in (255) for (239) above (Belletti 1982:6).

(255) *si mangiare i dolci al cioccolato*
One eats chocolate candy.
[s[NP e] [INFL tense . . . features . . . *si*]
[VP[*mangiare*] [NP *i dolci al cioccolato*]]]

Now, suppose that *si* in (255) somehow absorbs the accusative Case assigned by *mangiare*.[89] Then [NP,VP], the direct object, must move to a Case-marked, theta-position, which in (255) can only be [NP,S]. This then is Belletti's analysis of how the passive *si* in Italian works. Belletti then argues that (255) is also the D-structure for the impersonal use of *si*, as in (238) above. Another example of the impersonal, which varies minimally from the passive use in form is illustrated in (256).

(256) *si mangia i dolci al cioccolato*
One eats chocolate cookies.

When *si* in (255) absorbs the nominative Case, as opposed to the accusative, then the object NP may remain in the VP, receiving accusative Case. Belletti argues that French lacks an impersonal use of SE (cf. (238)

[88]I use SE here to stand for any reflexive reciprocal clitic.

[89]*Si* will always get the external theta-role of the verb assuming that transmission of the external theta-role always takes place through INFL. When INFL contains a pronominal (to use Belletti's term), then it will be assigned the theta-role. When INFL is nonargumental, the theta-role will be transmitted on to the subject position.

above), since this SE exists only in pro-drop languages, i.e., those with a pronominal INFL.[90] Thus, the absence of an impersonal SE in French is related to a more general property of that language, namely, that it is not a pro-drop language. That the absence of an impersonal SE in French need not be stipulated in her analysis counts strongly in favor of this approach. Belletti (1982:15) summarizes her analysis of SE as in (257).

(257) a. SE is assigned a theta-role by VP, i.e., it is assigned the theta-role that VP assigns externally to [NP,S], if INFL is not pronominal and to INFL if it is;

b. SE absorbs accusative Case; or

c. SE is marked with nominative Case.

Belletti's account represents an important advance in clitic studies and has several very positive aspects, as noted above. On the other hand, her analysis presents a few, nontrivial problems. First, it has no way of deriving the fact that SE is able to absorb accusative Case and must therefore stipulate this. Second, her explanation of why SE needs a theta-role and Case, namely, that any pronominal INFL must receive a Case and a theta-role, runs afoul of the fact (seen in chapter 3) that languages exist, such as Pirahã and Yagua, in which INFL is pronominal and yet never receives Case or a theta-role (facts which are crucial to the account I will defend directly). Additionally, Belletti's analysis seems unable to relate the impersonal and passive uses of SE to its equally common reflexive use. Evidently, she assumes these to be separate morphemes, sidestepping an important issue and complicating the grammar of SE as a result. Thus, I conclude that this analysis is inadequate. However, the basic insight of her analysis, that impersonal and passive SE are related, must be retained.[91]

[90] I have shown in §5.1 that the absence of impersonal *se* in French is also related to the fact that French is pro-drop, although in a different way than that proposed by Belletti. In my account, because French lacks pro it has more allomorphs for subject (D^0) position PRONS than other Romance languages, so that it is not surprising that the spell-out rules for *se* will be limited in French to nonsubject position.

[91] Although, in my account I will argue against the curious notion which informs so much work in Romance clitics that a clitic cannot be generated in an argument position. I consider it one of the primary advantages of my approach that the D-structure position of clitics need not be stipulated for any case.

5.4. Zubizarreta 1982, 1987. Zubizarreta (1982:155) claims that there are in fact three separate, homophonous lexical entries for SE.[92] These lexical items are a nominal clitic and two distinct verbal affixes, which I refer to in this section as SE_1, SE_2, and SE_3, respectively.

SE_1 may be generated under INFL or on the verb. When generated on the verb, it results in the simple reflexive-reciprocal reading given in (236) above. Zubizarreta claims that the D-structure of the reflexive/reciprocal in (258) would be as in (259).

(258) *Juan* SE *fotografa*
John photographs himself.

(259) $[_S[_{NP}\ Juan_i]\ [_{VP}[_V\ se_i\ fotografa]\ pro_i]]$

In (259), the set $se_i \ldots pro_i$ functions as an anaphor, as if it were a discontinuous version of *himself*. As an anaphor, $se_i \ldots pro_i$ must be bound in S, its governing category, as per the binding condition in (246).

Zubizarreta notes, as do other researchers (e.g., Burzio 1986), that SE must be c-commanded by its antecedent at D-structure. Thus, SE cannot refer to derived subjects. This accounts for the contrast in (260) and (261).

(260) *Pierre s'est presente a Marie*
Pierre introduced himself to Mary.

(261) **les infants* SE *sont presentes (par la diretrice)*
The children were introduced to each other (by the director).[93]

When generated under INFL, SE is responsible for the impersonal reading, as in (236) above; cf. also (262).

(262) SE *vende manzanas*
One sells apples.

Zubizarreta (p. 144) claims that "SE, when linked to the subject position is arbitrary in interpretation, like a pronominal anaphor." At this

[92]All page numbers refer to Zubizarreta 1982, unless otherwise noted.

[93]This stipulation is not needed in my account. It follows from the fact that *se* must be bound within its minimal domain, which will be VP. The derived subject of the passive can only bind it after it moves out of the VP, meaning that derived subjects cannot bind reflexives.

point, she relies on Belletti's account, accepting with little change her analysis of the impersonal. The difference is that she relates the reflexive to the impersonal via the free generation of SE under V or INFL and the assumption that it is anaphoric in both cases. Like Belletti, Zubizarreta notes that SE cannot appear in intransitive infinitives which supports the notion that it needs Case. Consider the explanation she gives for (263) and (264) (p. 146; her (51a) and (51b)).

(263) *[$_S$ *parece* [$_S$ *trabajarse duramente*]]
One seems to work hard.

(264) *[$_S$ *Juan cree* [$_S$ [$_{VP}$ *trabajarse duramente*]]
Juan believes SE to work hard.

Assuming that SE_1 is under INFL for the impersonal reading, (263) and (264) are ungrammatical since SE "only functions as a pronominal anaphor when it is part of an INFL which contains an AGR element . . . since nominative case is only available when AGR is present, SE will not be case-marked" (p. 146).

In Zubizarreta's analysis of passive *se*, SE_2, she again follows Belletti's account, in which SE absorbs the external theta-role of VP and the accusative Case. Moreover, she notes that whereas SE_2 can control a purpose clause or occur with an agentive adverb, it may never occur with a by-phrase. Thus, compare (265)–(267).

(265) *l'usine a été brûlee pour toucher l'assurance*
The factory was burned down to collect the insurance.

(266) *du bon vin* SE *boit voluntairement*
A good wine is drunk voluntarily.

(267) **du bon vin* SE *boit (voluntairement) par Marie*
A good wine is drunk (voluntarily) by Marie.

Zubizarreta's explanation of these facts is that SE simply alters the argument structure of the verb so as to make the external theta-role

unassignable to an argument.[94] She differs from Belletti in not collapsing the impersonal SE (SE_1) and passive SE (SE_2). Her principal empirical motivation comes from the fact that certain languages have SE_1 but lack SE_2, as does Trentino; note (268).

(268) a. *le castagne* SE *le magna col vin caldo*
Walnuts (are) eat(en) with hot wine.

b. **le castagne* SE *magna col vin caldo*
Walnuts (are) eat(en) with hot wine.

However, due to the fact that I have been unable to confirm the contrast in (268) in my own elicitation and in conversations with other linguists, I must take exception to these facts and not consider them as evidence in favor of Zubizarreta's proposal. She also argues that SE_1 and SE_2 differ in standard Italian with respect to AUXILIARY CHANGE (p. 178), in which SE_2 selects the auxiliary *essere* in complex verbs, (269), whereas SE_1 selects the auxiliary *avere*, as in (270).

(269) *quei libri* SE_2 *dovrebbero essere comprati*
Those books would have had to be bought.

(270) *li* SE_1 *dovrebbe avere comprati*
One would have to buy them.

