Verbal projections in Basque and minimal structure

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0. Introduction*

This work studies the structure of non-finite verbal projections in Basque and the nature of the grammatical formatives associated with them within the framework known as the Principles and Parameters approach to language (Chomsky 1986a, 1991). The central tenet of this research program states that there exists an invariant system of principles of Universal Grammar, genetically given, and that language particular variation arises as a result of specific settings of parameters and idiosyncratic properties of "non-substantive" elements of the lexicon.

In what follows, I attempt to show that a fair amount of syntactic variation specific to Basque is a consequence of the lexical properties of grammatical formatives in this language; moreover, these (grammatical formatives) do not necessarily correlate with the notion functional category in the sense of Fukui & Speas (1986), as I will clarify. More specifically, I concentrate on the analysis of the Basque nominalizing morpheme te (with its morphophonological variant tze), the perfect morphemes initu, their English counterparts ing and en, and the maximal phrases they project in the syntax.

I propose that some of these projections are selected and subcategorized as verbal heads. It is demonstrated here that the apparent neutralized character of these projections, i.e. the mismatch between their internal structure and their external distribution, can be adequately explained only by a theory which incorporates both syntactic and morphological information into subcategorization and selection.

In chapter one I outline the theoretical apparatus assumed throughout the article; specific attention is given to X-Bar theory and subcategorization, as well as to the interaction between morphology and syntax. I introduce and adopt Emonds' (1985, 1990) hypothesis that morphemes may be inserted at D-S (when insertion is conditioned or induced by some purely semantic feature) or after S-S otherwise. I refer to this as the Double Lexical Insertion Level Hypothesis. Some basics facts about the head-parameter and clausal structure in Basque are succinctly discussed as a general background for the next chapters.

Chapter two analyzes the properties of the Basque nominalizer te, which forms both derived nominals and nominalized clauses or DP-clauses similar to English DP-gerunds (NP-gerunds in traditional terms). I argue against previous analyses

* What follows is a virtually unmodified version of chapters one through four of my dissertation (Artiagoitia 1992a). Despite the crucial changes that the Principles and Parameters theory has known since its writing (cf. Chomsky 1992, 1994) and the various modifications that are possible, I have decided to publish the "creature" as it was conceived mainly because (it is hoped) the crucial insights have survived and the many dubious points still merit severe criticisms. The reader already familiar with the basics of Basque may want to skip most of chapter one. I would like to thank J. Lakarta for his insistence on my getting this work ready for publication. I would also like to express my deepest appreciation to the individuals that played a crucial role somehow when writing this dissertation: J. Emonds, H. Contreras, K. Zagona, J. Ortiz de Urbina, A. Eguzkitza, A. Olarrea, B. Oyarzabal, J.I. Markaida, I. Gomez Barrondo, A. Iriarz, I. Markinez, G. Elordieta, A. Brugos, M. Galvao, J.I. Artiagotia. Special thanks to K. Zuazo and the audience of UEU (1994) for helping me revise some data of chapter two.
which hold that these DP-clauses are dominated by a CP node, and propose a unified lexical entry for te which predicts the formation of both types of DPs, despite the fact that DP-clauses are selected as +V. I claim that the te is inherently specified for aspect features when subject to late lexical insertion. I propose to derive the availability of nominative case inside DP-clauses from the existence of [V-N] to D movement, which allows D to be a nominative case-assigner.

Chapter three concentrates on the so-called perfect morpheme in Basque (with its variants i/n/tu) within the double insertion level hypothesis. I show that this morpheme is like English en in that it forms derived adjectives and past participles. It is, however, unlike English en in that it also forms derived nouns and DP-clauses of the perfective type; in the latter case, the morpheme is associated with the aspectual feature [+completed]. I argue that both nominals and adjectives derived at D-S from the perfect morpheme in Basque are associated with the same feature: the direct DP complement to the verb is absorbed by the perfect morpheme. The absence of this absorption feature when the morpheme is subject to late lexical insertion predicts another crucial difference with respect to English en: the absence of a verbal passive in Basque.

Chapter four takes issue with the idea argued for in Laka (1990) that an Aspect Phrase exists in Basque periphrastic verb forms (verb + auxiliary combinations). The question seems crucially dependent on a deeper understanding of the perfect morpheme and the nominalizer te, which are precisely the alleged “aspect” heads in Laka’s analysis. I claim that the Aspect Phrase hypothesis makes predictions which are not borne out by the data, and is unable to account for the similarities between the non-perfect participle and a subclass of locative PPs. I develop an analysis of Basque participles whereby the “aspect” heads are indeed the same nominal and adjectival morphemes of chapters two and three. I argue that the mismatch between the verbal head selected by the auxiliary verbs izan and ukan (‘be’ and ‘have’) and the maximal projection headed by the selected verbs (PP and AP participles) is actually expected and predicted in the framework of Emonds (1990) and chapter one.

1. Towards a simplified theory of the base component

1.1. Theoretical outline

The Principles and Parameters model of grammar assumes the levels of representation in (1a); the properties of each level and the relations among them are determined by a restricted set of subsystems and principles in (1b):

(1) a. Syntactic Lexicon

- D-Structure
- S-Structure
- Phonetic Form
- Logical Form

b. X’theory

move a
b. X-Bar Theory
θ-Theory
Government Theory, Empty Category Principle
Case-Theory
Bounding
Binding
Control

An overarching principle of the model is the Principle of Full Interpretation which requires that every element that appears in a well-formed structure be licensed (Chomsky 1986a). In other words, Universal Grammar (UG hereafter) does not allow superfluous elements. In the following sections, I omit any mention of the subtheories of Binding and Control, which are not directly related to the topic of this work.

1.1.1. X-Bar theory and syntactic categories

I assume that UG has an inventory of a) lexical categories defined by the features [aN, bV] as proposed in Chomsky (1970): verbs ([+V, -N]), nouns [+N, -V]), adjectives ([+V, -N]) and prepositions ([+V, -N]); and b) functional categories: Determiner, Complementizer, Inflection and Quantifier (DET, COMP, INFL and Q respectively henceforth). The relation between lexical and functional categories is unique unless stipulated otherwise: DET invariably has a noun phrase complement, INFL (both [+finite] or [-finite]) a verb phrase complement, and COMP an IP complement. I further assume that the category VP does not exist outside its relation to INFL. As in Fukui & Speas (1986), I assume that functional categories may assign functional features such as [+wh], [+nominative], [+genitive] (usually to their specifiers as part of the Spec-Head agreement relation proposed in Chomsky 1986b). Furthermore, if a member of a functional category is specified to assign some functional feature, it must obligatorily assign that feature under certain conditions in order to avoid violating its subcategorization properties and, ultimately, the Projection Principle:

(2) Principle of Functional Feature Assignment: If α, a member of a functional category F, is lexically specified to assign some f-feature, then α within f_{\text{max}} must assign that f-feature.

I henceforth adopt the following X-Bar schemata, adapted from Lieber (1992: 39), where X ranges over both lexical and functional categories:

(3) \[
X'' = XP^* X' \\
X' = X^0 XP^* \\
X^0 = X^0 X^0
\]

(1) This is the subject matter of chapter five in Artiagoitia (1992a), omitted here. I argue there that "participial VPs" are universally either AP or PP; in other words, that participial morphology always involves grammatical formatives of category A or N-P combinations. Consequently, true VPs only exist as sisters to INFL.

[3]
Base-generated adjunction to $X''$ is in principle possible. $XP^*$ in $X''$ is the specifier of $X$; $XP$ in $X'$ is the complement of $X$. The motivation for the possibility of expanding $X^0$ as in the last specification is discussed below in section 1.2.1. I will consider that $a$ is a projection of $b$ if is a head, $a$ and $b$ share features, and the index of $a$ is higher than zero; in particular an $X^0$ never qualifies as a "projection" of any head. The position of the head with respect to both complements and specifiers is determined by Case-Theory and $\theta$-Theory and the head-parameter as in Koopman (1984) and Travis (1989).

1.1.2. Government and the ECP

The central structural relation inside $X''$ is that of government, which I define below:

(4) Government: $X$ governs $Y$ iff $X$ m-commands $Y$

(5) $X$ m-commands $Y$ iff neither $X$ nor $Y$ dominate each other, and the first $X_{\text{max}}$ dominating $X$ dominates $Y$

Following Rizzi (1990), I distinguish two kinds of government relations: head-government and antecedent-government. I assume with Rizzi that antecedent-government is a condition on chain-formation and reduces to Binding in the case of referential expressions. I adopt Rizzi’s principle of Relativized Minimality; $a$ in (6) ranges over "head" and "antecedent":

(6) Relativized Minimality: $X$ $a$-governs $Y$ only if there is no $Z$ such such that
   (i) $Z$ is a typical potential $a$-governor for $Y$
   (ii) $Z$ $c$-commands $Y$ and does not $c$-command $X$

In this article I will be mainly concerned with head-government and $X^0$-movement, for which the qualifications in (7) are needed:

(7) a. $Z$ is a typical potential governor head-governor for $Y = Z$ a head m-commanding $Y$
b. $Z$ is a typical potential antecedent governor for $Y$, $Y$ in an $X^0$-chain = $Z$ is a head $c$-commanding $Y$. (Rizzi 1990: 7)

I also assume that some rigid barriers to head and antecedent government may exist outside the relativized system, although this issue is peripheral in this article. The crucial assumption throughout this work is that a head always governs the specifier of a complement and that a head invariably protects its complements from an external governor.

(2) In Rizzi’s (1990: 7) theory, the definitions of potential $A$- and $A'$-antecedents are as follows:
   i. $Z$ is a typical potential antecedent governor for $Y$, $Y$ in an $A$-chain = $Z$ is an $A$ specifier $c$-commanding $Y$.
   ii. $Z$ is a typical potential antecedent governor for $Y$, $Y$ in an $A'$-chain = $Z$ is an $A'$ specifier $c$-commanding $Y$. (Rizzi 1990: 7)
Empty categories must obey the Empty Category Principle:

(8) **Empty Category Principle:** A non-pronominal empty category must be properly head-governed (where "properly" means governed within the immediate projection). (Rizzi 1990: 87)

Following Aoun et al. (1987), I will assume that the ECP (the Head Government Requirement) applies at PF. The ECP is relevant for the discussion of Spanish infinitives in chapter two.

I will assume that movement of heads is constrained by Travis's Head Movement Constraint (HMC hereafter):

(9) An \(X^0\) may only move into an \(Y^0\) that properly governs it (Travis 1991: 352).

In Travis' (1991) theory, an \(X^0\) is properly governed by a head \(A\) if \(X^0\) is the head of the complement of \(A\). This definition conflicts with the definition of proper government given in (8); for the purposes of this article, I reformulate the HMC as follows:

(10) **Revised Head Movement Constraint:** An \(X^0\) may only move into an \(Y^0\) that is its minimal (closest) head-governor.

Although the HMC is probably subsumed under the well-formedness conditions of \(X^0\) chains as in Rizzi (1990), I will continue to refer to the HMC as an independent constraint for ease of exposition.

(5) If PF is indeed a pure phonetic representation as argued in Chomsky (1992), then the ECP applies at a level prior to PF but post-transformational (after S-S). Note that the proponents of Lexical Phonology (cf. Kaisse 1985) also distinguish between postlexical rules which are sensitive to syntactic bracketing and postlexical rules which are not (apply across the board).
1.1.3. Case, the $\theta$-criterion and directionality

Every argument must play some semantic or $\theta$-role in a larger structure. The condition on proper assignment of $\theta$-roles is called the $\theta$-Criterion, which I define informally:

\begin{align*}
\text{(11) } \theta\text{-Criterion: Each argument } \alpha \text{ must be assigned a } \theta\text{-role, and each } \theta\text{-role is assigned to one and only one argument (adapted from Chomsky 1981: 335).}
\end{align*}

Given this version of the $\theta$-Criterion, an argument can indeed receive two $\theta$-roles from two heads (cf. also Chomsky 1986a). In Emonds (1985), the $\theta$-Criterion is refined as to allow one argument to receive two $\theta$-roles from two heads only if these are not $\theta$-related:

\begin{align*}
\text{(12) Two heads are } \theta\text{-related iff the maximal projection of one bears a } \theta\text{-role with respect to the other.}
\end{align*}

\begin{align*}
\text{(13) Revised } \theta\text{-Criterion: } \theta\text{-relatedness is an anti-transitive relation (Emonds 1985: 78).}
\end{align*}

Noun phrase arguments ("DP"s) must be visible in order to receive a $\theta$-role:

\begin{align*}
\text{(14) An element is visible for } \theta\text{-role assignment only if it receives case.}
\end{align*}

In particular, $V$ and $P$ assign objective case to a sister noun phrase they govern; $\alpha$ and $\beta$ are sisters if they are both dominated by the exact same projections. I adopt Koopman & Sportiche's (1991) proposal that subjects originate VP-internally and that INFL can assign nominative case by government or by specifier-head agreement, the choice being subject to parametric variation: in English and French finite clauses nominative is assigned by agreement between INFL and its specifier. Put differently, INFL is a raising category in these two languages:

\begin{align*}
\text{(15) English}
\end{align*}

\begin{align*}
\begin{tikzpicture}
\node (ip) at (0,0) {IP};
\node (dp) at (-1,-1) {DP$^\ast$ (=spec(I))};
\node (i) at (-3,-2) {I};
\node (vmax) at (-2,-3) {Vmax};
\node (dp*) at (-4,-3) {DP*};
\node (vp) at (-2,-4) {VP};
\draw (ip) -- (dp);
\draw (dp) -- (i);
\draw (i) -- (vmax);
\draw (vmax) -- (dp*);
\draw (dp*) -- (vp);
\end{tikzpicture}
\end{align*}

In Welsh and Irish finite clauses, on the other hand, the subject need not raise to spec(I) to receive case by agreement and can receive governed case from INFL. In Arabic both possibilities are realized with different surface orders (SVO vs VSO). I return to this issue as it applies to Basque in section 1.3.2.

The directionality of case- and $\theta$-role assignment determines the linear order in the X-Bar schemata. As in Travis (1989), I assume that if the subdomain of $\theta$-role or case-assignment is set, then the head-parameter is uniform for all categories in the
language (i.e. nothing else can be specified). If no subdomain direction is set for case or θ-role assignment, the value for headedness must be specified; crucially, it need not be the same across categories. This is the case of German as Travis points out. In sections 1.3.1-1.3.3, I will argue that most heads are final in Basque with respect to their specifiers and complements except for INFL, which precedes its complement.

1.1.4. Subjacency

For the purposes of this article, I adopt Chomsky's (1986b) version of the Subjacency Condition:

(16) \( \beta \) is n-subjacent to \( \alpha \) iff there are fewer than \( n+1 \) barriers for \( \beta \) that exclude \( \alpha \) (Chomsky 1986b: 30).

(17) \( \tau \) is a barrier for \( \beta \) iff (a) or (b)
   a. \( \tau \) immediately dominates \( \delta \), \( \delta \) a Blocking Category for \( \beta \)
   b. \( \tau \) is a Blocking Category for \( \beta \), \( \tau \neq \text{IP} \).

(18) \( \tau \) is a Blocking Category iff \( \tau \) is not L-marked and \( \tau \) dominates \( \beta \) (Chomsky 1986b: 14).

I understand L-marking as government by a lexical category of its complements: therefore, COMP, INFL, and DET do not L-mark their complements. Some modifications to these assumptions as they apply to Basque will be made in the course of the argumentation.