Again, however, I do not think that these facts support Zubizarreta's analysis. They can be derived more easily, it would seem, in terms of the movement of the subject in (269) versus nonmovement in (270). Continuing with my summary of Zubizarreta's analysis, however, consider

[94]However, she does not give an explicit account of how this alternation works, nor why SE should have this effect. In my account, *se* cannot occur with a by-phrase in the passive because it is not m-subcategorized, but is generated in an argumental position like any other pronoun. Thus, unlike the m-subcategorized morphological passive marker, e.g., *-ado/a* in Brazilian Portuguese, there is no way to specify lexically that *se* is, say, only optionally an argument. It can no more transfer its theta-role to the by-phrase than any other pronoun could. That is, I assume that the by-phrase in the passive receives its theta-role via chain-formation with the passive marker on the verb which, as part of the verb because it is m-subcategorized, is able to assign a theta-role via a chain and does not need (but may have if necessary) a theta-role at LF. In effect, this means that the morphological instructions for the passive allow the morphological passive marker to be optionally an argument, while *se* must keep its theta-role, if it receives one.

her remarks on SE_3, the ergative and inherent uses of *se*: "The ergative SE, like the passive SE, is a verbal affix which functions as an intransitivizer" (p. 152). I repeat examples of ergative SE in (271)–(272).

(271) *le verre s'est casse*
The glass broke.

(272) *il s'est casse trois verres*
There broke three glasses.

Zubizarreta notes that SE_3 differs from SE_2 in that it is unable to control a purpose clause and may not occur with an agentive adverb, as in (273) and (274).

(273) **le verre s'est casse volontairement*
The glass broke voluntarily.

(274) **le verre s'est casse pour embeter Marie*
The glass broke to bother Mary.

Additionally, she notes that whereas the SE_2 passive is productive, the use of SE_3 is lexically idiosyncratic. This idiosyncrasy, along with its inability to control or appear with agentive adverbs, leads her to postulate that SE_3 is affixed lexically, rather than syntactically (as with SE_2). This proposal seems to be on the right track, as it also subsumes under SE_3 the use of SE with a restricted set of verbs not derived from transitives. This use of SE is usually called the inherent *se* as in examples (275) and (276).

(275) *trois enfants* SE *sont evanouis*
Three children fainted.

(276) *il c'est evanoui trois enfants*
There fainted three children.

Zubizarreta's treatment of SE in (275) and (276) is to consider it a special case of SE_3, an ergative verb marker. But she offers no explicit suggestion as to how this might be expressed formally, an unfortunate omission in light of the fact that, unlike examples such as (271) and (272), those in (275) and (276) involve verbs with no transitive counterpart.

Summarizing Zubizarreta's analysis brings to light a number of facts which any account of SE must handle. But her conclusion that there are

three separate *ses* seems unnecessarily cumbersome. I continue this review of previous treatments of *se* by a consideration of the proposals of Manzini.

5.5. Manzini 1983. Manzini, like the present study, attempts to derive reflexive, impersonal, and passive uses of SE from a single lexical item, although she does not discuss the ergative use. She begins by suggesting the lexical entry in (277) for impersonal *se*.

(277) Impersonal SE = /si/: free variable, N, clitic on verb, nominative/bound to its subject by co-superscripting

Impersonal SE is listed as a free variable by Manzini due to its nondefinite referential character. N represents its lexical category. Its syntactic properties are indicated by the information clitic on verb and nominative, etc. By (277), and assuming much the same line of reasoning as Belletti (1982), Manzini derives the behavior of impersonal *se*. The uniqueness of her contribution begins to emerge in her analysis of middle *se* (referred to as passive *se* by Belletti and as SE_2 by Zubizarreta), which she analyzes as a RESTRUCTURING lexical item. To account for the passivizing property of middle *se*, Manzini proposes the following. Like impersonal *se*, middle SE is an argument requiring a theta-role. This, she claims, explains why SE cannot occur with a by-phrase—the presence of two arguments competing for a single theta-role would produce a theta-criterion violation.

Like Zubizarreta, Manzini (1983:85ff) argues that middle and impersonal *ses* must receive Case. She contrasts its inability to be embedded in control clauses with its grammaticality in raising configurations; note (278).

(278) a. **e facile lavarsi volentieri i bambini*
It is easy to wash eagerly the children.

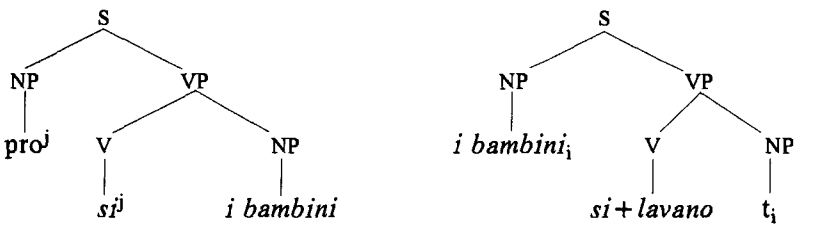
b. *e facile lavar volentieri i bambini*
It is easy to wash eagerly the children.

c. *i bambini sembrano lavarsi con facilita*
The children seem to wash (middle) easily.

Manzini's account of this contrast is that middle/impersonal SE must receive nominative Case via CO-SUPERSCRIPTING with the subject position, an alternative indexing procedure which many theoreticians, myself included, find unwarranted. But control subjects, PRO, have no Case and thus (278a) is ungrammatical. In (278c), the subject position of *sembrano* 'seem'

does receive nominative Case and, Manzini claims, transmits it to SE via co-superscripting. At this point, Manzini's account grows a bit more complicated. She claims that, as already stated, middle SE is at once a passivizer and an argument. But she argues that this leads to a paradox since (1) as a passivizer SE eliminates the verb's ability to assign an external theta-role, but (2) as an argument it must have a theta-role and the only theta-role available for it is the external role that it eliminates (the internal role goes to the object NP at D-structure). Manzini argues that this paradox is only apparent, however, since middle SE must, by its very nature lexically, appear exclusively in a THETA-RESTRUCTURING PHRASE MARKER (RPM). According to this analysis, SE will be associated with two structures simultaneously, as in (279) (Manzini 1983:94).

(279) RPM for middle SE



In the first part of the RPM in (279), SE receives nominative Case via co-superscripting with pro, and is also associated with a theta-marked chain (pro, *si*), satisfying its requirements qua argument. In the second structure, *si* passivizes the verb *lavano* 'wash', forcing *i bambini* 'the children' to raise to subject position as a derived subject. This leads to (280) as the lexical entry for middle SE (Manzini 1983:94).

(280) middle *si* = /si/: free variable, N, clitic on verb, nominative/bound to its subject by co-superscripting, passivizer

Manzini then turns to consider reflexive SE. She argues that reflexive SE, unlike impersonal and middle SE, could not be a free variable since it is bound by a referential NP, [NP,S], via co-subscripting. She further observes that reflexive SE (again unlike impersonal/middle SE) does not receive nominative Case via co-superscripting with subject position but rather receives accusative Case directly from the verb. The remainder of her discussion covers essentially the same facts and arrives at conclusions similar to Zubizarreta's thesis, except that Manzini considers reflexive SE

to be a bound variable. The resultant lexical entry for reflexive SE is as in (281) from Manzini 1983:107.

(281) reflexive SE = /si/: bound variable, N, clitic on a verb, bound to its subject by co-subscripting

Note that (281) is quite similar to (277) and (279), except that it lacks the feature, passivizer. This leads Manzini to predict a fourth type of *se*, which she labels as middle reflexive *se*. This SE would have the entry shown in (282).

(282) middle reflexive SE = /si/: bound variable, N, clitic on a verb, bound to its subject by co-subscripting, passivizer

The prediction of a middle reflexive SE is particularly interesting in the present context, since the account I propose below strongly predicts that no such middle reflexive SE could exist in principle. Thus, it is worth considering exactly what the properties of middle reflexive SE would be, as well as the kind of structures in which it would be predicted to occur. Manzini's final conclusions on the analysis are summarized in (283) from Manzini 1983:114.

(283) SE = /si/ (where SE = variable-like element): N, third person, unspecified number and gender clitic, on a verb bound to its subject (passivizer)

Summarizing Manzini's analysis, the three uses of SE she addresses are derived by relying on the notions of restructuring phrase marker, co-superscripting versus co-subscripting, and lexical information stipulating syntactic processes (e.g., passivizer). Additionally, she predicts the existence of a middle reflexive SE, a prediction made by no other researcher on SE, and one for which I have found no empirical support. Manzini's account is clearly incompatible with my present working assumptions, since it relies on a lexical (and highly stipulative) entry for *se*. Since the present analysis does not predict this latter use of SE and since it also unifies the inherent, ergative, agreement, and non-argumental impersonal uses of *se*, it is to be preferred to Manzini's account. Finally, consider Burzio's treatment of *se*.[95]

[95]Cinque (1988) also offers a very important contribution to the theory of Romance *se*, although it is primarily to introduce the phenomenon he labels argumental impersonal *se*. Since I have already given an analysis of this use of *se*, I have nothing more to say about Cinque's analysis here.

5.6. Burzio 1981, 1986. Burzio's work on SE is concerned with a number of related issues which do not impinge on the principal concerns here. In this section, I limit discussion to those aspects of Burzio's proposal which are of direct concern to the present issues.

Burzio claims that there are two *ses* in Italian (I assume, perhaps incorrectly, that he intends his conclusions to apply loosely for Romance in general). He distinguishes between the passive and impersonal SE (which he represents as SI) and the reflexive, ergative/inherent *ses* (represented as *sí*). He assumes that SI may be generated under any NP node, undergoes NP movement, and requires a theta-role and Case, just like any other NP. Unlike other NPs, however, SI must be cliticized. He argues that SI-cliticization must be stipulated to occur from subject position only, regardless of where it is inserted at D-structure. For this analysis of SI to be maintained, however, Burzio is forced to add the additional stipulation that SI may bind its trace, even if it does not c-command it. Although he notes the peculiarity of this proposal, he claims that "some such exceptional provision seems required for any case of subject cliticization" (1981:29).[96]

This peculiarity, SI's binding of its trace without c-command, is then used to explain the grammaticality of SI in raising constructions and its grammaticality in control structures (the same contrast is also noticed by Manzini and Zubizarreta). Burzio's argument is that in raising structures it is the trace of SI which raises, forming a Case chain, allowing SI to satisfy the requirement that NPs have Case. In (284), however, raising of SI's trace is blocked, since the matrix [NP,S] position is a theta-position; cf. (284) and (285).

(284) t_i *sembrava* t_i *mangiarsi*$_i$ *molto bene*[97]
One seemed to eat very well.

(285) **sarebbe interessante* t_i *vedersi*$_i$ *quel filme*
It would be interesting for SI to see that movie.

[96]However, as I argue below, cliticization from subject position will occur only at PF, leaving no trace. Thus, contrary to Burzio, no stipulation is required.

[97]Recall that similar examples in Spanish are, according to Zubizarreta, ungrammatical, as in (263) above. This can be analyzed if we assume that in Spanish *se*'s referential inadequacy cannot be relieved by chain-formation with an expletive pro, as I take the upper subject EC in (284) to be. To satisfy referential adequacy in Spanish, *se* in (263) must raise to the upper clause, as in *se parece trabajar duramente* 'One seems to work hard'.

Burzio's account of the passive use of SI differs, however, from the account of Belletti in that, like Manzini, he disassociates the object-raising facts from SI's Case requirements. That is, he assumes that SI always gets nominative Case, even in passives, and that OBJECT PREPOSING is independent of SI's absorption of accusative Case. The empirical motivation for this assumption comes from sentences such as (286) (Burzio 1981:34).

(286) a. *sarebbe belo* [PRO$_i$ *essere invitati* t$_i$ *a quella festa*]
It would be nice to be invited to that party.

b. **sarebbe belo* [PRO$_i$ *invitarsi* t$_i$ *a quella festa*]
It would be nice SI to invite (us) to that party.

In (286), object preposing has placed PRO in subject position of the embedded clause although, apparently, accusative Case was not absorbed. Thus (286a) is understood by Burzio to constitute prima facie evidence against the association of object preposing with accusative Case absorption.[98] In (286b), since no nominative Case is available, SI cannot be used, in spite of the fact that *invitar* assigns accusative Case. These constraints are met in (286a), where the accessible binder for SE is the (null) expletive subject of *sembrava*. In (286b), however, there is no accessible binder since this would create a theta-criterion violation.[99] In any case, momentarily setting aside discussion of the problems raised, examples such as (284)–(286) lead Burzio to the conclusion that SI must always receive nominative Case, leaving the accusative Case undischarged. Although he offers no justification for this conclusion, other than the lexical properties of SI, Burzio claims that this is exactly what obtains in (287).

(287) *le manifestazioni sportive si guardano con interesse*
Sporting events SI (are) watch(ed) with interest.

So, in (287), both *le manifestazioni sportive* and SI receive nominative Case from *guardano*, while the accusative Case normally assigned by *guardano* is not discharged.[100]

[98]I argue in §5.2. that *essere* is in fact the accusative Case absorber in (286a).

[99]Example (286b) is of course fine with the reflexive reading where SE is bound to PRO.

[100]Although he does not address this issue, Burzio must either assume that this Case is undischarged or that a single chain, *le manifestazioni* and its trace, receives two distinct traces, a less than desirable conclusion given current assumptions about Case theory.

Burzio analyzes ergative, inherent, and reflexive *si* as follows. First, he notes that the ergative is restricted to a particular class of verbs. Next, he claims that in sentences such as (289) below, "we can assume that *si* in these cases is the morphological reflex of the 'loss' of subject-thematic role . . . which is involved in the derivation of ergative entries from transitive ones" (Burzio 1981:46).

(288) *Giovanni rompe la finestra*
Giovanni breaks the window.

(289) *la finestra si rompe*
The window itself breaks.

For this use of *se*, Burzio's analysis agrees with that of Grimshaw (1982), who analyzes the SE facts as lexical transformations. Burzio notes that in spite of the fact that ergative SE is the reflex of a lexical process, it must still be analyzed as a clitic rather than as a verbal affix, because it may be separated from the verb, as in (290) taken from Burzio 1981:46.

(290) *la finestra si e rotta*
The window has broken.

Burzio assumes that the fact that *si* is related to subject position derives from the fact that it "is an indicator that assignment of thematic role to the subject position has been suspended" (1981:47).[101]

The basic rule governing ergative SE is summarized in (291) (cf. Grimshaw 1982:100ff on inchoativization).

(291) a. Insert *si*; suspend subject thematic role.

b. Turn object into subject.

Whereas Grimshaw understands (291) to apply in the lexicon, Burzio claims that (291b) is a syntactic operation. While I agree with Burzio's arguments here, neither Grimshaw nor Burzio gives an adequate account of this operation in light of a number of outstanding questions (e.g., why the SE in ergatives is the only one which is bindable by a derived subject). I conclude my review of previous accounts of SE with a

[101]While I agree with this in principle, one might reasonably require that an account of this property be more explicit as to how a theta-role may be suspended and what it means for *si* to be an indicator.

consideration of Burzio's discussion of reflexive SE (his *si*; see the review of Zubizarreta in §5.4 above for a description of inherent SE). For Burzio, inherent SE is simply a lexically idiosyncratic extension of the ergative marker to intransitives.

Burzio's (1981:427) assumptions are that SE is generated in clitic position on the verb and that it relates two arguments, the antecedent and the consequent, as in (292).

(292) NP *si* V . . . $NP_{\emptyset}$. . . ($\emptyset$ means that the NP is phonologically unrealized) R_1 R_2

Burzio gives evidence from object control structures to support the existence of an NP in object position in (292) which thus contradicts Grimshaw's lexical analysis, wherein SE merely marks the elimination of the object role in such configurations. Again, Burzio underscores the intimate relation which obtains between *si* and subject position by noting that whereas other anaphors in Italian, e.g., SE *stesso,* may take nonsubject antecedents, *si* may take only subject antecedents. Burzio also notes (as do Manzini and Zubizarreta) that reflexive SE may be related only to D-structure subjects. A number of other facts about reflexive SE are discussed by Burzio. Some of these are taken up below, others are omitted from this discussion since they are derivable straightforwardly with few or no modifications from the present account.

5.7. Conclusion. As my review shows, *se* has long been an important topic in the theory of syntax. I think it is fair to say, however, that of all the influential studies to date on *se*, none but the present analysis succeeds in unifying all the uses of *se* in a single theory; certainly not one is as minimalist in its assumptions as the present model.