1.2. The Base Component: X-Bar theory and the Lexicon

The lexicon plays a crucial role in determining the shape of lexical structure in syntax:

(19) Projection Principle: Representations at each syntactic level (i.e. LF, D-S, S-S) are projected from the lexicon, in that they observe the lexical properties of lexical items (Chomsky 1981: 29).

The projected lexical structure must conform to X-Bar theory. In what follows, I first motivate the X-Bar schemata I have adopted from Lieber (1992); second, I explain what properties I attribute to lexical entries and subcategorization.

1.2.1. Lieber's X-Bar theory

The X-Bar schema given in (3) differs from that of Chomsky's (1986b) in one important respect: it allows for recursion at the \( X^0 \) level.

The fundamental claim underlying this difference in Lieber (1992), to which I fully adhere in this article, is that there is no morphological component in the grammar distinct from syntax proper, and that the principles of syntax are the
principles of word formation as well: X-Bar theory, the head-parameter, directionality of \( \theta \)-assignment, move \( \alpha \), the ECP and binding (cf. also Walinska 1986). The last three are of no special concern here; Lieber (1992: ch.4) shows how the three operate under \( X^0 \) in the same manner they operate “in the syntax”. I will concentrate only on Lieber’s motivation to reduce the specification of headedness under the \( X^0 \) level to X-Bar theory and directionality parameters.

Lieber’s initial empirical observation is that certain word-formation processes involve maximal phrases: phrasal compounds, affixal case markers on a head that have scope over entire XPs, formation of verbs from XPs. If the grammar is to explain these, a theory that separates syntax from morphology will not suffice; therefore, they both must be allowed to interact. Lieber remarks that morphological theories exist (e.g. Williams 1981b, Lieber 1980, Selkirk 1982) which already share characteristics similar to those found in the syntactic component proper (at least at earlier stages of generative grammar): a) lexical entries for each affix specifying category label, subcategorization, phonetic and semantic information; b) specific rules of word formation similar to phrase structure rules:

(20) a. \( V \rightarrow (N,A,V) \) \( V \) (Selkirk 1982)
    b. \( \text{ize } [N,A] \rightarrow [V] \)

\[ \text{LCS: } [\text{CAUSE ([THING], [BE (LCS OF BASE)])}] \]

(Lieber’s own entry)

Despite this similarity, the notion of headedness is still stipulated outside the syntax component proper:

(21) Right-Hand Head Rule: In morphology we define the head of a morphologically complex word to be the righthand member of that word (Williams 1981b: 248)

Lieber reasons that as long as the direction of headedness in morphology must be established independently of syntax, it is conceivable that the two components are separate. Lieber then embarks on presenting cross-linguistic data (from Tagalog, English, Dutch, and French) to show that the head parameter in a language applies both in the syntax and in the morphology. I present here her arguments for English.

Lieber assumes the following parameter settings (“Licensing Conditions” in her terms) for English (cf. also Emonds 1985: ch.1):

(22) Licensing Conditions
    a. Heads are initial with respect to complements
    b. Heads are final with respect to specifiers
    c. Heads are final with respect to modifiers

(5) The motivation for condition (c) stems from the fact that NP-internal modifiers or adjuncts are generated prenominally according to Lieber; “heavy” modifiers like APs with complements, relatives, and PPs are then extrapolated to the right as is the case in Heavy NP-shift. Lieber (1992) assumes that phrasal (XP) modifiers are possible under the \( X^0 \) level.
The X-Bar schema can in principle produce four different structures below $X^0$ according to Lieber:

\[(23) \quad a. \quad X^0 \quad b. \quad X^0 \quad c. \quad X^0 \quad d. \quad X^0\]

\[Y^0 \quad X^0 \quad YP \quad X^0 \quad X^0 \quad Y^0 \quad X^0 \quad YP\]

For 23a. Lieber argues that affixes that attach to adjectives/nouns and form either adjectives or nouns fall under condition (22b), since the stems will act as specifiers; therefore, they are predicted to be right-headed:

\[(24) \quad a. \quad [\text{[happi]}_A\text{-ness]}_N \quad b. \quad [\text{[fruit]}_N\text{-y]}_A\]

Root compounds are also a subcase of modification, so (22b) predicts that they must be right-headed:

\[(25) \quad a. \quad [\text{[file]}_N\text{[cabinet]}_N]_N (= \text{some kind of cabinet}) \quad b. \quad [\text{[green]}_A\text{[house]}_N]_N (= \text{some kind of house})\]

Lieber admits that deverbal nouns and adjectives are not necessarily predicted to be right headed, since verb stems do not seemingly qualify as specifiers or modifiers (they are "predicates"); but, in her view, they do not constitute evidence to the opposite effect.

As for verb forming suffixes like *ify* and *ize*, Lieber claims that that these suffixes do not assign a $\theta$-role to their stems (the stems are predicates: *unionize* is to make X a union, *purify* is to make X pure, and so on); rather they assign a $\theta$-role outside the derived word. Therefore, since verbs assign a $\theta$-role to their right in English, they must assign it outside the word, leaving their internal noun or adjective stem as a predicate.

For 23b. Phrasal compounds of the type *over the fence gossip, ate too much headache* are also cases of modification, hence they are right headed.

For 23c. Lieber assumes that English prefixes are either specifiers (e.g. negative *un*) or adjective/adverb-like modifiers (e.g. *ante, co, re*). Alternatively, one can simply assume that prefixes lack category (the resulting word is usually of the same category as the initial word). As for category-changing prefixes, Lieber claims that only $\theta$-assigning categories can be category-changing prefixes (they would fall under the head-complement generalization); $N$ is excluded because, in her view, only derived nouns can assign $\theta$-roles they inherit from a verbal stem. $P$ is a closed class item, so it is almost impossible to derive a new member of that class by prefixation. Therefore, only verb-forming prefixes are predicted to exist, which seems correct:

\[(26) \quad a. \quad [\text{v de-}[N\text{ bug}]], [\text{v de-}[N\text{ throne}]], [\text{v de-}[N\text{fuzz}]] \quad b. \quad [\text{v en}[N\text{ case}]], [\text{v en}[N\text{ rage}]], [\text{v en}[N\text{ throne}]]\]

The non-existence of left-headed \([V-X]\) compounds is left unexplained by Lieber, although she notes that right-headed \([X-V]\) compounds are not productive either except for cases of back-formation (e.g. *babysit, barund*). \([P-X]\) compounds are excluded on general grounds again because $P$ is a closed category by itself. Finally, the
possibility of \([N-X]\) compounds reduces to \([N-N]\), which in Lieber's view is excluded as a potential case of structural ambiguity. In particular: "all N-N compounds must be interpreted as right-headed" (Lieber 1992: 59).6

In conclusion, Lieber claims that no morphology specific parameter or phrase structure rule other than those already specified in the syntax are needed to predict headness under \(X^0\) ("in morphology").

In this article I assume the correctness of Lieber's tenet that no morphological component exists outside the principles of syntax. I will interpret her proposal in a more general way: all cases of productive affixation are subsumed under the licensing conditions (or directionality parameters) for specifiers, and all cases of root-compounding are subsumed under the licensing conditions for modifiers/adjects. I do not adhere, however, to her analysis of category changing prefixes. Lieber herself establishes as a preliminary point that only productive affixes constitute positive and relevant evidence for a realistic theory of word-formation. In this regard, as she acknowledges, the verb forming suffix \(en\) is not productive and hence is not a sufficient piece of data to argue for the existence of structures like that of (23c). Similar considerations apply to \(de\), which, contrary to Lieber's proposal, seems to be a non-category changing prefix (i.e. creates verbs from already existing verbs):

\[(27)\]

\[
\begin{align*}
\text{a.} & \quad \text{mobilize} \rightarrow \text{demobilize} \quad (*\text{demobil}) \\
\text{b.} & \quad \text{moralize} \rightarrow \text{demoralize} \quad (*\text{demoral}) \\
\text{c.} & \quad \text{compress} \rightarrow \text{decompress} \\
\text{d.} & \quad \text{range} \rightarrow \text{derange}
\end{align*}
\]

The cases of \(de\)'s changing category are thus restricted and non-productive. Although it is explicitly contemplated in Lieber's proposal to account for phrasal compounds, I will omit the possibility of generating phrases as daughters of \(X^0\), since phrasal compounds do not play any role in the discussion ahead. Therefore, we are left with the following X-Bar schema:

\[(28)\] Generalized X-Bar Schema: \[
\begin{align*}
X'' &= XP^* X' \\
X' &= X^0 XP^* \\
X^0 &= X^0 * X^0 \\
& [\alpha^* = \alpha \text{ is iterable}] \\
& [X'' = X^2 ; X' = X^1]
\end{align*}
\]

(6) (23d) is not discussed by Lieber. As for right-headed synthetic compounds, Lieber assumes they are derived as in (i):

\[
\begin{align*}
\text{i.} & \quad \text{NP} \\
\text{N'} & \quad \text{N} \\
V^0 & \quad N^0 \\
\text{quench} & \quad \text{thirst} \\
\text{thirst, quencher} & \quad \text{thirst, quench, er}
\end{align*}
\]

\(thirst\) receives a \(\theta\)-role from \(\text{quencher}\). Unless it adjoins to the noun \(\text{quencher}\), it will receive case from it too, thus violating the condition that only NPs can be case-marked; central to this account is the assumption that case-marking is not a condition on \(\theta\)-role assignment.
1.2.2. Syntax embraces morphology: the form of lexical entries

I assume here that lexical entries only contain non-predictable information about a head: the categorial membership, intrinsic features associated with the morpheme, subcategorization frame for the complement and for the latter’s intrinsic features (whether semantic or syntactic), its phonetic form, and its morpheme boundaries stating whether the morpheme is bound, free or both. I specifically adopt the position that 0-grids as such do not exist and that Lexico-Conceptual Structures are not part of the lexicon. Rather, I side with Emonds (1991) in claiming that, given a properly specified lexical entry, 0-roles are predictable from subcategorization whilst the reverse is not true. By intrinsic syntactic feature I mean one that plays a role in the transformational component (or S-Structure) such as [+wh]. By intrinsic semantic feature I mean a feature that specifies classes of lexical categories and does not play a role in the syntax such as ACTIVITY, STATE, or PSYCHOLOGICAL for verbs.

Following a proposal in Baltin (1989), I reduce phrasal subcategorization (standard c-selection) to the form, \( \alpha, +X \), since \textit{a priori} the generation of some YP is predictable from the feature \(+X\). In fact, we will see that XP \textit{per se} may not be projected from \(+X\). I retain, as in Lieber (1992), the notion that affixes have lexical entries of the same type as free morphemes. I propose that bound morphemes are represented in the lexicon with a missing edge boundary that must be provided by an adjacent element (whether the latter is base-generated or incorporated after the application of move \( \alpha \)). This notation serves to minimally capture the difference between free and bound morphemes (I skip phonetic information for simplicity):

\[
\begin{align*}
(29) & \quad \text{a. ity], N, +N [N = +latinate, ...]} \\
& \quad \text{b. ness], N, +A [A = -latinate, ...]} \\
& \quad \text{c. [anti, +_N +_A} \\
& \quad \text{d. [read], V, +(N) (= “takes a DP”)}
& \quad \text{e. [story], N, +(N) (= “takes a DP”)}
\end{align*}
\]

This system easily allows for the representation of phrasal heads that are affixal. The Basque article is one example of this:

\[
(30) \quad \alpha], [+ or -definite], D, +N
\]

\((30)\) means that a full NP complement will be projected; \( I \) indicates that no left-boundary exists for the determiner. Therefore, by S-S the leftmost member of the NP must move to D to satisfy the subcategorization property \( \alpha \). Finally,
subcategorization frames of the type, \([a], +X_\) are predicted to exist for morphemes that are independent words but can still head syntactically complex words. Words that are optionally free or bound (e.g. English *able*) can be represented as \((f) a\).

1.2.2.1. Some uses of the boundary notation

The notation for lexical items I propose has the advantage of eliminating a great deal of information that is reduplicated if morphological subcategorization is assumed to be different from syntactic subcategorization. I illustrate this claim here with two examples: the singular article *a* ‘the/a’ in Basque, and the postposition *ra* ‘to’.

In Basque, determiners are head-final with respect to their NP complement; the singular article *a* (which may be specified as \([-/+/\mathit{definite}]\)) is a bound morpheme, and depending on whether an adjective has cliticized onto the noun and whether the head noun (or the entire NP) is ellipted, several heads may attach to it:

\[
\begin{align*}
(31) & \\
& a. \ \text{etxe-a} \\
& \quad \text{house-art} \\
& \quad \text{the,a house} \\
& b. \ \text{oso \(t\) etxe berri\(\bar{\imath}\)-a} \\
& \quad \text{very house new-art} \\
& \quad \text{the,a very new house} \\
& c. \ [\text{Bilbok\(\overline{o}\) etxe-a}] \ \text{eta} \ [\text{Eako-\(\emptyset\)-a}] \\
& \quad \text{Bilbo-gen house-art and Ea-gen-0-art} \\
& \quad \text{The house in Bilbao and the (one) in Ea} \\
& d. \ [\text{Nik ero\(s\)-i dudan etxe-a}] \ \text{eta} \ [\text{zuk ero\(s\)-i duzun-\(\emptyset\)-a}] \\
& \quad \text{I-E buy-perf have-comp house and you-E buy-perf have-comp-art} \\
& \quad \text{The, a house I bought and (the) one you bought}
\end{align*}
\]

\[
\begin{align*}
(32) & \\
& a. \quad \text{DP} \\
& \quad \text{NP} \quad \text{D} \\
& \quad \text{N} \\
& \quad \text{etxe} \\
& b. \quad \text{DP} \\
& \quad \text{NP} \quad \text{D} \\
& \quad \text{AP} \quad \text{N'} \\
& \quad \text{N} \\
& \quad \text{A} \\
& \quad \text{oso \(t\) etxe berri\(\bar{\imath}\) a}
\end{align*}
\]
In (b) the presence of spec(A) before the noun suggests that the adjective probably originates in a prenominal position; and in fact this holds for all DP-internal adjuncts in Basque (relative clauses, PPs, most quantifiers). I assume here that this movement of the adjective to N and all the cases of head movement to DET are legitimate instantiations of move which obey Travis's Head Movement Constraint as re-formulated in (10). If we separate morphological subcategorization from syntactic subcategorization, we need a separate morphological entry for each "morphological" combination:

\[(33)\]

\[(34)\]

This multiple morphological subcategorization only obscures the predictable fact that the rightmost element of the NP must move to D, because DET is a bound morpheme; yet this information must be expressed four or five times. Under the notation I use here, (33) reduces simply to (34):

\[(34)\]

where \(\ldots\) means that \(a\) is bound morpheme which requires some other morpheme to provide a left boundary to form a word; which element moves to D need not be specified. Any element may move and the Revised Head Movement Constraint will rule out illegitimate derivations.