6
Pronominal Determiners in Romance

In his 1991 paper, Bernstein discusses pronominal determiners in certain Romance languages, as illustrated in (293) and (294). These are contrasted with nonpronominal determiners, in (295) and (296).

(293) *uno simple* (Spanish)
a simpleton

(294) *quello alto laggiu* (Italian)
that tall (one) over there

(295) *un cierto dato*
a certain fact

(296) *unas flores olorosas*
some fragrant flowers

As Bernstein (1991:51) points out, the occurrence of the pronominal determiner precludes the presence of a lexical noun, as shown in (297) and (298).

(297) **uno hombre simples* (versus *un hombre simples*)
a simple man

(298) **quello alto monte laggiu* (versus *quell'alto monte laggiu*)
that tall mountain over there

Adjectives which may appear exclusively in prenominal position are ungrammatical with the pronominal determiner as in (299).

(299) a. *un mero accidente*
a mere accident

b. **un accidente mero*

c. **uno mero*

Moreover, the presence of the pronominal determiner blocks certain adjectival interpretations which are possible when the NP is present as in (300)–(302).

(300) a. *un simple hombre*
a simple man

b. *un hombre simple*
a simple-minded man (i.e., a simpleton)

c. *uno simple*
a simpleton *not* a mere man

(301) a. *un gran autor*
a great author

b. *un autor grande*
a large author

c. *uno grande*
a large (one) *not* a great (one)

(302) a. *un pobre hombre*
a pitiable man

b. *un hombre pobre*
a poor man

c. *uno pobre*
a poor (one) *not* a pitiable one

According to Bernstein (1991:58–59), adjectives in Spanish admit of adjectival and nominal interpretations. The adjectival interpretation allows degree adverbial modification, but the nominal (deadjectival) interpretation does not. Adjectival readings are illustrated in (303)–(304), and deadjectival nominals in (305)–(306).

(303) a. *uno pobre*
a poor one

b. *uno muy pobre*
a very poor one

(304) a. *uno viejo*
an old one

b. *uno muy viejo*
a very old one

(305) a. *un pobre*
a pauper

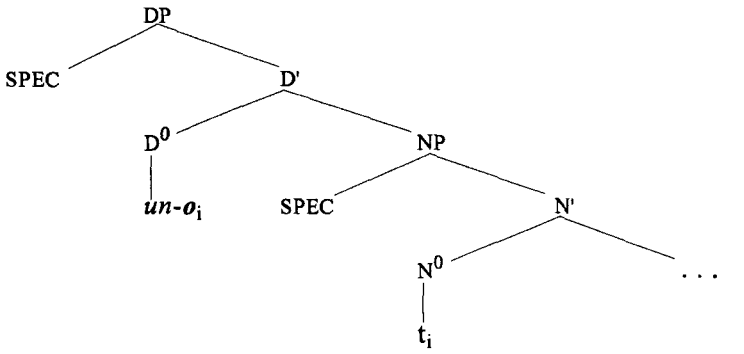
b. **un muy pobre*

(306) a. *un viejo*
an old person

b. **un muy viejo*

Interestingly, the pronominal determiner, as in (303) and (304), allows only the adjectival reading. Bernstein accounts for this array of facts by claiming that the pronominal portion of the determiner (e.g., the final *o* in (304)) actually originates in N^0 and then raises to the surface position D^0, as in (307).

(307)



This analysis prohibits the deadjectival reading for an adjective which occurs with the pronominal determiner, so that, for example, *uno pobre* can only mean 'a poor (something or other)' and not 'a pauper'.

Bernstein's incorporation analysis accounts for all these facts quite simply. If I assume the HEAD MOVEMENT CONSTRAINT (Travis 1984:31; Baker 1988:53ff) or RIGID MINIMALITY (Chomsky 1986b:42), then incorporation from N^0 to D^0 is allowed only if no other X^0 intervenes between N^0 and D^0.[102] When an adjective occurs prenominally, it will block incorporation from N^0. Moreover, this automatically predicts that the pronominal determiner will require an adjectival reading and not allow a deadjectival nominal reading since if the pronominal portion of the determiner originates in N^0, then the adjective which follows the determiner, as in (304) above, must modify a (covert) N^0.

The relevance of these facts and Bernstein's analysis of them for the present model is quite clear in that they are concerned with the syntactic behavior of a phi-feature bundle of exactly the type discussed throughout this monograph. At the same time, my model is unable to analyze these facts as incorporation, at least not of the same type that Bernstein describes. Since phi-features are [+functional] in my account, they cannot be generated in a lexical category, e.g., N^0. Moreover, even if I were to claim that phi-features could be inserted into N^0 somehow, a movement analysis like Bernstein's is unavailable because the free insertion of phi-features from the lexicon to the syntax implies that for any derivation relying on movement, there is another possible derivation

[102] HEAD MOVEMENT CONSTRAINT is defined as: An X^0 may only move into the Y^0 which properly governs it. Minimality is defined as: Alpha does not govern beta if gamma is a projection of delta excluding alpha such as . . . alpha . . . [gamma . . . delta . . . beta . . .].

based on direct (D-structure) insertion of the phi-features into the head position of the chain; this contrast is stated in (308).

(308) a. Insert phi-features into N^0 then move to D^0 (movement).

b. Insert phi-features into D^0 (nonmovement).

Therefore, I must show how the no-clitics model I am developing here can account for the pronominal determiner facts placed on the agenda by Bernstein.[103] Fortunately for me, Bernstein's analysis needs to be questioned anyway, on conceptual grounds. This is because her analysis suffers from several problems (which do not impinge on the present model).

The problems with Bernstein's analysis include the following: (1) it is unclear how such an analysis is to be understood in terms of a theory of morphology which distinguishes cliticization from affixation (an issue which does not arise in the present framework but which is implicit in all other theories of morphology); (2) her analysis allows a pronominal in N^0, contrary to independent work which suggests that pronominals are always D^0 categories (cf. especially Baker and Hale 1990); (3) it introduces a movement process which is otherwise unattested in Romance and it violates normal cliticization patterns in Romance; (4) it fails to explain why other Ns cannot undergo the rule; and (5) it fails to offer an account of pronominal determiner readings in Romance languages which lack any overt distinction between pronominal and nonpronominal determiners.

Consider problem one, i.e., is the pronominal part of the determiner a clitic or an affix? The answer to this question must be rather arbitrary in Bernstein's theory—whether it is an affix or a clitic is just an arbitrary lexical fact. But it is a question which nonetheless arises. In the present model, however, there is no possibility that cliticization to D^0 could take place other than mere phonological cliticization. This is because a clitic will only originate in a functional position and the only functional position associated with NP, i.e., the MINIMAL DOMAIN of NP, is D^0; cf. Chomsky 1992:6. But if phi-features originate in D^0, they will appear included in D^0, i.e., they will surface as an affix, never as a clitic. Since my analysis can derive this fact and Bernstein's cannot, I take this as evidence in favor of my model.

[103] Again, my model also rules out any operations involving phi-features other than insertion and (co)indexation. Operations like phi-feature transfer or phi-feature copying are disallowed by my model.

Now consider objection two. The idea that pronouns are generated in D^0 is useful for at least two reasons. First, it accounts for the fact that in certain languages pronouns can be incorporated out of PPs, while nonpronominal nouns may not be (e.g., Southern Tiwa, cf. Baker and Hale 1990:294ff). Since N^0 and P^0 are both lexical categories, Rizzi's RELATIVIZED MINIMALITY principle will interpret the preposition as a potential antecedent governor for N^0, blocking movement out of PP. On the other hand, D^0 can incorporate out of PP since the preposition is of a different kind of category (lexical versus functional) than the pronoun and will thus not count as a potential antecedent governor. Another reason for generating pronouns in D^0 is that this automatically accounts for the fact that they cannot be modified, since modification takes place in NP;[104] cf. (309).

(309) *an old him

Objections three and four are self-explanatory, so I will not belabor them here. Objection five is by no means an insurmountable problem for Bernstein, although it does force her to include some explicit consideration of the difference between abstract incorporation versus spell-out rules. Consider examples (310) and (311) from Brazilian Portuguese.

(310) a. *um pobre*
a poor (one) *or* a pauper

b. *um muito pobre*
a very poor one

c. **um muito pobre*
*a very pauper

[104]If this is true, then the reader may legitimately wonder how it is that binding could ever take place between D^0 and N^0, as is crucial in my analysis. That is, how can D^0 be a potential antecedent for N^0? I claim that potential antecedent is determined by category node and/or by the features on a node. Lexical categories are constant with respect to potential antecedenthood. A lexical category will always be a potential governor for another lexical category and will never be a potential governor for a functional category. However, I assume that the status of functional categories is variable, such that a functional category will be a potential governor for a lexical category just in case it shares features with the lexical category. So, D^0 will not be a potential governor for N^0 if it contains no nominal features [gender, person, number] (in such a case it would merely contain [definiteness], 'a', 'the' [proximity], e.g., 'that', 'this', etc.), but it will be if it does contain such features.

(311) a. *um mero acidente*
a mere accident

b. **um acidente mero*

c. *?um mero*
A mere (one).

d. **um mero*
a thing characterized by mereness[105]

These examples are a problem for Bernstein only in a very general sense and she might address them with little difficulty. To account for the different readings in languages like Brazilian Portuguese where the pronominal determiner reading is available with no phonological reflex of the pronominal, Bernstein must either assume abstract incorporation (i.e., a pronominal with no phonological form) or she must assume that spell-out rules do not interpret the phi-features in such a structure in this language. The difference is subtle but important, because it distinguishes between two very different notions of surface morphology, one based on the morpheme, where the Spanish pronominal determiner *-o* is listed in the lexicon as well as the Portuguese null counterpart, and the other which does not rely on the notion morpheme, adopting instead an a-morphous approach to morphology (cf. Anderson 1992). This is a choice which Bernstein must make but which is unnecessary in the present theory, which does not recognize the morpheme. Therefore, there are several parts of Bernstein's analysis which are untidy. I would like the present account to clear up these areas at the same time that it shows how to handle the facts in terms of unconstrained phi-feature insertion.

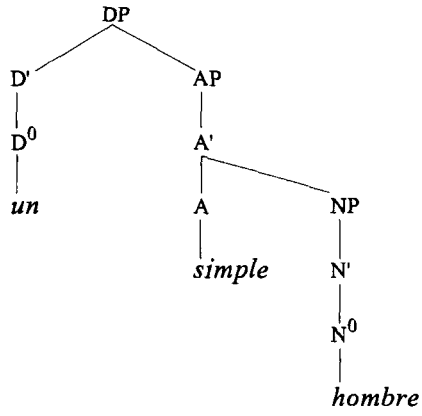
The present model accounts for these facts in the following way. According to what has been said about phi-feature insertion, the presence of phi-features [person, number, gender] on the D^0 position will require an N^0 position, but will prohibit that N^0 position from bearing an argument.[106] The N^0 in fact can be filled by a trace, although this is a requirement of the representation and does not result from movement. If

[105]Frankly, I suspect that any example with such an adjective that does not also have a head noun will be ungrammatical for independent semantic reasons. But I will assume the grammaticality judgments predicted by Bernstein for the sake of discussion.

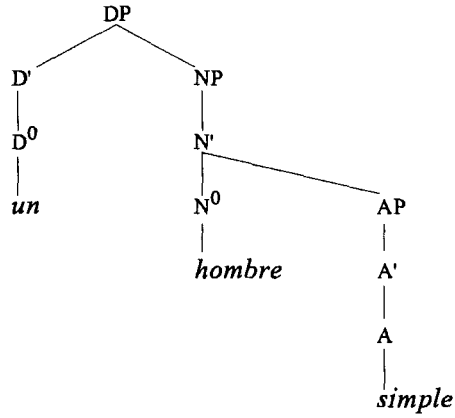
[106]Hence the ungrammaticality of *[$_{NP}$ *he John*] *is nice*. Cf. also the discussion of clitic left dislocation structures in Italian in chapter 7.

this trace must be antecedent governed, which Bernstein also assumes, then the facts in the current framework can be derived as follows. Assume that antecedent government is subject to minimality as defined either by Chomsky 1986 or Rizzi 1990. Then an intervening A^0 will block binding of the EC in N^0 position, just as in Bernstein's account. Therefore, an adjective occurring with the pronominal determiner must take the so-called restrictive reading, i.e., the reading wherein it is generated on the right of N^0, no longer intervening between N^0 and D^0 and no longer c-commanding N^0. I have simplified Bernstein's examples (1991:55) here in (312)–(313), by eliminating as irrelevant his number phrase.

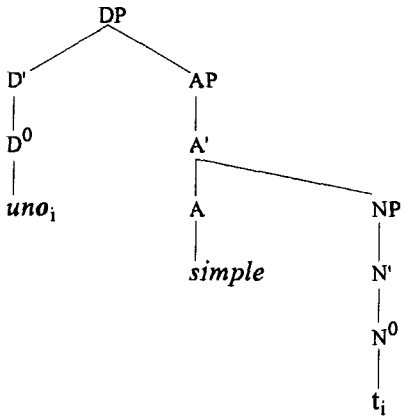
(312) a.



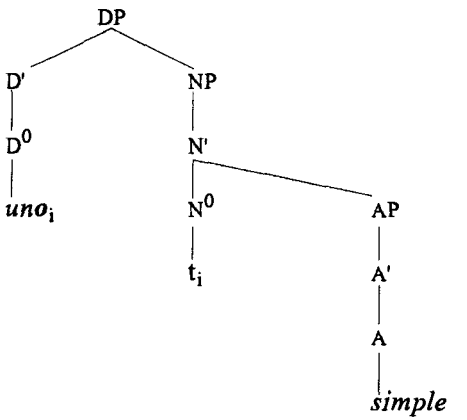
b.



(313) a.



b.



To conclude this section, I have shown that pronominal determiners are handled straightforwardly and more clearly in the present account without raising the side questions which Bernstein's pioneering exploration of these facts does.

[blank]

7
Clitics and Binding

In the course of this study I have examined various properties of PRONs and have argued that these are epiphenomenal. However, up until this point most of the argumentation has dealt with lexical and morphological properties of clitics. I turn now to consider briefly the implications of the present no clitics model to certain conditions on representation having to do with binding theory. I am concerned with facts about WH-movement in Romanian discussed by Dobrovie-Sorin (1990), and the CLITIC LEFT DISLOCATION (CLLD) construction analyzed by Cinque (1990), and some pronoun versus clitic contrasts in Brazilian Portuguese. Consider first the CLLD construction.

7.1. Clitic left dislocation. CLLD is similar to the more well-known LEFT DISLOCATION (LD) phenomenon, e.g., *John, you gotta like him,* found in English and other languages. It is illustrated in (314) (Cinque 1990:50ff).

(314) a. [$_{PP}$ *al mare*] (*ci*) *siamo gia statti*
To the seaside, **there** we have already been.

b. [$_{AP}$ *bella*] *non* (***lo***) *e mai stata*
Beautiful, she never was **it**.

c. [$_{VP}$ *messo da parte*] *non* (***lo***) *e mai stato*
Got out of the way, he never was **it**.

d. [$_{QP}$ *tutti*] *non (li) ho visti ancora*
All, not of **them** have I seen yet.

e. [$_{CP}$ *che bevi*] *(lo) dicono tutti*
That you drink, (**it**) everybody says.

f. [$_{NP}$ *Gianni*] ***(lo) ha visto** (clitic is obligatory)
Gianni, **him** I saw.

However, according to Cinque's analysis of this phenomenon, CLLD is unlike LD in that while the latter is produced by WH-movement, the former does not involve movement of any kind in spite of the fact that it obeys numerous movement-like constraints. While this aspect of CLLD is not directly relevant here, two observations about CLLD which Cinque makes directly impinge on this discussion. These are the fact that (1) the S-internal resumptive element in CLLD can only be a clitic, never a nonclitic form, e.g., a pronoun; and (2) if a NP is dislocated as in (314f), the clitic is obligatory, whereas if the dislocated element is of any other category, the clitic is optional, as shown by the parentheses in (314a)–(314e).