A second advantage of my proposed notation is that it can provide a minimal lexical entry for elements that can be both heads of phrases and heads of derived words, e.g. most members of category P in Basque. Postpositions in Basque are bound morphemes; hence, [P-X] derived words or compounds "look like" [PP-X] combinations. That this is not the case can be shown because true PPs which contain more than a simple [N-P] combination cannot be part of derived words or compounds:

**Phrasal PPs**

\[(35)\]

a. etxe-\(\emptyset\)-ra 'to home, to the house' (D = \(\emptyset\))

b. etxe berri-\(\emptyset\)-ra 'to the new house' (D = \(\emptyset\))
P-X derived and compound words

(36) a. [etxe-ra]-Ø 'go home'
    b. [etxe-ra]-tu 'gone home'
    c. [etxe-ra]-tze 'home-going'
    d. [etxe-ra] [joalea] 'home-goer' (joan 'go'; joa-le 'goer')

(37) a. *[etxe berri-ra]-Ø 'go to the new house'
    b. *[etxe berri-rà]-tu 'go(ne) to the new house'
    c. *[etxe berri-ra]-tze 'new home-going'
    d. *[etxe berri-ra] [joalea] 'new home-goer'

What looks like a "PP" in (36) (i.e. the strings between brackets) is just a case of an N-P combination. If an N-A-P combination is used to form a derived word or a compound, the results in (37) are ungrammatical. The same results obtain with any combination other than N-P (e.g. N-Q-P, N-overt D-P). Using the notation I have proposed, all that is required is the following:

(38) a. raP, GOAL, +N (as in (35)) (= "takes a DP")
    b. ra],P, GOAL, +N_ (as in (36))

The two can now be factored out:

(39) ra], P, GOAL, +N(_)

A theory which distinguishes morphology and syntax is forced to express these restrictions in a duplicated manner, and still has to stipulate that [A-P] combinations are impossible in forming derived Ps:

(40) a. ra], P, +DP (syntax)
    b. ra], P, +N_ (morphology)
        +A_ (morphology; can't form derived Ps)

In conclusion, by reducing "morphological" subcategorization to subcategorization proper, we obtain a minimally simple set of lexical entries containing only unpredictable features of individual items. How both +X and +X_ frames interact is the subject matter of the next section.

1.2.3. Lexical insertion and Minimal Structure

The fundamental hypothesis I adopt here for lexical insertion stems from work by Emonds (1985, 1990):

(9) The process of deriving a verb via zero suffixation is totally productive with the postposition ra):
    i. [etxe-ra]-Ø 'go home'
    ii. a. [mendira] 'to the mountain'
       b. ([mendira]p-Ø) 'go to the mountain'
       c. ([mendira]p-tu) 'gone to the mountain'

The participle is the citation form in the tradition of the South Basque Country. In the dialects spoken there, the participle is often used where the bare stem is used in other dialects.
(41) a. The Double Lexical Insertion Level Hypothesis: Deep structure insertion is restricted to inserting elements associated with (either conditioned by or inducing) the presence of a purely semantic (non-syntactic) feature.

b. Otherwise, when no semantic features are associated with insertion, S-S is always the level of insertion (Emonds 1990: 129-130).

By (41a) all elements containing some purely semantic feature (e.g. open class items) are already present at D-S, as in the classical "standard theory" of Chomsky (1965). The so-called derivational morphemes also belong under this heading since their insertion is generally constrained by some semantic feature or another; e.g. derived *ing nominals are restricted to ACTIVITY verbs (cf. *knowing of algebra), *ity is at best restricted to LATINATE stems (a non-syntactic feature).

By (41b) certain closed class items (various spec(X) categories) and inflectional morphemes are subject to late lexical insertion. This proposal is motivated in Emonds (1985) in view of the fact that certain items are inserted into contexts produced only after certain applications of move α; thus, the operation of late lexical insertion always defines or produces a post transformational (post S-S) structure. Emonds' examples include morphemes of category INFL such as ed, comparative er, the non-floating quantifier every, the prepositions of and to (in dative shift contexts), an alternation between so and too, the causative verb give, be itself, and so on.

One clear example is the case of "grammatical" verbs like have and get; by grammatical X is meant "a lexical item of a lexical category (N, A, V, P) which contains no purely semantic feature in its lexical entry" (Emonds 1985: 169). These grammatical verbs are transitive, i.e. they subcategorize for a noun phrase complement but they fail to undergo passivization (with a non-agentive presentation):

(42) a. John had this car last year
b. * This car was had by John last year (E's (42a))

(43) a. Joan got malaria during her trip
b. *Malaria was gotten by Joan during her trip (E's (42d))

Given the grammatical status of these verbs, they are not inserted until after S-S, namely after move α has applied. At this point, their subcategorization feature must be checked:

(44) A contextual subcategorization feature $Z^0$, $+_kX^k$ of a morpheme α is satisfied only by a Lexical-Head $Z^0$ and a complement $X^k$ which both dominate a terminal element at the level at which α is inserted, unless $X^k$ is further stipulated as (possibly) empty by the feature in question (adapted from Emonds 1990: 131).

(10) The definition of lexical head is given below. For the purposes of (42) and (43) lexical head = selecting head. Emonds (1990) uses the term functional head, which I replace with L-head to avoid confusion with functional heads such as DET, INFL and COMP.
It follows then that these verbs' complements cannot undergo passivization; when insertion of *have* and *get* takes place (after S-S), their noun phrase complements must be in their base-position in order for the transitive subcategorization feature to be satisfied.

I presuppose here that the projection of phrasal structure from the lexicon is constrained by the following principle, a subcase of the Principle of Economy of Representation (cf. Chomsky 1991):

\[(45) \text{Minimal Structure Principle: Co-occurrence restrictions are to be satisfied by D-S trees which contain the fewest number of phrasal nodes consistent with the principles of syntax (Emonds 1990: 136).}\]

Thus, if a head $\alpha$ subcategorizes as $+X$, the Projection Principle and the Minimal Structure Principle (MSP henceforth) guarantees that the subcategorization frame is satisfied using the least structure possible. Since $+X$ is the minimum unpredictable specification for $\alpha$, the maximal phrase dominating $X$ may be but need not be XP. This is the case, for example, when a head takes a DP complement:

\[(46) \quad \alpha, Z, +X \quad ZP \]
\[\quad Z'\]
\[\quad Z^0 \quad YP \]
\[\quad Y' \]
\[\quad Y^0 \quad XP \]
\[\quad X' \quad X^0 \]

($\alpha=V$, and $X=N$, then $Y$ must be DET)

In the case of "derivational morphemes" no conflict arises since these specifically subcategorize for non-phrasal complements ($+X$). However, there exists the possibility that the subcategorization $+X$ may require excess phrasal structure which can be avoided. In particular, suppose that $\alpha, Z, +X$ and principles of the grammar are consistent with (47):
If a language contains a morpheme \( \beta, Y, +X \_ \) which can attach to \( X \) and project \( YP \) without violating any syntactic principle, then the Minimal Structure Principle will dictate that \( YP \) (and not \( LP \)) is projected at D-S, as in (48):

(48) a. \( \alpha, Z, +X \_ \) (order irrelevant)

By economy of representation, \( +X \) is satisfied with fewer phrasal nodes in (48) than in (47). In view of the selection of \( X \) by \( \alpha \), the morpheme \( \beta \) can only be a morpheme that is subject to late lexical insertion (that is to say, that contains no purely semantic features); otherwise, it will impose restrictions on \( X \) that are absent in the subcategorization frame \( \alpha, Z, +X \):
(49)  a.  \(\alpha, Z, +X\)
\(\beta, Y, +X_{\_}\) (order irrelevant)

\[
\begin{array}{c}
\alpha \\
\tau \\
\emptyset (\Rightarrow \alpha \text{ at PF})
\end{array}
\]

The situation in YP raises the question of what the status of X is with respect to Y, given that Y is only inserted after S-S. Following Emonds (1990), I propose to define an affixal head as the Lexical-head of any maximal phrase only if that affixal head is lexically realized at a given level of representation; this serves to disambiguate the situation in cases like (49) above:

(50) **Lexical-head** \(^{11}\): The L(exical)-head of \(Y^2\) is the rightmost lexically filled \(X^0\) dominated by \(Y^2\) (and by no other maximal projection under \(Y^2\)).

I assume here that the L-heads are the selectionally dominant heads inside their maximal projections and can govern and assign case across an empty \(Y^0\); they also determine the range of possible adjuncts inside YP (cf. Emonds 1990). In other words, late-inserted heads in a morphologically complex word do not play a role in government relations:

(51) **Empty Head Transparency**: Under the same \(Y^2\), empty heads induced by subcategorization distinct from the L-head are transparent in the syntax.

(52) **Transparent**: A transparent head doesn’t govern and doesn’t block government.

Thus, **Empty Head Transparency** has the effect of making the L-head (the highest lexically filled head) the only governing head under all the same YP. As is standard, any head under a lexically filled \(X^0\) (i.e. under the L-head) cannot govern outside that \(X^0\) (e.g. the verb *read* in \([N[V \text{ read}][N \text{ er}]]\) cannot govern across the noun). Following an idea of Emonds (1985), I assume that \(X^0\) in (49) constitutes a sister to WP at S-S because the only terminal elements under the sister of WP (= the upper \(Y^0\)) is under \(X^0\) (and \(Y^0\) dominates \(X^0\))\(^{12}\).

\(^{11}\)The definition of L-head will require the opposite directionality in languages where specifiers follow heads, as explained earlier.

\(^{12}\)Emonds’ exact definition of “constitutes” goes as follows: i. D constitutes a Cj if and only if Cj dominates D and the only terminal elements under Cj are under D Emonds (1985: 38).
In what follows, I show how selection, the MSP, and the interaction of "phrasal" and "affixal" subcategorization conspire to provide minimal base structures, and how this sheds light on the nature of neutralized categories, English present participles and gerunds in particular.

1.2.4. English ing and selection
1.2.4.1. A lexical entry for ing

Emonds (1990) proposes that all uses of ing in English reduce basically to adjectival ing and nominal ing, and that the four way paradigm is due to the fact that, for either value, the morpheme may be inserted at D-S or after S-S. This four way paradigm includes a) derived nominals and NP-gerunds; and b) derived adjectives and present participles (what I term AP-gerunds below).

1.2.4.1.1. The following examples illustrate the nominal value of ing:

(53) a. The shooting / finding / killing of the lions
    b. *The knowing / boring of Mary
(54) We prefer John's winning the prize to your obtaining it fraudulently (adapted from Emonds 1990).

As can be seen in the contrast between (53a) and (53b), ing-derived nominals are restricted to a subclass of verbal stems that Emonds identifies, roughly speaking, as [+ACTIVITY]. No such restriction applies to NP-gerunds. He proposes the following lexical entry for ing:

(55) ing, N, +V_— (\{V = +ACTIVITY\})

If the parenthesized option is chosen, ing must be inserted at D-S since its insertion is then conditioned by the semantic feature ACTIVITY, and we obtain a derived nominal. Otherwise, the insertion of ing is post-transformational since no semantic feature induces the insertion of ing. At D-S and S-S, a noun phrase headed by ing will have the following structures ((56a) is a derived nominal; (56b) an NP-gerund):

(56) a. NP
    spec
    N
    N'
    V
    N
    PP
    the
    shoot
    ing
    of the lions

I will reanalyze NP-gerunds in terms of the DP hypothesis in chapter two. I keep the NP notation in this chapter whenever the authors cited (e.g. Emonds 1990, Lieber 1992) use it.
In (56a) the morpheme *ing* is both the L-head and the structural head of NP, and internal selection of complements proceeds as in a regular noun phrase. In (56b), however, the late insertion hypothesis determines that *ing* is absent in the syntax (at D-S and S-S) because it is not associated with any semantic feature. This fact alone makes the verb the L-head of NP; by virtue of Empty Head Transparency, the empty N does not affect the government properties of V; in particular the complements inside the NP-gerund are selected by V and V can assign objective case to the prize. The empty N element in (56b) abides by the ECP because the latter applies at PF, after late (post S-S) lexical insertion has taken place.

1.2.4.1.2. Consider the following examples of adjectival *ing*:

(57) a. an amazing / exciting / boring / person
b. *a(n) hitting / eating / speaking person

These are cases of lexical adjectives; they seem to be restricted to subclasses of verb which Emonds characterizes in general terms as +PSYCHOLOGICAL (cf. also Brekke 1988).

Emonds claims that present participles of the type traditionally referred to as “VP-ing” (they have the internal structure of a verb phrase) are dominated by an AP node of which *ing* is the head. The motivation for this position is based on the fact that these present participles occur precisely in the same environments APs do: a) in complement position to certain verbs, b) as sister to N’, c) as VP/IP-adjuncts, and d) in absolutive constructions\(^{14}\). Each case is exemplified below:

(58) a. We found the students studying French / sick and tired
b. Travellers holding American passports / ready to board may go to gate two
c. John left the room swearing he would never study linguistics again / angry
d. With John having obtained his degree / eager to leave town, we can hit the road
(examples adapted from Emonds 1990).

Emonds thus proposes the following lexical entry for adjectival *ing*:

(59) *ing*, A, +V_\_ (\{V = +PSYCHOLOGICAL\}).

(14) Like APs, they too can marginally be complements to prepositions:

i. While driving the car...

ii. She went from happy to sad.
If the option between parentheses is chosen, we obtain a derived adjective as before and *ing is inserted in the base (as constrained by the semantic feature PSYCHOLOGICAL). If not, then *ing will not be inserted until after S-S. The two possible AP structures parallel to (56) are given below:

\[
\begin{align*}
(60) & \quad \text{a.} & \quad \text{b.} \\
& \text{AP} & \text{AP} \\
& \text{spec} A' & \text{spec} A' \\
& A \quad (XP) & A \quad (XP) = \text{NP} \\
& V \quad A & V \quad A \\
& \text{amazing} \quad \text{ing} & \text{study} \quad \emptyset \\
& \text{French} (\emptyset = \text{ing in PF}) &
\end{align*}
\]

(60a) is just a lexical adjective; in (60b), on the other hand, V is crucially the L-head and, hence, can again select its complements inside AP as if in a bare "VP".

1.2.4.2. Selection of gerunds and present participles and the minimal structure principle

The characterization of present participles and NP-gerunds as headed by morphologically complex heads allows a verb to act as a selectionally dominant L-head in a phrase which is specifically not dominated by a CP node or a VP node. This raises the question of whether these present participles and NP-gerunds are selected as APs and NPs respectively, or as verbs. Emonds' answer is the latter; there are verbs which take AP complements but do not tolerate AP-gerunds and there are verbs which take AP-gerunds and do not tolerate regular APs:

\[
\begin{align*}
(61) & \quad \text{a.} & \quad \text{b.} \\
& \text{Mary feels happy / *going to the movies} & \text{Mary started *happy / going to the movies} \\
\end{align*}
\]

Emonds (1990) assumes then that AP-gerunds and NP-gerunds are selected as V heads while the category of the XP dominating them is determined by independent principles of the grammar; more specifically, the Minimal Structure Principle (as a subcase of Economy of Representation) and the Revised 0-Criterion.