Consider first question one, i.e., why the overt resumptive element can only be a clitic. Clearly, in the model I am proposing here, the reason for this cannot be simply that clitics and pronouns have different binding characteristics since neither of these exists except as the output of independent principles and rules. I am thus forced to look for an alternative account.

Cinque's own proposal in this regard cannot be fully exploited in my model, although one part of it can be. He relegates his own idea on this to a footnote, suggesting that, "the fact that the resumptive pronoun must be a clitic pronoun on the verb, rather than a tonic pronoun filling the A-position, is possibly a consequence of the need to reconstruct the CLLD phrase into the IP-internal position for Full Interpretation purposes" (1990:183). This explanation rests on the assumption that pro and overt pronouns are separate lexical items and that one selects the item best suited for a particular construction. Cinque's suggestion also implicitly assumes that a covert pronoun is different from an overt pronoun in that the former but not the latter can be deleted at LF and substituted by another item, e.g., the dislocated phrase in CLLD.

Clearly, in the present model, however, such an approach cannot be used. One reason is that the only difference between pro and an overt pronoun in my account is that the former does not map to PF and thus does not need Case if it forms an interpretive unit with an overt AGR (a clitic). I do accept Cinque's reconstruction of the dislocated element into

the position where pro is supposed to be in his account, the position coindexed with the clitic. But rather than claim that this position is filled by pro, I suggest that it is an empty position which is coindexed with AGR (i.e., the clitic) but has no features of its own at all, i.e., it is empty.

An immediate advantage of this proposal is that I am not forced, as Cinque is, to delete pro at LF in order to reconstruct at LF, nor am I required to make any significant distinctions between pro and overt pronouns. Because the position coindexed with the lower AGR is empty, this proposal requires that the dislocated element be reconstructed there at LF in order to satisfy theta-assignment and checking at LF. Notice that in minimalist theory, it is no longer necessary to assume that the position have anything in it in the syntax as long as it can have an argument in it by LF, crucially without lexical insertion since lexical insertion must not ever occur at LF for obvious reasons; (cf. Chomsky 1992).

Now assume that a position may satisfy theta-assignment at LF if it is (1) licensed clause-internally, (2) recoverable at PF, and (3) filled by an argument at LF. If I also assume that the dislocated element in CLLD is clause-external, as Cinque himself does, then this element cannot license the empty position. Moreover, if this element must be reconstructed into the clause-internal position at LF, then the position into which it must move must be empty and this position must be licensed. The clitic satisfies all these conditions. It tells us in LF and PF what class of elements can be reconstructed into this position. At LF it licenses the insertion of the dislocated element and at PF it allows one to parse the sentence properly, i.e., to know exactly the terms for interpreting the position into which the distributed element is placed. Nonnominal elements presumably do not require a clitic-licensed position, since their phrasal status determines their placement and since nonnominal phrases can be placed more freely at LF, due to their Case or feature makeup.

As to question two above, i.e., why the clitic is optional if the dislocated element is nonnominal, my answer follows from the reasoning of the previous paragraph and differs significantly from Cinque's, who argues that the empty element in CLLD is a variable and thus must be A'-bound by the clitic. In my approach, there is nothing in the position of the clitic's double.[107] Moreover, my account necessarily rejects the

[107]Alternatively, I could analyze the empty position as a trace, analogously to the analysis proposed for pronominal determiners in chapter 6. The trace would not be ill-formed, since reconstruction at LF would satisfy theta-assignment, and I am assuming a minimalist theory in which D-structure is only a convenient way of talking about the introduction of items into a derivation; it has no properties of its own, e.g., as being a pure representation of theta-relations, a common assumption in GB theory.

use of any feature, e.g., [± pronominal], which Cinque crucially relies on to deduce that the doubled item must be a variable. I suggest that nonnominal dislocated elements carry their own theta interpretations. If the dislocated phrase is an AP, VP, or PP, no further information is needed about how to interpret it, except which clause it goes in and allowable positions for its LF reconstruction or gap-insertion in the clause. This latter concern is handled without difficulty by normal conditions on representations, as Cinque elegantly establishes in his monograph. On the other hand, a dislocated nominal can go only in a particular position and it has no interpretation at all outside of this position, unlike nonnominal categories, which have more insertion sites, due to their optionality and unrelatedness to theta-assignment. Thus the clitic is necessary to guide it at LF unambiguously into the correct nominal position.

To sum up, my account of the role of the clitic in CLLD seems superior to Cinque's in that it is more compatible with minimalist assumptions on the difference between pro and overt pronouns, and it requires no insertion and deletion of an item in a single derivation.

I move on now to briefly consider the clitic-related facts from Romanian discussed by Dobrovie-Sorin (1990).

7.2. Romanian WH-movement. Dobrovie-Sorin (1990) presents a detailed discussion of clitics and WH-extraction in Romanian. In spite of the fact that Romanian is known to otherwise permit clitic doubling, it prohibits clitics from certain extraction environments. Examples (315) and (316) taken from Dobrovie-Sorin (1990:354–55) show that Romanian allows clitic doubling.

(315) *l-am vazut pe Ion*
him-we^have seen ***pe*** *John*
We saw John.

(316) *i-am dat carti baiatului*
him-we^have given books boy^DAT
We gave books to the boy.

Yet in spite of the fact that Romanian normally allows clitic doubling, it prohibits clitics in certain types of WH-constructions as illustrated in (317).

(317) a. **pe cine l-ai vazut*
pe who him-you^have seen
Who did you see?

b. *pe cine ai vazut*

Interestingly, however, with other kinds of WH-constructions, the clitic is actually required as in (318).

(318) a. *pe care l-ai vazut*
pe which him-you^have seen
Which one did you see?

b. **pe care ai vazut*

Dobrovie-Sorin's (1990:356ff) account relies on a distinction, which I accept here, that *cine*-type WH-elements bind variables, i.e., that they behave as quantifiers, whereas *care*-type WH-elements are not true quantifiers and thus do not bind variables. This much is completely compatible with the assumptions of the present model and, as seen below, leads to a straightforward account of the facts. But Dobrovie-Sorin draws a different conclusion. She claims that the clitic absorbs the Case of the double and therefore, since variables must bear Case, that a clitic-doubled element can never be a variable. Hence, with elements like *cine*, which must bind a variable, the clitic is prohibited.

Since there is nothing like Case absorption in the present model, this solution is not available to me. What I propose instead is that, just as in other cases of clitic doubling, the clitic must form an interpretive unit with its doubled position. If I assume that variables have no phi-features at all, since they are interpreted via quantification, then a clitic cannot form an interpretive unit with a variable.[108] If a particular WH-element does have phi-features, however, then it will leave a trace, not a variable, and thus may be doubled by a clitic. This is the solution needed except for knowing why the clitic is required. This follows in the present account from the fact that *care*-type elements may be used as a pronoun. If *care* is in fact a pronoun in the WH use examined here, then it must be doubled for the same reason that pronouns elsewhere in Romanian (and

[108]Why can the position not simply be left empty, as it was in Italian CLLD? The reason is that here there is no reconstruction. A variable must be present by LF, thus inserted into the relevant position. I assume that variables are listed in the lexicon, perhaps as [+quantification] or simply [variable].

Spanish, as discussed in chapter 3) are obligatorily doubled. That is, Romanian is like Spanish and Welsh in requiring that phi-features be spelled out first in functionally required positions. Since *care* occurs in a lexically required position, it can be spelled out only if the corresponding AGR (clitic) position has been spelled out first. I need no ad hoc devices like Case absorption to make my account work. Given the lexical differences between *care* and *cine* type WH-elements, the doubling contrasts are predicted straightforwardly by my analysis. However, it should be noted that the *pe* element in the above examples is always obligatory with a doubled NP or a doubled pronoun. If *pe* indeed assigns Case to the double and is required for this reason, then Romanian differs from Spanish and Welsh in requiring that pronouns receive Case independently, even when they otherwise form an interpretive unit with the relevant clitic. This is reminiscent of why doubled pronouns in Irish and Breton are obligatorily null. In any case, I conclude that my model is able to account for the Romanian facts without difficulty, and I therefore move on to consider one more relevant set of clitic-related binding facts, those from Brazilian Portuguese.

7.3. Brazilian Portuguese. It is well known that pronominals and pronouns often differ with regard to the binding theory (cf. Grimshaw and Rosen 1990). So, cf. (319) and (320) from Brazilian Portuguese.

(319) *João*$_i$ *viu ele*$_{i/j}$ *no espelho*
John saw him/himself in the mirror.

(320) a. *João*$_i$ *o*$*_{i/j}$ *viu no espelho*
John saw him/*himself in the mirror.

b. *João*$_i$ *se*$_{i/*j}$ *viu no espelho*
John saw himself/*him in the mirror.

These contrasts, while puzzling from a purely binding-theoretic perspective, are accounted for in the present model via allomorphy, viz., the rules in (243)–(245) in chapter 5. Take first the example in (319), where the pronoun *ele* is optionally bound from the local subject position. This behavior is typical for pronouns in Brazilian Portuguese, regardless of position. That is, pronouns can be bound locally, whether in direct object position or in indirect object position and by either the subject or direct object; note (321).

(321) *João*$_i$ *falou com Sergio*$_j$ *sobre ele*$_{i,j,k}$ *a audiencia*
John spoke with Sergio about him/himself to the audience.

In (321), *ele* can be bound by *Sergio*, *João*, or someone else not mentioned in the sentence. That is, it behaves like a conflation of English *him/himself*. No special stress or peculiar pragmatic context is necessary to get any of these readings—all are perfectly natural. My analysis of this is that Portuguese has a lexeme like English *-self* (anaphor), except that the lexeme has no phonological interpretation. That is, Portuguese has both *himself* and *him*, but there is no morph for *-self*. Therefore, no spell-out rule for Brazilian Portuguese pronouns distinguishes between noncontrastive reflexives and nonanaphoric pronouns.[109] However, Portuguese does have special forms to distinguish bound versus free clitic, i.e., AGR forms. Thus, the bound interpretation in (320) is ruled out via allomorphy, as seen in more detail in chapter 5 above, while the bound versus free interpretations of these pronoun forms are the result of neutralization. This then accounts for the much stronger prohibition against binding nonreflexive clitics than nonreflexive pronouns in Portuguese.[110]

[109]The forms *ele/ela/si mesmo/a* 'he/she/self himself' are not merely anaphoric, but also indicate contrast, i.e., 'this person and no other'. Thus, *mesmo* is not merely the Portuguese translation of *-self* but something different.

[110]There is some dialectal variation on the ability of clitics to serve as antecedents. Some speakers do allow clitics, like *lhe* in (48b) to bind the reflexive elements in direct object position. Moreover, this account does not say anything about clitic left-dislocation structures as in Everett 1986b. However, it may be that this is best. Since clitic-left dislocation allows clitics to be bound only by quantifiers with the appropriate theta-role, as defined in (38) and (39), it is not necessary to treat these here.

[blank]

8
Acquisition of Clitics

8.1. The general pattern. According to the model developed above, clitics are adjoined AGRs and affixes are included AGRs. Look once again at the structures involved as shown in (322).

(322) a. $[_{X^0}$ AGR] AGR = affix

b. $[_{X^0}$ AGR $[_{X^0} \ldots]]$ AGR = clitic

c. $[_{AGR} \ldots]$ $[_{X^0} \ldots]$ AGR = free word or simple clitic

The structure of (322a) is a proper subset of (322b), in terms of the number of branches of X^0. Now consider this fact more carefully from the perspective of the SUBSET PRINCIPLE proposed by Berwick (1985). I will use the definition in (323) provided by Manzini and Wexler (1987:425).

(323) Subset principle. Let p be a parameter with values $p_1, \ldots, p_n$, f_p a learning function, and D a set of data. Then for every p_i, $i \leq i \leq n$, f_p (D) = p_i if and only if:

a. $D \subseteq L(p_i)$, and

b. for every p_j, $1 \leq j \leq n$, if $D \subseteq L(p_j)$ then $L(p_i) \subseteq L(p_j)$.

How can I apply (323) to the acquisition of clitics and affixes? I assume that X^0 adjunction will generate a language which is a superset of a language with only X^0 substitution. That is, the structures generated by adjunction will be a superset of the structures generated exclusively by m-subcategorization, both in configurational structure (322), and in number of structures generable by the grammar in question. If this is correct, then the subset principle predicts that children will assume (322a) before (322b), abandoning (322a) only as the result of positive evidence.[111]

This then predicts that an overt AGR will first be hypothesized to be an affix (so long as the CDAP is respected) and only next to be a clitic. Consider how this might account for the child language data in (324) from Brazilian Portuguese (data from children 6–13 years old).

(324)a. *me pega eu*
1s^DAT catch^IMP 1s^NOM
Catch me.

b. *pega eu*

c. *me pega-me*

d. *me pega-me eu*

e. **pega-me*

f. **pega-me eu*

There are two important observations to be made here. First, virtually any structure in which the dative clitic precedes the verb is grammatical, although the clitic is optional (324b). Second, the otherwise exclusively nominative form of the pronoun, *eu*, is used in direct object position. This second fact is also found in many colloquial adult registers of Brazilian Portuguese so that it is not crucial here, although it is relevant.

The most common clitic-verb order in Brazilian Portuguese, as in other Romance languages, is for the clitic to be in preverbal position.[112] I return to this observation below. First, however, it is worth pointing out that these facts are found in similar form in other Romance languages.

[111]Structure (322c) is listed as an option for AGR realization, but it is irrelevant for the principle under discussion.

[112]Prescriptive grammars of Brazilian Portuguese often call for the clitic to follow the verb, although this is rare in normal speech.

In Haverkort and Weissenborn's 1991 paper, they argue for three stages in the acquisition of clitic-verb order in French positive imperative constructions as given in (325).

(325) a. Stage 1: clitic-verb

b. Stage 2: clitic-verb and verb-clitic

c. Stage 3: verb-clitic

Haverkort and Weissenborn explain (325) in terms of the acquisition of movement constraints. I suggest a simpler analysis, however, which does not involve movement. My alternative is that children learn the most frequent order as an inclusion structure, so that for French and Brazilian Portuguese children, the structures of the adult grammar in (328)–(329), are not hypothesized initially. Rather, the child will first hypothesize the structures in (326) and (327).

(326) a. *j'en veux*
I thereof want.
[[$_{NP}$ *j*] [$_{V}^{0}$ *en veux*]]

b. *je le mets dedans*
I put it therein.
[[$_{NP}$ *je*] [$_{VP}$ [$_{V}^{0}$ *le-mets*]] [*dedans*]]

(327) a. [$_{V}^{0}$ *me-pega*] [$_{DP}$ *eu*]

b. [$_{V}^{0}$ *pega*] [$_{DP}$ *eu*]

c. [$_{V}^{0}$ *me-pega-me*]

d. [$_{V}^{0}$ *me-pega-me*] [$_{DP}$ *eu*]

e. **pega-me*

f. **pega-me eu*

(328) a. *j'en veux*
I thereof want.
[$_{NP}$ *j*] [$_{V}^{0}$ *en* [$_{V}^{0}$ *veux*]]

b. *je le mets dedans*
I put it therein.
[NP *je*] [VP [V^0 *le* [V^0 *mets*]] [*dedans*]]

(329) a. ([AGR *me*-][V^0 *pega*]) [DP *eu*] (parentheses indicate phonological boundary)

b. [V^0 *pega*] [DP *eu*]

c. **me-pega-me*

d. **me-pega-me* [DP *eu*]

e. [V^0 *pega*]-[AGR *me*]

f. *[V^0 *pega*]-[AGR *me*] [DP *eu*] (Out due to visibility; cf. chapter 3)