By comparing AP- and NP-gerunds, Emonds contends that AP-gerunds are maximal with respect to V's being their head and minimal with respect to the MSP; since NP-gerunds contain a subject position to which a 0-role must be assigned, Emonds further unifies both the nominal and adjectival *ing lexical entries as follows:

\[
\begin{align*}
i. \quad \text{ing, [+N], +V, } & \quad (N: \text{V = +ACTIVITY}) \\
& \quad (A: \text{V = +PSYCHOLOGICAL})
\end{align*}
\]

This entry expresses "the related nature of derivational and inflectional *ing" (Emonds 1990: 130) and reduces the difference between Middle English (which lacked an NP-gerund) and Modern English to a minimal change in the lexical entry of *ing:

\[
\begin{align*}
i. \quad \text{ing(e), [+N], +V, } & \quad (N: \text{V = +ACTIVITY}) \\
& \quad (A: \text{V = +PSYCHOLOGICAL})
\end{align*}
\]

The difference that gave rise to the modern English NP-gerund is the exclusion of the late-insertion option to nominal *ing.
whenever possible AP-gerunds will prevail over NP-gerunds. Obviously, this is the case in non-subcategorized position (adjuncts, reduced relatives, absolute constructions) where only AP-gerunds are found. In the complement system, a few verbs which select as +V have AP gerunds: aspectuals. But these are precisely those which do not assign a θ-role to their subject:

(62) a. keep, +V  
    b. John kept mowing the lawn (E’s (39a))  
    c. θ-roles are assigned as indicated by the arrows. The specification +V cannot give rise to NP-gerunds because, even if their extra subject position were controlled, the extra subject NP in (62b) would not receive any θ-role. Similar considerations apply to perception verbs where Emonds assumes that the verbal head assigns no independent θ-role to its object (I caught John mowing the lawn)\(^\text{16}\). That these gerunds are not NP-gerunds is shown by the impossibility of undergoing NP-movement in passives and clefts:

(63) a. *It’s mowing the lawn that John kept  
    b. *Mowing the lawn was kept by John

In sum, where no conflict arises with θ-Criterion, the preferred minimal structure which satisfies the subcategorization feature +V is an AP-gerund.

In the case of verbs which select +V and do assign a θ-role to their subject, an NP-gerund is generated to minimally meet subcategorization requirements and to allow the verb of the gerund to assign an external θ-role without violating the θ-Criterion (cf. (11) and (13) above):

(64) a. avoid, V, +V  
    b. John avoided mowing the lawn

(16) See Emonds (1990) for a detailed account of how θ-role assignment proceeds in perception verbs.
That this is a true case of NP-gerund is shown in (65):

(65) a. It’s mowing the lawn that John avoided
    b. Mowing the lawn was avoided by John

Given the selection of +V, then, the Revised 0-Criterion given in (13) in accord with the MSP determines what type of gerund (NP or AP) is generated.¹⁷

To sum up, complement subcategorization reduces to selection of heads, as proposed in 1.2.2. Some syntactic features may trigger base generation of further structure; but in the case of AP- and NP-gerunds, the frame +V is sufficient to project the necessary phrasal structure. Economy principles determine that only the needed structure is projected onto the syntax. Again, the simplification of subcategorization provides a radical explanation of the nature of neutralized phrases; these arise as a result of head-selection and the interaction of morphology/syntax as constrained by the MSP.

(17) According to Emonds, the choice between NP-gerunds and infinitives reduces to the specification of some syntactic features in the lexical entry of the selecting verbs beyond the basic +V feature: GOAL (for clauses), [+WH], M(odal) (which triggers the insertion of to after S-S). In this scenario, some verbs select as +M^V (they only take infinitival complements):

i. John hoped {to mow the lawn / * mowing the lawn / * when to mow the lawn}
Verbs like know select as +WH^V:
ii. John knows {* to mow the lawn / * mowing the lawn / how to mow the lawn}
A verb like decide selects as ((WH,GOAL)^M^V, which predicts it will have wh-infinitives, for-clauses and infinitives, but not gerunds:
iii. John decided {to mow the lawn / when to mow the lawn / for Mary to mow the lawn / * mowing the lawn}
Finally, verbs which optionally subcategorize for F-features (+WH, M, GOAl) are predicted to exist; climb for example subcategorizes as +(M)^V, and hence it will have infinitival and gerundive complements:
iv. John has tried {to climb the mountain / climbing the mountain}
A similar situation obtains with verbs like discuss, which select as +(WH)^V:
v. The lawyer discussed {buying some clothes in Rome / * what clothes buying in Rome / * to buy some clothes in Rome / what clothes to buy in Rome}.  

[23]
1.2.5. Reconsidering morphology and syntax

The theory of subcategorization and interaction of morphology/syntax proposed in this chapter and illustrated with English *ing* has some implications which merit further scrutiny.

First, the proposal explicitly confirms that base-generation of complex heads exists and is constrained by both subcategorization and the MSP. At the same time, it presupposes the abandonment of the assumption of much current work (e.g. Baker 1988, Ouhalla 1991 and others) that every (inflectional) affix *must* project to a full phrase, an assumption which is rarely supported by argument. In the terms of this article, a head generated by the frame +X will project to a full phrase only if it *must*. By including boundaries in subcategorization frames, I retain the notion that head-movement may be triggered by “morphological” requirements, for example when a given head is affixal with respect to its complement sister [\(\alpha\), +X].

The merging of “affixal” and “phrasal” subcategorization also presupposes that constraints to the effect that bound morphemes must host some morpheme such as Baker’s (1988) Stray Affix Filter\(^{18}\) are subsumed under the Projection Principle without any further addendum. In cases where two lexical properties cannot be simultaneously met (e.g. the Basque article, which takes an NP sister and is a bound morpheme), I propose the following convention:

(66) **Simultaneity Convention:** If a lexical entry contains two properties \(P_1\) and \(P_2\) which cannot be simultaneously met at a level of representation \(L_0\), the Projection Principle is said to be satisfied if \(P_1\) is met at \(L_0\ldots n\) and \(P_2\) is met at \(L_{1\ldots n}\).

It is not necessary to stipulate which one must be met first; in the case of the Basque article (which has the lexical entry \([\alpha], D, [\text{definite}], +N\)), if the determiner is affixed onto a noun and forms a complex determiner of the form \([D N-D]\) at D-S, then the requirement that it takes an NP sister cannot be met at the next level of representation, since \(X^0\)-structure would need to be modified. Suppose, on the other hand, that a deep phrase marker of the form (67) is generated:

(67) \[
\begin{array}{c}
\text{DP} \\
\text{D'} \\
\text{NP} \\
\text{N'} \\
N \\
\alpha \\
\end{array}
\]

(18) “**X if X is a lexical item whose morphological subcategorization is not satisfied at S-S**” (Baker 1988: 140).
Now the requirement that the determiner a host a head can and, furthermore, must be met at the next level of representation by head movement of the noun as constrained by the HMC.

The framework adopted here implicitly rejects the claim that syntax has no access to the internal structure of words as assumed by DiSciullo and Williams (1987); it does if, and only if, certain affixes are by hypothesis transparent in the sense that they are not inserted until after S-S (cf. (41) and (51) above)\(^{19}\). Once an X\(^0\) is inserted, then nothing under X\(^0\) can be analyzed. Thus, the term "weak lexicalist hypothesis" (rather than say "X\(^0\) hypothesis") is appropriate for my proposal.

1.3. Basics of Basque Grammar
1.3.1. The position of heads and specifiers
1.3.1.1. N, DET, and P are final in NP, DP and PP

As we saw in section 1.2.2.1, Basque Determiners and Ps are last inside DPs and PPs respectively:

(68) \[ [[[Etxe berri]NP honeta]DP-n]pp \] house new this -loc
     In this new house

Complements (and subjects) to nouns also precede the latter:

(69) Asierren Kavafis-en itzulpen hau
     Asier-gen Cavafy-gen translation this
     This translation of Cavafy by Asier

1.3.1.2. V is final in VP

The position of objects with respect to verbs in root clauses is more problematic because of the relatively free word order of Basque, as we shall see in 1.3.3. There are however cases of bare participial complements to aspectual verbs like hasi 'start', traditionally assumed to be VPs, which provide a testing ground for the position of the verb. Assuming for the time being that they are instances of VPs, we can see that a verb must follow the object (I disregard potential cases of object focalization or topicalization):

(70) a. Ainhoa egunkaria irakur-tze-n has-i da
     newspaper read-re-loc start-perf is
     Ainhoa has started reading the newspaper

b. * Egunkaria Ainhoa irakurtzen hasi da (no pause after egunkaria)

(19) I depart from Lieber's claim that inflectional affixes lack a categorial signature. A categorial signature in Lieber's terms is "a frame of morphosyntactic features headed by the category features [+/-N], [+/-V] that are of syntactic relevance for a particular category in a particular language" (Lieber 1988: 88-89). The categorial signature for nouns may include person/gender/number features and so on. I assume here that inflectional features do have categorial signature and category label: sometimes they are of the same category of the stem they attach to (the plural morpheme); sometimes they belong to a functional category (DET, INFL) (English modals, ed).
c. *Ainhoa irakurtzen egunkaria hasi da
'd. Ainhoa hasi da egunkaria irakurtzen
e. *Ainhoa hasi da irakurtzen egunkaria
f. Hasi da egunkaria irakurtzen Ainhoa
g. *Hasi da irakurtzen egunkaria Ainhoa

As can be seen from the contrasts, all the grammatical sentences have the object DP immediately preceding the verb. This indicates that verbs are also head-last with respect to their complements.

De Rijk (1969) provides other cases of tenseless structures where the verb must follow its complement. Nominalizations are one instance of this:

(71) a. Cascabelek Urtain bota-tze-a-k harri-tze-n nau
    -E throw-TE-art-E amaze-TE-loc has
    Cascabel's knocking down Urtain amazes me
b. *Cascabalek bota-tzeak Urtain harritzen nau
    Cascabel's knocking down Urtain amazes me (de Rijk 1969: 350)

The verbs of control nahi 'want' and behar 'have to/need' subcategorize for a bare infinitive. This infinitive must follow its complement, or the sentences turns out to ungrammatical:

(72) a. Orain sagarr-a jan behar du
    now apple-art eat need has
b. *Orain jan sagarra behar du (de Rijk 1969: 349)
c. Orain behar du sagarra jan (ok, northern dialects)
d. *Orain behar du jan sagarra
    Now s/he needs to eat an/the apple

According to Ortiz de Urbina (1989), jan and behar in sentences like (72a) get reanalyzed as a single verb; irrespective of this, the restriction that the verb follow its complement still holds in (72c).

The preceding paragraphs, then, show that in Basque Verbs, Nouns and Postpositions are last with respect to their complements and assign 0-roles and case to their left. Determiners also follow NPs.

1.3.1.3. Specifiers are phrase initial

With regard to classes of specifiers, these precede the head. Inside DPs possessive genitives and genitive subjects precede a head noun and are both compatible with a lexical determiner; I take this to imply that spec(D) and spec(N) precede D and N respectively20:

(20) Quantifiers are other candidates for the spec(N) position; these generally precede the noun, although some quantifiers are postnominal:
    i. Hiru / zenbait / anitz / aski lagun heldu dira
       three some many many fried arrive-perf are
    ii. Lagun barzu / asko / gutxi heldu dira
       several many few
       { Several / many / few } friends have arrived

[26]
Specifiers of degree also precede their head in APs:

Asier is {very, rather, totally, absolutely} smart

1.3.1.4. The position of nominal adjuncts

As shown above in 1.2.2.1, nominal modifiers or adjuncts are invariably prenominal in Basque: relative clauses and PPs precede the noun. Additionally, PPs and bare DPs usually take the postposition ko:

(75) a. Eros-i dudan etxe-a
The, a house I have bought
b. Donostiara-ko tren-a
Saint Sebastian-adl-KO train-art
The, a train for Saint Sebastian
c. Begirada hitse-ko neska
The girl of sad look

Adjectives are usually postnominal. However, if a spec(A) is present, it tends to precede the noun, which suggests that APs also originate prenominally and that the adjective itself is moved onto N:

(76) a. Oso filme (?oso) luze-a
A very long movie
b. Hain filme (*hain) interessazzziga-a
Such an interesting movie
(lit: “a so interesting movie”)
ally related: joan ‘go’, etorri ‘come’, esan ‘say’, ukan ‘have’, izan ‘be’, eritzi ‘opine’, ekarri ‘bring’, jakin ‘know’, eraman ‘carry’, egon ‘stay’, etzuan ‘lie’, erion ‘flow’, esan ‘say’ and so on (see Euskaltzaindia 1985 for a complete list). Traditional grammarians describe these synthetic forms in the present and past as having punctual aspect, since they are incompatible with an habitual interpretation. Here are some examples:

(77) a. Ainhoa etxera doa
    home-adl goes
    Ainhoa is going home

   b. Ainhoa etxera zihoan
    went
    Ainhoa was going home

(78) a. Ainhoak eskuan liburua dakar
    -E hand-loc book-art brings
    Ainhoa is carrying the book in her hand

   b. Ainhoak eskuan liburua zekarren
    brought
    Ainhoa was carring the book in her hand

Most of the verbal conjugation, however, is periphrastic and consists of an uninflected form of the verb (a participle) and an auxiliary verb. In these periphrastic forms, the auxiliaries izan ‘be’ and ukan ‘have’, which are themselves main verbs and have synthetic forms, may take any of the three participles: perfect, non-perfect and future. The auxiliary izan ‘be’ is used with unaccusative verbs in the sense of Burzio (1986), while ukan ‘have’ is used with transitives and unergatives:

(79) Ainhoa etxera {etorr-i / etor-tze-n / etorr-i-ko} da
    home-adl arrive-perf /-TE-loc / -perf-KO is
    Ainhoa has arrived / arrives / will arrive home

(80) Ainhoak eskuan liburua {ekarr-i / ekar-tze-n / ekarr-i-ko} du
    -E hand-loc book bring-perf / -TE-loc -perf-KO has
    Ainhoa has brought / brings / will bring the book

There exists a progressive construction formed with the non-perfect participle followed by the verbs ibili ‘walk’, egon ‘stay, be’ or the particle ari followed by izan ‘be’. The choice among these three options depends on the dialect:

(81) Euskal Herriaren egoera politikoa alda-tze-n
     (dago / dabil / Basque Country-gen situation political change-TE-loc a) stays / walks / ari da
     ARI is
     The political situation in the Basque Country is changing

This progressive construction makes up for the absence of synthetic (“punctual”) forms with the majority of the verbs. One salient feature of the inflected verbs (whether they are “main verbs” or “auxiliaries”) is their poly-personal nature (in Rebuschi’s 1989 terms). By this, we mean that, besides tense and subject agreement
markers, Basque inflected verbs also contain agreement markers for the object and the indirect object:

(82) a. ekarr-i d-u-∅
    bring-perf 3A-root-3E
    S/he has brought it/her/him
b. ekarr-i d-u-t
    bring-perf 3A-root-1E
    I have brought it/him/her
c. ekarr-i d-i-zu-∅
    bring-perf 3A-root-2D-3E
    S/he has brought it/her/him to you (sg)
d. ekarr-i d-i-zu-t
    bring-perf 3A-root-2D-1E
    I have brought it/her/him to you (sg)

This richness in verbal agreement licenses empty object and indirect object pronouns in Basque (i.e. Basque is a null-object and null-indirect object language), as explained in Eguzkitza (1986) and Ortiz de Urbina (1989).

Throughout this article, I assume that all these person markers are spellouts of INFL (or AGR in INFL), and that the poly-personal character of Basque arises because the verb is capable of carrying three indices (the indices of three DP arguments) when it moves to INFL. In principle, I dissociate these morphemes from case-marking of DPs; this seems justified since the same range of case-marking possibilities holds even when inflected main verbs or auxiliaries are absent, i.e. in tenseless clauses and in nominalizations, as we shall see in chapter two.

1.3.3. Clausal word order: Basque as an INFL-initial language

I have deliberately delayed the discussion of what the position of INFL and COMP is in Basque. The matter is not trivial and requires a more detailed discussion than I can possibly offer in an introductory chapter, nor is the focus of this article. I suggest below that IP is head-initial and that CP is head-final in Basque. This proposal should be regarded as an intermediate step in the search for a definitive solution to the murky issue of Basque word-order. I will outline my tentative proposal and briefly show how it accounts for the different word order patterns found in Basque.

There is a general consensus among most Bascologists (cf. de Rijk 1969, Goenaga 1980, 1984, Eguzkitza 1986) that Basque is an SOV language. This is also the opinion of the official grammar of the Basque Academy (cf. Euskaltzaindia 1985). Nonetheless, when explaining the data, all discussions about word order in Basque contain lengthy explanations about how the syntax of focused phrases is similar to that of wh-phrases; and how these two constructions are similar to that of sentences with negative and emphatic "particles" or operators.

(22) See Laka (1988) for a thorough analysis of these verbal paradigms in terms of Baker's Mirror Principle (1988). There are also allocutive forms for colloquial speech which display an extra agreement marker with the "listener" or addressee.

(23) In Lieber’s (1992) terms, the categorial signature of the verb in Basque can include three specifications for number/person, which are “filled out” after the verb moves to INFL. I assume with Emonds (1985) that datives are PPs with an empty P at D-S and S-S, filled in at PF. Nonetheless, the DP in a dative “constitutes” a sister to the verb at D-S and S-S in that the only terminal lexical elements under a dative PP are under DP.
In fact, in the absence of more data concerning unacceptable orders, one wonders sometimes if there is an "unmarked" order in Basque at all\textsuperscript{24}. I will maintain here that Basque is indeed an SOV language at D-S; the same is true at S-S in certain cases, but I propose to derive the unstability of word order from the fact that INFL precedes VP in Basque. In other words, a Basque clause looks like the following at D-S:

\[(83) \begin{array}{c}
\text{IP} \\
\text{spec}(l) \\
\text{INFL} \\
\text{VP} \\
\text{DP}^* \\
\text{VP} \\
\text{DP} \\
\text{V}
\end{array}\]

Under this analysis, INFL assigns nominative case to DP* under government, and not by agreement with a DP in spec(l) (cf. Koopman & Sportiche 1991). This leaves spec(l) as a possible landing site for moved phrases. My contention is that the following parametric choice holds of Basque INFL:

\[(84) \quad \text{Basque INFL: Every [+finite] } \alpha, \alpha \text{ a member of (functional category) INFL, assigns the feature [+operator] to some overt element in spec(l)}\]

(84) simply states that the f-feature assigned by a finite INFL in Basque to its specifier is [+operator]. In other words, the Spec-Head agreement relation within IPs in Basque always involves the feature [+operator] (and not, say, [+nominative] as in English according to Koopman & Sportiche 1991). I include wh-phrases, focused XPs, and affective predicates in the sense of Klima (1964) as potential recipients of the feature [+operator]. Whichever features these elements inherently have, they move to spec(l) and INFL as a result assigns ("discharges") the f-feature [+operator]. This proposal has a series of important ramifications that I explore henceforth.

As is well-known in the tradition of Basque linguistics since Altube (1929) and de Rijk (1969, 1978), focused XPs and wh-phrases behave alike in that both must usually be adjacent to the verb\textsuperscript{25}:

\[(85) \quad \text{a. } \text{Nora doa Ainhoa ordu honetan?} \]
\[\text{where goes time this-loc} \]
\[\text{Where is Ainhoa going at this time?}\]

(24) Mitxelena (1981) analyzes four possible word orders for the sentence hau ona da "this is good":

i. Hau ona da 
ii. Hau da ona 
iii. Ona hau da 
iv. Ona da hau

He explains them in terms of which XP is the topic and which one the focused phrase; but he does not say whether a certain order (e.g. (i)) may be interpreted as lacking both.

(25) The reason adverbial and, to a lesser degree, the wh-phrase nola 'how' seem to be exceptions to this generalization; cf. Mitxelena (1981), Laka (1985). This exception is accounted for if, as proposed in Rizzi (1990), the reason adverbial is generated in spec(C). The same can be proposed for nola.
b. \textit{ETXERA doa} Ainhoa ordu honetan  
   home-adl  
   It's home that Ainhoa is going  
c. \*\textit{Nora Ainhoa doa} ordu honetan ?  
d. \*\textit{ETXERA Ainhoa doa} ordu honetan

Although other constituents may precede focused and wh-phrases, they usually behave like topics in that such elements are pronounced with "a characteristic listing intonation" (Ortiz de Urbina 1986: 225; cf. Eguzkitza 1986):

(86) a. Ainhoa / ordu honetan / \textit{nora doa} ?  
   b. Ordu honetan / Ainhoa / \textit{nora doa} ?

I assume here that these topics are adjoined to IP. The negation and emphatic markers (\textit{ez} and \textit{ba}) must also precede the inflected verb; in fact they may as well be considered affixes on the inflected verb\textsuperscript{26}. The same is true of other operator-like elements of the type studied by Klima (1964) and de Rijk (1972b):

(87) a. \textit{Ez dator} Ainhoa etxera  
   No comes home-adl  
   b. \*\textit{Ez Ainhoa etxera dator}  
   Ainhoa is not coming home  

(88) a. \textit{Ba dator} Ainhoa etxera  
   Yes comes home-adl  
   b. \*\textit{Ba Ainhoa etxera dator}  
   Ainhoa IS coming home

(89) a. \textit{Ainhoa bakarrik dator} etxera  
   only  
   b. \*\textit{Ainhoa bakarrik dator} etxera  
   Only Ainhoa is coming home

(90) a. \textit{Nekez uztent} bere sorteria sustrauak han dituen-a-k  
   hardly leave-TE-loc has his/her homeland roots there has-comp-art-E  
   Hardly does the one who has roots there leave her/his homeland  
   b. \*\textit{Nekez sustrauak han dituenak bere sorteria uztent du}

Following Eguzkitza (1986) and Ortiz de Urbina (1989), I adopt the position that \textit{balez} are heads generated under INFL; in this case, the feature [+operator] can be assigned internally by INFL to the adjoining head, as in (91):

(91)

\begin{center}
\begin{tikzpicture}
  \node (IP) [circle, draw] {spec(I)};
  \node (I') at (1,0) [circle, draw] {I'};
  \node (VP) at (2,0) [circle, draw] {VP};
  \node (DP*) at (1,1) [circle, draw] {DP*};
  \node (NEG) at (0,0) [circle, draw] {NEG};
  \node (AFF) at (0,-1) [circle, draw] {AFF};
  \node (XP) at (2,1) [circle, draw] {XP};
  \node (V) at (2,2) [circle, draw] {V};

  \draw [->] (IP) -- (I');
  \draw [->] (I') -- (VP);
  \draw [->] (VP) -- (DP*);
  \draw [->] (DP*) -- (XP);
  \draw [->] (XP) -- (V);

  \draw [->] (NEG) -- (I);
  \draw [->] (AFF) -- (I);

  \end{tikzpicture}
\end{center}

\textsuperscript{(26) It is only because of an orthographic convention that \textit{ez} 'not' is written as an independent word nowadays. The only elements that can appear between \textit{ez/ha} and the inflected verb are the so-called modal particles, which are generally assumed to be base-generated under the INFL node (cf. Eguzkitza 1986, Ortiz de Urbina 1989):}

i. [\textit{Ez omen dator} Ainhoa etxera  
    neg apparently comes home-adl  
    Ainhoa is apparently not coming home}
This INFL-internal assignment requires that we add the following to (84):

(84)' ... in spec(I) or in INFL

When the f-feature [+operator] is assigned INFL-internally, however, the subject DP* may move to spec(I) without being interpreted as a focused phrase. This is actually the preferred order in negative sentences:

(92) Ainhoa ez dator etxera (cf. (87a))
    Ainhoa is not coming home

Nonetheless, INFL may assign its f-feature to a wh-phrase or, more marginally, to a focused phrase, in the presence of negation. This is impossible with the emphatic morpheme ba:

(93) a. Nor ez dator etxera?  
     who is not coming home?
(94) a. * Nor ba dator etxera?  
     who aff comes home-adl
     It's Ainhoa that IS coming home
b. ? AINHOA ez dator etxera  
   It's Ainhoa that is not coming home
b. * AINHOA ba dator etxera  
   Who IS coming home?

This means that negation, unlike the affirmative morpheme, may but need not agree with INFL.

A sequence of a participle and an auxiliary verb can also be sentence-initial; I will analyze these participles in detail in chapter four. For the present discussion, I assume that these structures may appear in INFL because the main uninflected verb (i.e. the participle) is coindexed with the auxiliary verb as proposed in Chomsky (1986b) and hence may adjoin to INFL without violating any syntactic constraint:

\[
\begin{array}{c}
\text{IP} \\
\text{spec(I)} \\
\text{I'} \\
\text{I[V_i]} \\
\text{VP} \\
\text{XP} \\
\text{DP*} \\
\text{XP} \\
\text{(YP)} \\
\text{V+X} \\
\end{array}
\]
This adjunction complies with the Head Movement Constraint. Given Chomsky’s (1986b) contention that auxiliary verbs are coindexed with main verbs in V* constructions, the indices $i$ and $j$ are probably the same and the entire $[I_i ... t ... t]$ counts as a unimember chain; no head intervenes and relativized minimality is respected.

Another means for explaining why $[X V+X]$ can adjoin to INFL is to consider that the complex head INFL governs XP after movement of the auxiliary as in Baker (1988); then $t_i$ does not constitute a closer head or a barrier to (antecedent) government of $t_j$ by the new INFL containing $V+X_j$.

If nothing occupies the spec(I) position, INFL will internally assign the feature [+operator] to the participle (regardless of which account of participle adjunction is chosen). This seems appropiate; participle-initial sentences are interpreted as V-focalization (cf. Ortiz de Urbina 1989):

(96) **etorr-i da Ainhoa etxera**
    arrive-perf.is home-adl
    What Ainhoa did was come home

If some XP occupies the spec(I) position, then XP rather than the participle agrees with INFL and receives the focus interpretation.

(97) **ETXERA etorr-i da Ainhoa**
    home arrive-perf is
    It’s home that Ainhoa has come

(27) This complies with Baker’s Government Transparency Corollary: “A lexical category which has an item incorporated into it governs everything which the incorporated item governed in its original structural position” (Baker 1988: 64).

(28) In V + auxiliary complexes, if some XP occupies the spec(I) position the participle may also remain in its base-position; the resulting order is stylistically marked:

i. **Nora da Ainhoa etorr-i**  
   where is arrive-perf
   Where is Ainhoa?

ii. **ETXERA da Ainhoa etorr-i**
   It’s home that Ainhoa has come
   Where has Ainhoa come?

I will return to this matter in chapter four.
By identifying the left position of operators in Basque with spec(I), we can derive the impossibility of having a sentence-initial inflected verb from general principles of UG:

(98)  

\[
\begin{align*}
\text{a. } & \text{*dator Ainhoa etxera} & \text{b. } & \text{*da Ainhoa etxera etorr-i} \\
& \text{comes home-adl} & & \text{is home come-perf} \\
& \text{Ainhoa is coming home} & & \text{Ainhoa has come home}
\end{align*}
\]

If INFL is filled with some lexical item, then it must agree with an operator-like element. This follows from (84) and the Principle of Functional Feature Assignment in (2), which forces a member of a functional category (INFL in this case) to obligatorily assign its f-feature under certain conditions:

(2) **Principle of Functional Feature Assignment**  
If \( \alpha \), \( \alpha \) a member of a functional category \( F \), is lexically specified to assign some f-feature, then within \( F^{\text{max}} \) must assign that f-feature

If a filled INFL remains in situ, sentences (98a, b) are ungrammatical because INFL does not assign its f-features (it cannot vacuously assign it to an empty position) and (2) is violated. The only way for a sentence without operators not to violate this requirement is for INFL to move somewhere else; I suggest that this is exactly what happens in the unmarked verb-final order. INFL moves to an empty COMP (a substitution movement), and then a lexical item under INFL need not assign its f-feature (since INFL is no longer contained in IP):

\[
\begin{tikzpicture}
\node (CP) at (0,0) {CP};
\node (C) at (2,2) {C'};
\node (IP) at (-2,2) {IP};
\node (C) at (0,4) {C};
\node (spec(I)) at (-2,0) {spec(I)};
\node (I') at (-1,1) {I'};
\node (I) at (0,1) {I};
\node (VP) at (-1,3) {VP};
\node (V) at (0,3) {V};
\node (DP*) at (-2,1) {DP*};
\node (t_i) at (-2,-1) {t_i};
\node (Ainhoa) at (-1,-1) {Ainhoa etxera};
\node (t_i) at (0,-1) {t_i};
\node (doa_i) at (1,-1) {doa_i};
\node (Ø) at (-4,0) {Ø};
\draw (CP) -- (IP);
\draw (IP) -- (C);
\draw (spec(I)) -- (I');
\draw (I') -- (I);
\draw (I) -- (VP);
\draw (VP) -- (V);
\draw (DP*) -- (t_i);
\draw (Ø) -- (t_i);
\draw (Ainhoa) -- (t_i);
\draw (t_i) -- (doa_i);
\end{tikzpicture}
\]

In accord with Economy of Representation (cf. also Travis 1991), it is plausible that no COMP node need be generated in matrix clauses if spec(I) is filled and INFL assigns its functional feature within IP as part of Spec-Head agreement; the substitution movement to COMP takes place as a “last resort” for INFL not to violate the Principle of Functional Feature Assignment in (2). I now turn to the motivation of COMP as CP-final in Basque.
1.3.4. Rightmost Position Of COMP

Complementizers in Basque are bound morphemes on inflected verbs. That the COMP position is final in Basque is supported by the fact that words consisting of an inflected verb and a complementizer are sentence final in many non-root clauses. Relative clauses are a clear example of this:

(100) a. Asierrek gaur Ainhoari idatz-i dio-n gutuna
    -E today -D write-perf has-comp letter
b. *Asierrek idatzi dion Ainhoari gaur gutuna
   The letter that Asier has written to Ainhoa today

The same is true of subordinate clauses that involve sentential complements other than to verbs of saying and thinking:

(101) a. Asierrek Ainhoari gutuna idatz-i (ez) dionetik...
    -E -D letter write-perf (no) has-comp
   Since Asier has (not) written a letter to Ainhoa
b. *Asierrek ez dionetik Ainhoari gutuna idatzi...
   Since Asier has not written a letter to Ainhoa
c. *Asierrek idatzi dionetik Ainhoari gutuna...
   Since Asier has written a letter to Ainhoa

(102) a. Asierrek Ainhoari gutunak idaz-te-n (ez) dizkionez...
    -E -D letters write-TE-Ioc (not) aux-comp
   Because/since Asier does (not) write letters to Ainhoa
b. *Asierrek ez dizkionez Ainhoari gutunak idazten...
   Because/since Asier does not write letters to Ainhoa
c. *Asierrek idazten dizkionez Ainhoari gutunak...
   Because/since Asier writes letters to Ainhoa

As can be observed, the negative element moves along with the inflected verb to the complementizer position. Interestingly enough, when these subordinate sentences have empty (pronominal) subjects and objects and the inflected verb stands alone, no ungrammaticality results. This contrasts with the situation in root-clauses (e.g. (98) above, repeated here as (104a) for convenience):

(104) a. * dator (Ainhoa)... 'is coming (Ainhoa)...'
b. * dakit (gauza bat)... 'I know (a thing)...'
The contrast is nicely predicted by the analysis whereby INFL moves to COMP in these subordinate clauses and hence need not assign its f-feature to an overt element in spec(I); in (104a) and (104b), on the other hand, dator and dakid are standing in INFL but assign no f-feature in violation of the Principle of Functional Feature Assignment. An interesting question arises when we look at the situation of embedded sentences that are complements to verbs of thinking and saying (generally formed with the complementizer la ‘that’); these subordinate sentences behave precisely like root sentences in that operator-like elements are sentence-initial (in the “left position”) and have the inflected verb immediately following them together with the complementizer:

(106) a. Asierrek [ez datorrela Ainhoa etxera] esan du
    -E not comes-comp home say-perf has
    Asier has said that Ainhoa is not coming home
b. Asierrek [ba datorrela Ainhoa] esan du
    aff comes-comp say-perf has
    Asier has said that Ainhoa IS coming home
c. *Asierrek [datorrela Ainhoa etxera] esan du
    comes-comp Ainhoa home say-perf has
    Asier has said that Ainhoa is coming home
d. Nondikio Asierrek [ti datorrela Ainhoa t1]?
    where-abl says -E comes-that
    Where does Asier say that Ainhoa is coming from?