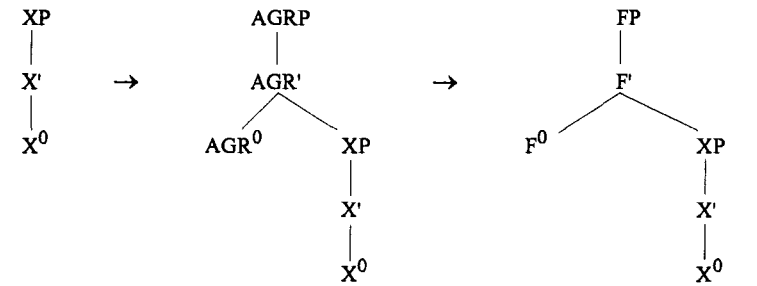
These examples are predicted by the model here, so that the child will first analyze the clitic as an affix, that is, as included within V^0, because the child hypothesizes an inclusion structure. He will analyze the proclitic as an object agreement prefix, m-subcategorized by the verb. However, since affixes are unlike clitics in having a much more rigid order because m-subcategorization specifies linear order whereas adjunction is primarily determined by the syntax, then the child will first assume that what he has analyzed as a prefix may also surface as a suffix, (325b) and (324 c, d). On the other hand, since m-subcategorization generally specifies only a single insertion site for an AGR node, the appearance of an item as both a prefix and a suffix will lead to a period of instability in the analysis, (325b). This reasoning automatically predicts that children will learn alternate orders of clitics later and with more difficulty since, by definition, these alternate orders violate the child's subset-driven inclusion analysis. The child will have to alter his affixal analysis of the element in question and reanalyze it as a clitic, deciding on the basis of movement that it is not m-subcategorized by the verb and thus is subject to syntactic conditions on placement, leading finally to (325c). Haverkort and Weissenborn's study illustrates that this difficulty also occurs in French, just as it does in Brazilian Portuguese.

My analysis also makes an additional prediction, which no other analysis makes, as far as I can tell. It predicts that children will allow clitic doubling even when it is prohibited by the adult grammar, as seen in (324 a, d). The reason is that the child's analysis of the clitic as an affix also implies that the clitic will not need Case, since it will be visible via

inclusion. Note too that theta assignment within the perfect projection of V (=VP) is a subset of the setting for theta assignment within the extended projection. This predicts that children in, say, Brazilian Portuguese, will assume that affixes are nonarguments, unless there is evidence to the contrary (as in Celtic). Thus my analysis accounts straightforwardly for the acquisition facts from Brazilian Portuguese, i.e., that the children will learn the clitics most easily in preverbal position based on relative frequency of occurrence and inclusion as a subset of adjunction or COVER structures, and that children will initially allow clitic doubling.[113]

8.2. Multi-AGR languages and the acquisition of AGR. Kazman (1991:46ff) argues for the sequence in (330) in the acquisition of functional categories.

(330)



According to Kazman's theory, children first build simple phrase structures for each lexical head they encounter. Next, they recognize functional features on the head, X^0, and project a generic AGRP. Kazman's idea here is that AGR is the least specific type of FC and the one hypothesized initially by children. More specific FCs (e.g., DPs) only arise after the induction of AGR and the expansion to an AGRP, as in (330).

Kazman's theory is compatible with the present model in at least two ways. First, recall that I predict that children will learn the FC first as an affix and only later as a clitic. This corresponds to Kazman's proposal that children will first recognize functional features as parts of words and only then will they project separate positions for the item in question. In my

[113]I also predict that Celtic-speaking children will first allow NP arguments to freely occur with synthetic verb forms and that French children will initially allow clitic doubling. I have no idea about the veracity of either prediction, however, so I leave this question for future research.

terms, they will first hypothesize inclusion, without movement, and then they will hypothesize that the inclusion of the relevant features results from m-subcategorization, which in turn suggests that the item m-subcategorized might originate external to X^0. Another way in which Kazman's model is compatible with mine is that it predicts that some languages could have AGRPs where other languages have more specific FCs. Pirahã and Yagua, for example, are like many Amazonian languages in lacking overt determiners but having agreement within NP, the same type of agreement marker found with verbal objects and subjects. In my terms, this would be because these items never made it to stage three. This proposal is worth considering since this type of phenomenon is relatively common. That is, Kazman's model predicts the existence of what Everett (1989a) called "multi-AGR languages," i.e., languages with AGRs found in PP and NP, phrases in which the Case assigned is not usually thought to require an AGR since it is inherent (theta-related) rather than structural (non-theta-related). The fact that Kazman's model indirectly predicts this fact provides an independent and interesting basis to the analysis derived from the present model.

One objection might be raised with regard to Kazman's model, however. That is, projection of AGRPs for NP and PP seems less common and more marked. This fact can be accounted for without any wear and tear on either Kazman's model or mine, however, by requiring that any model of AGR correctly distinguish between structural and inherent Case. AGRs associated with what are universally structural Cases (verbal direct object and clausal subject Cases) are always projected. The child will always project an AGR for these Cases, therefore, even if he detects no functional features on V. But languages vary as to whether all Cases are structural or whether only subject and direct object Cases are, producing multi-AGR and normal-AGR languages, respectively. I would predict that children will project AGRPs for NP and PP only after, or at least never before, the upper and lower AGRs of Chomsky (1992).

9
Conclusion

What can be learned from the various case studies, principles, and parameters in the preceding discussion? The lessons fall into two areas: the theory of pronominals and the theory of syntax.

At the level of finest detail, the theory of pronominals, more about the crosslinguistic behavior of clitics and affixes has been discussed. I have shown that not only are there numerous crosslinguistic regularities which other accounts fail to notice, but that the very terms clitic and affix do not in fact refer to ontologically or lexically primitive categories but that they merely label morphosyntactically produced configurations. I have also proposed that the lexicon not only contains words, but that it also contains meaning components which are used to classify and distinguish classes of words, what I have called phi-features. The question should be asked once again if this view of the lexicon is really any better than that of a lexicon which contains clitics and affixes rather than phi-features. If I have done nothing more than substitute one set of entries for another, then arguably little progress has been made. Fortunately, the answer is that yes, this view of the lexicon is indeed superior. I illustrated, for example, that phi-features must be entered in the lexicon independently of whether or not it also has clitics and affixes there. Therefore, a lexicon which contains clitics and affixes as well as phi-features is more cluttered and less desirable than one which has the only the latter. I have also shown that the free insertion of independently stored phi-features provides insights into the relationships between pronominal categories that would otherwise not be perceived.

With regard to syntax, the idea that what was thought to have originated in the lexicon, i.e., anaphoric (pronouns), morphological units (affixes), and intermediate units (clitics) arises instead from the insertion and stacking of the same lexical features in different syntactic positions and provides a basis for deepening our understanding of the interface between morphology and syntax—a frontier that has long intrigued linguists and which is rich in insights into the human linguistic capacity, UG. When I couple these notions with the principles of morphological visibility and morphological versus syntactic subcategorization, it becomes apparent that syntax reaches deep into morphology and that morphology may be little more than another output of syntactic principles since all of the principles introduced here have to do with whether something is adjoined to or part of a word, what DiSciullo and Williams (1987) call SYNTACTIC ATOMS. At least a step has been taken in this direction by eliminating reference to the otherwise exclusively morphological category of agreement affixes and the principles which govern the distribution of clitics, such as Case absorption, clitic placement, theta transfer, Case spell-out, and other peculiar ad hoc and now unneeded proposals that have been appealed to over the years to account for clitics and affixes.

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Why There Are No Clitics

An Alternative Perspective on Pronominal Allomorphy

Publications in Linguistics Number 123

This book argues for the thesis that pronominal clitics, pronouns, and pronominal (agreement) affixes are allomorphs of one another, derived from lexical storage of individual grammatical features, e.g., person, number, and gender (called phi-features in some syntactic theories), which are then "spelled-out" as pronouns, affixes, or clitics, depending on how they are stacked, as well as where they are inserted. This study thus crucially assumes a separationist theory of morphology, whereby phonological realization and lexical insertion are separate steps.

Daniel Everett is Chair of the Department of Linguistics at the University of Pittsburgh and International Linguistics Consultant with the Summer Institute of Linguistics. He has authored three books in addition to this one and has published over fifty articles on phonology, phonetics, morphology, semantics, and syntax in journals such as *Journal of the International Phonetics Association, International Journal of American Linguistics, Linguistic Inquiry, Revista D.E.L.T.A., Language, Pragmatics and Cognition,* and *Natural Language and Linguistic Theory.* He has conducted research on various Amazonian languages, focusing primarily on the Pirahã language. He earned the Sc.D. in Linguistics from the State University of Campinas (UNICAMP) in Brazil, where he later served on the faculty for six years.

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