The contrast between (106a,b) and (106c) indicate that these sentential complements are indeed root-like in that INFL must assign its f-feature to an operator-like element (cf. Emonds 1976: chapter two and references therein). If the operator is [+wh] then it must move to a higher spec(I), but the embedded verb is still second with respect to the extracted element.

What is problematic in these embedded sentences which display root-clause behavior is the presence of the complementizer on the verb in second-position. What I would like to propose here is that the COMP position is allowed to remain empty in these cases, because its alternative realization on the head INFL is licensed by the Invisible Category Principle of Emonds’ (1985, 1987):

(29) Sentence (105c) is ok as an indirect imperative; note that imperatives, as opposed to regular inflected verbs, are also possible sentence-initially: betor ‘that s/he come’, zatoz hona ‘(You-sg) come here’. Perhaps, some imperative element stands in spec(I) (cf. Katz & Postal 1964).
(30) Pied-piping of the entire clause is also possible (cf. Ortiz de Urbina 1989).
(107) **Invisible Category Principle:** A closed category B with positively specified features C_i may remain empty throughout a syntactic derivation if the features C_i (save possibly B itself) are all alternatively realized in a phrasal sister of B.

(108) **Alternative Realization:** A feature C of a closed category B is alternatively realized in a sister D of B if and only if B appears in the surface configuration \([B, +C] D[\ldots C_i \ldots]\) and no maximal projection within D contains C_i (Emonds 1987: 615).

In Emonds' account, the ICP allows for the possibility of the Determiner's remaining empty when the feature [+plural] is realized on the head of NP; for the possibility of spec(A) to remain empty when comparative *er* is realized on the adjective (rather than as *more*); and for the existence of adverbial DPs with empty prepositions.

Because of the properties of the functional category INFL in Basque root clauses, features that are generally associated with COMP (= [awh, βoperator], [t/affective]) in other languages are in fact productively realized on IP (its specifier and/or its head). Since IP is a sister of COMP, the ICP will license an empty COMP position alternatively realized on INFL:\(^{31}\):

(109)
```
CP
   /\spec(C)
  \   /\spec(I)
 IP  | IP'  \\
    \   \     \\
     \   \     \\
      \   \     \\
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      \   \     \\n```
(110) a. *Gurasoek [nor Dimara joa-n-go den oporretan] galde-tu dute
parents-E who Dima-adl go-perf-KO is-comp vacation-loc aske-perf have
The parents asked who will go to Dima on vacation
b. Gurasoek [nor joa-n-go den Dimara oporretan] galde-tu dute

Nonetheless, the wh-phrase must raise to spec(C) from spec(I) for the subcategorization requirements of [+wh] verbs to be satisfied; I assume that this is the case in (110b) and the like. The complementizer itself, however, is realized on INFL:

(111) Gurasoek [cp nori [ip ti [i joango den] Dimara oporretan]] galde-tu dute

1.3.5. Other analyses of word order

The proposal I have made here is intended to contribute to the solution of the word order issue in Basque. Although it is not without problems, it preserves the insights of traditional grammarians and, especially, the insights of Ortiz de Urbina's (1989) analysis. Ortiz de Urbina's (1989) insightful discussion of Basque word order presupposes that all heads are final in Basque, but that COMP is initial:

(112) CP
    spec(C) C'
    COMP IP
      spec(I) I'
      VP INFL
        V

The major advantage of Ortiz de Urbina's proposal\(^{32}\) is that 63 operator-verb sequences are analyzed as V-2 phenomena of the kind found in many languages (Germanic and Romance) and that the existence of an additional preverbal Focus position (besides COMP) is rendered unnecessary (cf. Eguzkitza 1986, Horvath 1986). The major drawback of his proposal, however, is that Ortiz de Urbina has to assume that every instance of a sentence-final complementizer is a result of downward movement of the latter to INFL. In the case of sentence-initial operator-verb sequences (i.e. sentential complements to verbs of saying/thinking), the complementizer is moved to INFL and the entire [INFL-COMP] sequence is moved back to the COMP node. My proposal, on the other hand, retains the notion that COMP is head-final like most heads in Basque, but ascribes the fairly "unstructured" and unconstrained

\(^{32}\) See Ortiz de Urbina (forthcoming) for an updated version of his account of wh- and focus movement within the minimalist program.
word-order to the effect produced by a head-initial INFL. I do not doubt that this may have historically arisen due to the pressure of the neighboring Indo-European languages.\(^{33}\)

Laka's (1990) insights too are retained under my proposal without the problems inherent to her analysis. She proposes a sentence-initial \(\Sigma\) projection where the functional negative and affirmative/emphatic heads are generated. She assumes that focused phrases move to \(\text{spec}(\Sigma)\):

\[
\begin{array}{c}
\text{CP} \\
\text{spec}(C) \quad \Sigma P \\
\quad \text{spec}(\Sigma) \quad \Sigma' \\
\quad \text{spec}(I) \quad I' \\
\quad \text{VP} \quad \text{INFL} \\
\end{array}
\]

The main problem with Laka's analysis is that wh-phrases are left out of the discussion and the parallelism between foci/negation and wh-phrases is not captured in a unified way. Her analysis also predicts that the unmarked word order in negative sentences is negation + (auxiliary) verb + subject, when in fact the subject generally precedes the negative element. A second problem in Laka's proposal is that no account is given for the fact that some (but not all) embedded sentences behave like root sentences.

1.3.6. Case in Basque

Basque is a morphologically ergative language. By morphologically ergative I mean that the subject of transitive verbs (regardless of the \(\theta\)-role they receive) and the subject of unergative verbs in the sense of Burzio (1986) bear the marker \(k\).
Subjects of unaccusatives and objects of transitive verbs have no morphological mark at all:

(114) **Unergatives**
   Ainhoa-k gogor burruka-tze-n du
   -E hard fight-TE-loc has
   Ainhoa fights hard

(115) **Transitives**
   a. Ainhoa-k Asier maite du
      -E love has
      Ainhoa loves Asier
   b. Labana-k gutunazala ebak-i du
      knife-E envelop cut-perf has
      The knife has cut the envelop

(116) **Unaccusatives**
   Gutuna berandu hel-du da
   letter late arrive-perf is
   The letter has arrived late

The ergative marker seems to indicate that certain DPs are external arguments in their D-S position; at S-S no syntactic difference exists between subjects of unaccusatives and subjects of transitive/unergatives. I will assume therefore that the ergative marker is just a reflection of a language specific rule inserting the affix $k$ under Koopman & Sportiche's DP* position if the latter is lexically filled:

(117) $\emptyset \rightarrow K, D, /+D$
   If D is lexical, and D is in [DP*, VP]

I take the position that INFL in Basque assigns governed (nominative) case to the DP* position at S-S; in the case of unaccusative verbs, the D-S object raises to DP* to receive governed case from INFL. I thus assign no particular case-theoretic status to the ergative morpheme. Put differently, I dissociate abstract case from morphological ergativity. Another alternative is to assume that INFL may assign case to the DP* position at D-S or at S-S. If it assigns it at D-S, then the noun phrase occupying the DP* position will be marked by the "ergative" affix. If the D-S object of an unaccusative verb moves to the DP* position at S-S, then INFL will also assign governed case to it but without a morphological reflex on the noun phrase. I will not adopt this position here but keep it as a possibility.

(34) See Ortiz de Urbina (1989) for arguments: these have to do with control, the position of negation, etc. Ortiz de Urbina shows that a treatment of unaccusatives à la Burzio — co-indexation with a pronominal element in spec(I) — is untenable in Basque.

(35) See Oyharçabal (1992) for a proposal that the ergative is an inherent case. My assumptions agree with O. de U. in that INFL is responsible for case-marking of subjects in both situations ("ergative" and "absolutive"). But I depart from his view that Basque INFL may assign ergative, absolutive and dative indistinctively. For a more updated version of case theory as it applies to Basque, see Laka (1993).
2. The roots of nominalization in Basque

The grammatical formative \textit{te} (and its variant \textit{rte}) has long been regarded as "nominal in nature" in the Basque linguistic literature (Lafitte 1962); it shows up in three different constructions, summarized in (1):

\begin{enumerate}
\item[(1)]
  \begin{enumerate}
  \item [a.] \begin{flushleft}
    \begin{tabular}{l}
    \begin{tabular}{l}
      [Euskaldunen alfbeta-tze masiboak] \textit{ere ez luke hizkuntzaren} \\
      Basque-gen alphabetize-TE massive-E even no aux language-gen \\
      erorkizuna ziurtatuko \\
      future assure \\
    \end{tabular}
  \end{tabular}
  \end{flushleft}
  Even a/the massive alphabetization of Basque speakers would not secure the future of the language
  \item [b.] \begin{flushleft}
    \begin{tabular}{l}
    \begin{tabular}{l}
      [(Herri batek) hiritarrak alfbeta-tze-a] \textit{funtsezkoa da} \\
      country one-E citizens TE-art fundamental is
    \end{tabular}
  \end{tabular}
  \end{flushleft}
  A given country's alphabetizing its citizens is fundamental
  \item [c.] \begin{flushleft}
    \begin{tabular}{l}
    \begin{tabular}{l}
      Ainhoa oporretan \textit{Lekeitiora joa-te-n da/zen} \\
      vacation-Ioc Lekeitio-adl go- TE-loc is/was
    \end{tabular}
  \end{tabular}
  \end{flushleft}
  Ainhoa goes/used to go to Lekeitio on vacation
  \end{enumerate}
\end{enumerate}

In (1a) \textit{te} forms a derived nominal; in (1b) the bracketed structure corresponds to a nominalized (tenseless) clause, a notion which will be clarified below and which constitutes the core of this chapter; in (1c) \textit{te}, together with the locative postposition \textit{n}, is used as an aspect marker for imperfect (i.e. [-completed]) tenses. I will argue in chapter four that this third use of \textit{te} reduces to the second one (i.e. that there is no Aspect Phrase), but I leave it out of the discussion for the time being.

The main idea of this chapter is to show that the theory of grammar can (and furthermore must) capture the intuition that \textit{te} is indeed a morpheme of category \textit{N} in both instances (1a and 1b) if it is indeed to attain a deep understanding of the interaction between morphology and syntax. In this light, I adopt and further investigate the \textit{Double Lexical Insertion Level Hypothesis} presented in chapter one: grammatical formatives are inserted at D-S when some purely semantic feature conditions lexical insertion; otherwise, they are inserted after S-S. It is claimed here that in UG late insertion of a nominalizing suffix gives rise to a maximal projection headed by a nominal element which is "switched off" until PF and allows the entire phrase to behave as a clause internally. More specifically, I propose that \textit{te} is uniformly a morpheme of category \textit{N}, which bears the syntactic feature [-completed] when it is inserted in the context V \_ \_ after S-S. I will try to show that this, interpreted in the light of the DP hypothesis, accounts for the possibility of assigning abstract case to the subject in (1b) as a result of V-N to D movement, a situation that mirrors movement in clauses (V-to-I movement). Since this movement is impossible in English gerunds for independent reasons, it follows that the only case available for the subject will be genitive\footnote{\textit{ACC-ing} seems to be a purely stylistic variant of POSS-ing for many speakers, according to Emonds (but see footnote 3).}.

(1) ACC-ing seems to be a purely stylistic variant of POSS-ing for many speakers, according to Emonds (but see footnote 3).
I have organized the discussion as follows. Section 2.1 refines Emonds's treatment of English nominal *ing*, in terms of the DP hypothesis; several theoretical and empirical advantages over Abney's (1987) and Suzuki's (1988) analyses are examined. Section 2.2 discusses briefly the use of *te* as a suffix forming derived nominals. Section 2.3 argues against previous analyses of Basque nominalized clauses of the type shown in (1b), which considered them CPs, and proposes several tests that show that these constituents are indeed noun phrases in the traditional sense. Section 2.4 develops an analysis of Basque nominalized clauses as DPs with a nominal head (*te*), subject to late lexical insertion. Abstract case-marking of the subject DP is shown to be dependent on the possibility of V-N to D movement. Section 2.5 argues that the apparent clausal properties of nominalized clauses are compatible with their being dominated by a DP node. Finally, the case of the Spanish nominal infinitives discussed in Plann (1981) is brought into the discussion in 2.6 as another example of the double insertion nature of grammatical formatives. Variation in the extraction possibilities out of “clausal” DPs in Basque/English and Spanish are accounted for in terms of the Empty Category Principle, which I assume applies at PF (cf. Aoun et al. 1987).

2.1. A DP analysis of English NP-gerunds

As was pointed out in chapter one (1.2.2.1), Emonds (1990) has proposed that the dual nature of nominal *ing* in English stems from the hypothesis that grammatical formatives may inserted at D-S or after S-S otherwise (in which case they are not visible until PF). This dichotomy makes it possible to maintain that both instances of the morpheme are basically the same, i.e. that the morpheme is of category N, +V_, in both the “syntactic” and the derivational uses, as expressed by the lexical entry in (4):

(2) a. The shooting of the lions by the hunters
   b. My handling of the problem
   c. *Your knowing of algebra surprised me
   d. *The amusing of people is fatiguing

(3) a. (The hunters’) shooting the lions upset all of us
   b. Nobody objected to my handling the problem
   c. Your knowing algebra surprised me
   d. Amusing people is fatiguing

(4) *ing*, N, +V_ (N: V= +ACTIVITY)

The parenthesized option in (4) forces the affix to be restricted to a semantic subclass of verbs which will result in its being inserted at D-S; no such restriction exists if the affix is by default inserted after S-S. Emonds (1990) further claims that the feature +V and the late insertion option of nominal *ing* induce a full NP structure as constrained by X-Bar theory whose nominal head is in fact null,
"switched off", until PF, thus allowing the verb to act as the I-head of the phrase, so defined in (6):

(5)  
    NP  
     |  
    (SPEC)  N'  
    NP's  
     |  
     V  N  

     shoot  \( \emptyset \) (ing in PF)

(6)  
The lexically-head of Y² is the rightmost lexically filled X₀ dominated by Y² (and by no other phrasal projection under Y²)

By (6), the verb is the I-head of the NP at both D-S and S-S; the verb selects all the complements inside NP and is able to assign case to an NP of which it constitutes a sister (cf. ch. one: 1.2.3), so the internal sentence-like behavior of the phrase follows from this. Henceforth I propose to recast the proposal in (5) in terms of the DP hypothesis (Fukui & Speas 1986); as in chapter one, I assume that all categories project to the double bar level:

(7)  
    DP  
     |  
    (SPEC)  D'  
    D  
     |  
    D₁  's  
    (SPEC)  N'  
    N₁  
     |  
     V  N  

     \( \emptyset \) (ing in PF)

Following Mallén (1989), Suzuki (1988) and Torrego (1987), I assume that DP subjects originate (in the specifier position) inside NP. This claim is parallel to the notion that IP subjects originate inside VP (cf. Zagona 1982), Koopman & Sportiche 1991 and others). In line with Koopman & Sportiche (1991), I also assume that DET in English is a raising category (like INFL), and that the DP subject moves to spec(D) for case reasons: it receives case from DET ('s) by agreement. If 's is absent,

(2) Koopman & Sportiche (1991) do not decide whether the DP* subject position inside VP is the actual specifier position or an adjunction structure. I retain that ambiguity here. Nevertheless, I do assume that the NP internal subject is the spec(N) position.
PRO stays in the spec(N) position and remains ungoverned: an empty (contentless) DET cannot govern into spec(N)\textsuperscript{3}. The absence of a lexical DET eliminates the minimality effect over V (cf. Rizzi 1990) and therefore V inside NP in (7) could head-govern spec(N) since it m-commands it by *Empty Head Transparency*; nevertheless, this is avoided because head-government in English is from left to right.

The structure in (7), to which I will refer as the *Nominal Head hypothesis*, is reminiscent of recent proposals to analyze nominal gerunds advanced by Abney (1987) and Suzuki (1988):

\begin{align*}
(8) & \quad \text{DP} \\
& \quad | \text{John's} \\
& \quad \quad | \text{D'} \\
& \quad \quad | \text{D} \\
& \quad \quad | \text{NF} \\
& \quad \quad | \text{ing} \\
& \quad \quad | \text{VP} \\
& \quad | \text{V} \\
& \quad | \text{DP} \\
& \quad | \text{sing} \\
& \quad | \text{the Marsellaise}
\end{align*}

Abney (1987: 223)

\begin{align*}
(9) & \quad \text{DP} \\
& \quad | \text{SPEC} \\
& \quad | \text{D'} \\
& \quad | \text{D} \\
& \quad | \text{IP} \\
& \quad | \text{John's} \_i \\
& \quad | \text{∅} \\
& \quad | \text{DP} \\
& \quad | \text{I'} \\
& \quad | \text{I} \\
& \quad | \text{VP} \\
& \quad | \text{ing} \\
& \quad | \text{pass the exam}
\end{align*}

(=John's passing the exam) Suzuki (1988: 119)

(3) I regard POSS-ing and PRO-ing as instances of (7), which I will call DP-gerund [the latter being the subjectless case of the former], since they both have the same external distribution (Emonds 1976, Abney 1987). As for ACC-ing, some authors suggest that it behaves differently from DP-gerunds even with respect to distributional tests (Reuland 1983, Abney 1987). Emonds (1992), on the other hand, argues that the different properties attributed to the ACC-ing construction (free extraction, anaphor subjects) are a reflection of the fact that the sequence of an accusative noun phrase and a gerund doesn't always form a constituent and is in many cases a sequence of two complements (DP and AP-gerund) just like in the case of perception verbs. Where this is not the case, both POSS-ing and ACC-ing behave alike:

i. * My parents are investigating each other (')s buying a house

ii. * What are your parents investigating John's buying?
In (9), movement of the DP subject to spec(D) is triggered by Suzuki’s
Definite-ness Principle, which requires all [+definite] DPs (among which he includes DP-
gerunds) to have some [+definite] element in spec(D) or DET at S-S. In Suzuki’s
account, a [+Nominal] INFL can assign genitive case to its specifier.

The nominal head hypothesis in (7) differs from Abney’s and Suzuki’s proposals
in fundamental ways and, theoretical matters aside, it also makes a different set of
predictions. In the following paragraphs, I briefly summarize these differences
with respect to the absence of a spec(V) position, the absence of gapping and null
VP effects, and the lack of NP ellipsis (standard N’ deletion). The data will show
that only the nominal head hypothesis can predict all these characteristics of
DP-gerunds. First of all, the Nominal Head hypothesis represented by (7) predicts
that only specifiers of DET should be allowed inside DP-gerunds, as is the case (cf.
Abney 1987 and Suzuki 1988, who include demonstratives, negative ‘no’, and the
article in Old English). Crucially the proposal in (7), unlike Abney’s or Suzuki’s, also
predicts that no specifier of VP should be licensed since there is no VP proper.

Zagona (1988a: ch.2) has independently shown that the scarcely type of adverbials are
generated under the spec(V) position. If she is right, they should not able to occur in
DP-gerunds. This prediction is confirmed by all the speakers I have consulted with:

(10) a. We all object to the university’s (*? hardly) hiring female professors
b. The teacher was shocked by Mary’s (*? hardly/barely) answering a
question right
c. Lisa’s (*? barely/scarcely) drinking beer surprises her friends

Second, gapping of the verb alone in English usually contrasts with gapping of
the verb associated with INFL:

(11) a. Max played the drums and Charlie the alto sax
b. Max could play the drums and Charlie the alto sax
  c. ?? Max could play the drums and Charlie could the alto sax
     [d. * Max could play the drums and Charlie play the alto sax]

Under Suzuki’s analysis, gapping of V-ing in DP-gerunds should pattern with
(11a/b) if ing is indeed INFL; under (7), it should pattern together with (11c), where
V alone is gapped (no INFL element is involved). The data indicate the correctness
of (7)’s predictions:

(12) a. ?? I enjoy Max’s playing the drums and Charlie’s the alto sax
b. *? I object to Mary’s writing the first part and Joe’s the second
c. *? Sharon’s teaching syntax and Joe’s phonology came as a surprise
   [cf.d. I expected Sharon to teach phonology and Joe syntax]

(4) These are not trivial in any case. And I will return to them in section 2.2.1. Note that licensing VP as
complement to an affix which lacks categorial status is unusual from the point of view of UG; the same can be said
of the ability of the “lexical features” of ing to transform VP into NP (cf. Abney 1987). Equally problematic is
the licensing of IP as complement to DET. Both authors fail to characterize in a systematic way what is common to both
nominal ings (derivational vs syntactic), and hence co predict why DP-gerunds should have a noun phrase distribu-
tion in the first place.
As (12d) illustrates, gapping of a verb and a non-finite INFL is grammatical, which goes to prove that the marginality of (12a-c) cannot be attributed to the non-finiteness of inflectional *ing*. The data on gapping thus favors Emonds’ analysis over Suzuki’s (the argument is neutral with respect to Abney’s account). A third argument which also favors the Nominal Head hypothesis account over Suzuki’s analysis (but is neutral with regard to Abney’s proposal) is provided by the absence of VP-ellipsis in DP-gerunds. Lobeck (1986) and Zagona (1988a, b) have shown that a non-finite INFL can only properly govern a null VP if the CP immediately containing it is an argument:

\[
\begin{align*}
(13) & \quad a. \text{John persuaded Mary to leave, and Fred persuaded Mary to } [v_p \emptyset ] \\
& \quad b. \text{* John runs to stay fit, and Bill swims to } [v_p \emptyset ] 
\end{align*}
\]

Zagona derives this contrast by requiring that null VPs be Tense-governed, and by assuming that non-finite INFL can only become a Tense-governor if it is immediately contained in an argument. Unlike *to, a head like *ing, if it is indeed INFL as Suzuki proposes, cannot be a proper governor by itself because it requires affixation of a verb, a process which destroys the context for null VPs. Nevertheless, according to Zagona (1988b: 114), auxiliaries in argument non-finite clauses may properly govern a null VP if they are coindexed with their non-finite INFL:

\[
\begin{align*}
(14) & \quad a. \text{ (?) John might not want to have graduated soon, but Phil would like to have } [v_p \emptyset ] \\
& \quad b. \text{ (?) John might not want to be studying tonight, but Phil would love to be } [v_p \emptyset ] 
\end{align*}
\]

The auxiliary verbs *have* and *be* in (14) properly govern a null VP because they can be coindexed their non-finite INFL (*to*) (no barrier intervenes). Similar judgments should obtain with *have-ing* (V-I) under Suzuki’s analysis if *ing* is indeed INFL provided the gerund is an argument. The prediction is not confirmed:

\[
\begin{align*}
(15) & \quad a. \text{ * Some people don’t regret having gone to the movie but John regrets having } [v_p \emptyset ] \\
& \quad b. \text{ * Bird enjoyed having played with Miles and Trane enjoyed having } [v_p \emptyset ], \text{ too} 
\end{align*}
\]

Nothing prevents Zagona’s INFL-auxiliary coindexing from taking place in (15a, b); therefore Suzuki’s analysis predicts that (15) should be grammatical. The failure of the auxiliaries to properly govern the null VP in (15), on the other hand, follows from (7), since no INFL node is present. Finally, the absence of NP ellipsis in DP-gerunds favors the Nominal Head account over Abney’s proposal. Consider the following sentences:

\[
\begin{align*}
(16) & \quad a. \text{ * I like Mary’s singing the blues but I prefer Bessie Smith’s } [n_p \emptyset ] \\
& \quad b. \text{ * I was surprised by John’s pitching in, and by Mary’s } [n_p \emptyset ] \text{ too} 
\end{align*}
\]

\(\text{Abney’s 1987: 200b}\)
(17) a. I like Maria's car but I prefer Perry's [NP 0]
   b. I was surprised by John's eagerness, and by Mary's [NP 0] too
       (Abney's 200a)
   c. Mary's examination of the papers lasted one hour, but Joe's [NP 0]
       lasted just a few minutes
   d. Mary's defense of the proposal came as a surprise but Joe's [NP 0]
       was expected

The contrast between (16) and (17) shows that NP ellipsis (standard N' deletion) is not possible with DP-gerunds even though it is grammatical with regular DPs. This seems unproblematic for Suzuki's analysis; the ungrammaticality of (16) can be attributed to the failure of the genitive subject to receive case from INFL, since the latter is missing. Abney, however, has no explanation to offer for the contrast. Contrary to Abney's claim, the absence of NP ellipsis in DP-gerunds cannot be due to the fact that event/fact nominals (among which DP-gerunds are certainly included) disallow NP ellipsis in general, since (17c/d) are grammatical.

Under the Nominal Head hypothesis, there is a very straightforward account of the contrast between (16)-(17).

Let us assume, as in Williams (1977), that null NPs are base-generated. Following Lobeck (1986, 1991), I assume that a null NP must obey the ECP and is licensed as an empty category because it is properly governed by 's in DET (at PF in my terms). Like all elements in a syntactic representation, a null NP must be interpreted (cf. Chomsky's 1986a Principle of Full Interpretation). According to Williams (1977), this is done via an interpretive rule (i.e. his Delta-Sub-f Interpretation rule) which copies some previous NP in the sentence/discourse in order to assign the relevant interpretation to an ellipted NP and applies to LF representations. This rule (which crucially has no access to PF, the level at which the nominal head ing is inserted) will fail to provide the ellipted NP with an appropriate interpretation on the assumption that the copied NP lacks a nominal head proper.

The preceding four characteristics of DP-gerunds are all predicted by the Nominal Head hypothesis in (7), but not by Suzuki's and Abney's proposals, which fail to predict at least two of them. In view of this, I conclude that the Nominal Head hypothesis for DP-gerunds is to be preferred. Its predictive power thus constitutes further evidence for the correctness of the late lexical insertion mechanism advocated by Emonds (1985, 1990) for English ing. I now turn to the analysis of the Basque morpheme te in its derivational use.

(5) Not surprisingly, Grimshaw (1990: ch.2) does not mention N'-deletion among the numerous tests distinguishing complex event nominals from result nominals, which roughly corresponds to Abney's fact/act nominals distinction.

(6) Although I have referred to the paradigm in (16)-(17) as NP ellipsis, the argument in favor of the Nominal Head hypothesis is independent of whether these empty NPs are actually base-generated or deleted by affect. If this second approach is taken, the argument can be formulated along the following lines: Let us trivially suppose that in order for affect α Chomsky (1981) to apply (at 5-S), α must be present in the representation; this is uncontroversial. Let us further assume that in order for α, α=XP, to be present, the head of α must be present (=X). Since the nominal head in (16) is in fact absent, it follows that deletion cannot proceed to the extent that the head of N is absent until PF [crucially affect α does not affect the PF component].
2.2. *te* in derived nominals

In this section I simply outline the characteristics of nominals derived from *te* which are relevant for the discussion here and which illustrate the true nominal character of these nouns. I have heavily relied on Goenaga’s (1984) and Ortiz de Urbina’s (1989) works on the subject, as well as on Eguzkitza’s (1992) general discussion on DPs in Basque. The second part of this section is devoted to showing that *te* derivation is in fact restricted to a semantic class that I will tentatively characterize as [+ACTIVITY].

2.2.1. Properties

a. The noun phrase status of *te*-derived nominals is indisputable. First, the internal structure of these nominals parallels that of other derived nominals and regular noun phrases. Both subjects and objects appear in the genitive case:

(18) a. Ainhoa-ren argazkia (picture noun)  
   The/a picture of Ainhoa  
   gen photo  

b. Ainhoa-ren etorrera (derived noun)  
   Ainhoa’s arrival  

   arrival  

c. Ainhoa-ren *etortzea* (te derived noun)  
   Ainhoa’s arrival  

   d. Berebila-ren erreketa (derived noun)  
   The burning of the/a car  

   car-gen burning  

e. Berebila-ren *erretzea* (te derived noun)  
   The burning of the/a car  

   According to Eguzkitza (1992), both subject and object genitives can occur inside nominals. This is also possible in *te*-derived nominals:

   manifestatzaileen berebilaren erreketa/erretzea  
   the demonstrator’s burning of the/a car  

   demonstratros-gen car-gen burning / burn-TE-art

   nominals may also be modified by adjectives:

   Ainhoa-ren ibiltze azkar hori itzel gustatzen zait  
   the quick walking of Ainhoa’s  

   -gen walk-TE quick that terrible like aux  

   like a lot that quick walking of Ainhoa’s

   Regular nominals, any PP modifier (whether complement or adjunct) postposition *ko* in order to occur as a DP internal element (cf. de Rijk analyzes *ko* as an adjective forming suffix):  

   The apparent counterexamples to this, with some adjuncts and adverbs, as noted by Goenaga, are not apparent, because they involve composition:

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VERBAL PROJECTIONS IN BASQUE AND MINIMAL STRUCTURE

(21) a. Ainhoa-ren gaurko etortzea / etorrera
   -gen today-KO come-TE-art arrival
   Ainhoa’s arrival “of today"
   b. Ainhoa gaur dator
   Ainhoa arrives today

d. Like regular nouns, nominals derived from te can be relativized (cf. Goenaga 1984) yielding a result reading:

(22) Aitoaari gustatzen zaion gidatze azkarra Alemanian ikusten da
     grandpa-D like aux-comp driving fast Germany-loc see aux
     (adapted from Goenaga 1984)
     The fast driving that grandpa likes can be seen in Germany

e. As noted by Goenaga (1984), and contrary to the situation in tensed clauses, scrambling of internal arguments within te-derived nominals and noun phrases in general is ungrammatical and the order is rather fixed:

(23) a. Ainhoa gaur etxera dator
     today home-adl comes
c. Gaur dator Ainhoa etxera
     "Ainhoa comes home today"

d. ... "Ainhoa’s coming/arrival "of to home" “of today”"

(24) a. Ainhoa-ren gaurko etxerako etortzea / etorrera
     -gen today-KO home-adl-KO come-TE-art/ arrival
   b. * Ainhoa-ren etortzea / etorrera gaurko etxerako
   c. * Gaurko etortzea / etorrera Ainhoaren etxerako8
   d. * ...

   "Ainhoa’s coming/arrival “of to home” “of today”"

i. Gurasoen Ondarrua-joatea [hyphen X.A.] Parents’ Ondarroa-going
   As for (i), the fact that Basque P(ostpositions) are bound morphemes entails that any P-V or P-N compound
   looks like PF-V or FP-N on the surface (cf. chapter one 1.2.2.1). That (i) is a compound can be shown because the (i)
   becomes ungrammatical if more than a single word is used for the P element:

   iii. *? Gurasoen etxe berrira-joatea
        Parents’ new house-going
   Crucially, ondarrua does not have referential value in (i) (this test is taken from Williams & DiSciullo 1987);
   (iv) is not a contradictory statement whereas (v), with a nominalized clause where Ondarrua is a PP, is:

   iv. Nekatuta nago gurasoen Ondarrua-joatearekin, Ondarrua sekula joan ez badira ere
        I’m tired of (my) parents’ Ondarroa-going, although they’ve never gone to Ondarroa
   v. (!!) Nekatuta nago gurasoak Ondarrua joatearekin, Ondarrua sekula joan ez badira ere
        I’m tired of my parents’ going to Ondarroa, although they’ve never gone to Ondarroa

   Finally, Goenaga himself gives one further argument: no wh-phrase can replace Ondarrua in (i), a result
   expected if it is indeed a member of a compound (and hence lacks referential value):

   vi. Gurasoen nora-joatea da herri ona ? Parents’ where-going is good news ?
   Similar considerations apply to (ii).

(8) Eguzkieta (1992) notes that in some cases an object may precede the subject:

   i. Cortazar-en Poe-ren itzulpena Cortazar’s translation of Poe
   ii. Poe-ren Cortazar-en itzulpena Poe’s translation by Cortazar

   In (ii) the implication is that there is more than one translation other than Cortazar’s. In any case, it seems that
   any further scrambling/movement beyond the object’s moving to spec(D) is not possible. Thus, Goenaga’s generali-
   zation is still valid to a large extent.
f. Extraction of any internal arguments from te-derived nominals and Basque DPs in general is impossible, most likely because they violate Ross's (1969) Left Branch Condition (or, ultimately the ECP)\(^9\):

\[(25) \begin{align*}
a. \text{* Noren espero du aitak [ t etortzea]} \ ? \\
    \text{whose expect aux father-E come-TE-art} \\
    \text{Whose does father expect [ t coming/arriving] ?} \\
    b. \text{* Noren espero du aitak [ t dirua]} ? \\
    \text{money} \\
    \text{Whose does father expect [ t money]?}
\end{align*}\]

However, the entire DP can be pied-piped to the matrix spec(C) position:

\[(26) \begin{align*}
a. \text{[Noren etortzea] espero du aitak t} \ ? \\
    \text{Whose coming/arriving does father expect ?} \\
    b. \text{[Noren dirua] espero du aitak t} ? \\
    \text{Whose money does father expect ?}
\end{align*}\]

In view of these six characteristics, I propose the following tree structure for te-derived nominals:

\[(27) \begin{array}{c}
\text{DP} \\
\text{SPEC} \\
\text{NP} \\
\text{SPEC} \\
\text{DP} \\
\text{XP} \\
\text{V} \\
\text{N}
\end{array}\]

\[\text{Manifestatzaileen (berebilaren) erre tze a (= (19))}\]

My contention is that the subject DP is assigned genitive case by DET, which, unlike in English (cf. (17) above), I take not to be a raising category in Basque, the same as INFL (cf. Koopman & Sportiche 1991).

2.2.2. Restrictions on te-derived nominals

Having outlined the main properties of te-derived nominals, I now take up the issue of the restriction on the verbs that may take te. At first sight, it appears as

\[\text{Definiteness Filter: a [+definite] DP must have one [-definite] element at S-\$}
\]

\[\text{Definiteness-raising: every [+definite] XP must be raised to [+definite] DP at LF}\]

\[\text{See Stowell (1989) for an ECP treatment of the LBC, and Suzuki (1988: 94), who reduces the LBC to the following Definiteness Principle:}\]

\[\text{i. Definiteness Filter: a [+definite] DP must have one [-definite] element at S-\$}\]

\[\text{ii. Definiteness-raising: every [+definite] XP must be raised to [+definite] DP at LF}\]
though just any verb may undergo te suffixation, especially if a derived nominal is impossible with other suffixes, very much like ing in English:

(28) a. Lagunen mendirako igoera/igotzea  
Friends-gen mountain-adl-KO climbing/climb-TE-art  
My friends’s climbing of the mountain
b. Lagunen ibilera/ ibiltzea  
walking/ walk-TE-art  
My friends’s walking
c. Arazoaren azalpena/ azaltzea  
problem-gen explanation/ explain-TE-art  
The explanation/ explaining of the problem

(29) a. Ainhoaren * mintrarena/ miintzatzea  
-gen speaktion / speak-TE-art  
Ainhoa’s “speaktion” / speaking
b. Umeen * euskaldunketa/ euskalduntzea  
Kids-gen Basque-learntion/ Basque-learn-TE-ing  
The kids’s Basque-“learntion” / Basque-learning
c. Abioiaren * lurrarpena/ lurrartzea  
Plane-gen landtion/ lan-TE-art  
The plane’s “landtion”/ landing

Nonetheless, when one tries to form derived nominals from stative and "psych" verbs, the results are far less felicitous:

(30) a. * Lagunen atzoko geratzea  
Friends-gen yesterday-KO stay-TE-art  
“My friends’ staying/remaining of yesterday”
b. * Lagunen mendiko egotea  
friends-gen mountain-KO stay-TE-art  
“My friends’ staying "of" at the mountain”  
(cf. Lagunen mendiko egotaldia)  
(cf. “My friends’ stay-time at the mountain”)
c. * Ainhoaren igandeko aspertzea  
-gen sunday-KO get-bored-TE-art  
“Ainhoa’s getting bored of Sunday”

(31) a. * Lagunen atzoko larritzea (cf. larrialdia)  
yesterday-KO get-upset-TE-art  
“My friends’ getting upset of yesterday”  
(cf. “My friends’ upset-time of yesterday”)  
b. ?? Umearen etengabeko beldurtzea/ikaratzea  
Kid-gen constant-KO fright/scare-TE-art  
The constant frightening/scaring of the kid”  
c. * Zurrumurruaren gurasoen lotsatzea  
rumor-gen parents-gen embarrass-TE-art  
The rumor’s embarrassing of my parents”

[51]
Although sporadic examples of te-derived nominals with stative/"psych" verbs might be found, the nature of the generalization is clear: activity oriented verbs freely form derived nominals with te, whereas other subclasses of verbs resist them. Therefore, I propose this provisional lexical entry for te:

\[(32) \text{te}, N, +V_\{V = [+ACTIVITY]\}\]

(32) simply states that te is morpheme of category N that attaches to verbal roots specified as activity verbs, a restriction akin to that found for English ing by Emonds (1990).

2.3. Nominalized clauses headed by te

2.3.1. Previous analyses

Based on their internal similarities to tensed clauses, Goenaga (1984) has proposed the following structure for nominalized clauses (NCs henceforth) of the type exemplified by (1b), repeated here as (33a):

\[(33) \]

\[a. \text{Herri batek hiritarrak alfabetatzea funtsezkoa da} \]
A given country's alphabetizing its citizens is fundamental

\[b. \text{Herri batek hiritarrak alfeta ditzan funtsezkoa da} \]
That a country alphabetizes its citizens is fundamental

\[(34) \]

\[a. \text{Ainhoa etxera etortzea...} \]
Ainhoa's coming home...

\[b. \text{S' \hspace{1cm} S' - COMP} \]

\[\text{S' \hspace{1cm} S' - COMP} \]

\[\text{NP \hspace{1cm} VP \hspace{1cm} INFL} \]

\[\text{Ainhoa \hspace{1cm} etxera \hspace{1cm} etor \hspace{1cm} tze a} \]

When the different postpositions (locative, ablative, ...) are attached to these NCs, he proposes that they occupy the COMP position:

\[(35) \]

\[a. \text{Nik [herri batek hiritarrak alfabetatzea] garrantzia ematen dio} \]
I give importance to a country's alphabetizing its citizens

\[b. \text{[Ainhoa etxera etortzean], denok irtengo gara} \]
[Upon Ainhoa's coming home], we will all leave...
c. [Ainhoa etxera etortzearekin] ez dugu ezer konpontzen
   come-TE-with no aux anything solve
   We don't solve anything [with Ainhoa's coming home]

d. ...

(36)

There exists in Basque a second type of NC headed by the morphemes \textit{tu/i/n} (the choice depending on each verb), for which Goenaga proposes the exact same structure. The only difference between the two NCs is aspectual according to him: \textit{te} is specified as [-perfect], whereas \textit{tu/i/n} are specified as [+perfect]

(37) Nik [Ainhoa etxera etorria] espero dut
    I-E home come-I-art expect aux
    "I expect [Ainhoa's having arrived home]"

(38)

Ortiz de Urbina (1989) basically follows Goenaga's intuitions a) that NCs are indeed CPs; b) that \textit{te} is a morpheme of category INFL; c) that the article and the relevant postpositions that attach are members of the category COMP as far as NCs are concerned (or at least they are generated under the COMP node):

(10) Goenaga argues that this difference mirrors the difference between the two morphemes when they function as aspect markers in periphrastic verb forms (cf. Artiagoitia 1991); he assumes these aspect markers originate in INFL and then cliticize onto the verb:
   i. Ainhoa etxera etor-tze-n da (= 'Ainhoa comes home')
   ii. Ainhoa etxera etor-i da (= 'Ainhoa has come home')

   Matters are more complex because \textit{te} must also take the locative postposition \textit{N} when functioning as aspect marker (a fact that Goenaga does not address). I will return to this in section 2.4 and, more extensively, in chapter four.
Ortiz de Urbina's analysis of NCs differs from his analysis of tensed CPs (cf. chapter one, section 1.3.5), where COMP precedes IP.

Ortiz de Urbina elaborates further on the clausal properties of NCs:

a. In contrast with te derived nominals (cf. (24)) and regular DPs, NCs admit scrambling of the internal elements, like tensed clauses:

(40) a. Ainhoa gaur etxera dator (= 23)  c. Etxera Ainhoa gaur dator
today home-adl comes  d. ...  
b. Gaur etxera Ainhoa dator

(41) a. [Ainhoa gaur etxera etortzea] harrigarria da
today home-adl come-TE-art surprising is  
b. [Gaur etxera Ainhoa etortzea] harrigarria da  
c. [Etxera Ainhoa gaur etortzea] harrigarria da  
d. *? [Gaur etortzea Ainhoa etxera] harrigarria da  
e. *? [etxera etortzea gaur Ainhoa] harrigarria da  
[Ainhoa's coming home today] is surprising

The sentences become very marginal if the scrambled phrases are to the right of the verb of the NC (cf. example (71) in chapter one); but the permutation of the elements when the verb is final is free.

b. The range of arguments and adjuncts licensed in NCs are exactly the same in NCs as in tensed CPs (and unlike in derived nominals (cf. 2.2.1.b/c above)):

(42) a. Ainhoa gaur azkar etxera dator
    fast
    Ainhoa comes home fast today

b. Ainhoa gaur azkar etxera etortzea
    Ainhoa's coming home fast today

cf. c. Ainhoaren gaur-ko etxera-ko etorrera azkarr-a\textsuperscript{11}
    Ainhoa's fast arrival "of" at home of today

(11) The only adjectives allowed in NCs are 
    \textit{huts} and \textit{soil}, which both translate as "mere, bare":

\[\text{\textit{huts}}\] and \[\text{\textit{soil}}\]
c. Wh-phrases are tolerated in NCs; NCs containing wh-elements usually pied-pipe the whole NC to a sentence initial position (matrix spec(C) in Ortiz de Urbina’s analysis), a phenomenon also found in tensed clauses in Basque:

(43) [Zu nora joango zarela]$_i$ erabaki du aitak ti ?
    you where go aux-comp decide aux father
    “That you will go where did father decide ?”

(44) [Zu nora joatea]$_i$ erabaki du aitak ti ?
    go-TE-art
    “Your going where did father decide ?”

This, according to Ortiz de Urbina, constitutes evidence that NCs do indeed have a spec(C) position. I will return to this in section 2.5.

d. Following ideas developed in Raposo (1987) (and stemming from Reuland 1983), Ortiz de Urbina 1989 claims that the case-marking of the subject of NCs by non-finite INFL (i.e. by $te$ in INFL) is possible a) because the IP itself is case-marked by some element in COMP (when the latter is occupied by some postposition); or b) because the entire CP is case-marked (for example when the article occupies the COMP position). Put differently, a non-finite INFL will assign case under government if it is itself governed (by a case-assigning postposition in COMP or by the article heading CP, the latter receiving case from outside). Since in the former case, the postpositions usually have DPs as sisters and presumably assign case to them, and since in the latter case NCs headed by the article can only be assigned case in the same positions as regular DPs, Ortiz de Urbina concludes that his analysis predicts that NCs (true CPs) will have the same distribution as DPs (i.e. as noun phrases), a statement which is descriptively correct:

(45) a. [[Astelehen]$_{DP}$-eanP]$_{PP}$ denok irtengo gara
    monday -loc all leave aux
    [Or. Monday] we will all leave

b. [[Ainhoa etxera etor-TZE]$_{IP}$ -[eanCOMP]$_{CP}$ denok irtengo gara
    home come-TE -loc all leave aux
    [Upon Ainhoa’s coming home] we will all leave

(46) a. Asierrek [ur-[aD]]-Ø nahi du
    -E water-art want aux
    Asier wants [(the) water]

b. Asierrek [[Ainhoa etxera etor-TZE]$_{IP}$ -[acOMP]$_{CP}$] nahi du
    -E home come-TE art want aux
    “Asier wants [Ainhoa’s coming home]”

i. [Ingalaterrara joate butakasozailak] ex du bermatzen inglessa ondo ikastea
   “The mere going to England does not warrant learning English well.”

This is an interesting restriction, also operative in Spanish nominalized infinitival clauses (cf. Plann 1981, and section 2.6), which can only be modified by the adjective mero “mere”. I assume, with Plana, that but/soil and mero (and possibly solo ‘only’ not discussed by her) are N-level adjectives that can modify a noun that is empty at S-S (these “grammatical” adjectives cannot be used predicatively, nor do they have any referential value).
2.3.2. Problems with previous analyses

Both Goenaga’s and Ortiz de Urbina’s analyses pose several problems for the theory of grammar and also face some empirical inadequacies. Their contention that NCs have internal sentential structure, although descriptively correct, dilutes any possibility of explaining in what sense these “clauses” are “nominalized” since, according to their claims, there is no nominal element. Furthermore, the alleged CP/S’ status of NCs force both authors to assume that articles and contentful postpositions may have different categorial status between DET/COMP and P/COMP depending on whether they take NPs/DPs complements or a te-headed IP. In fact, this latter construction is the only one which motivates this categorial duality:

\[(47) \quad \text{(cf. 46a)}\]
\[
\begin{array}{c}
\text{DP} \\
\text{NP} \\
\text{DET} \\
\text{N'} \\
\text{N} \\
\end{array} \quad \begin{array}{c}
\text{CP} \\
\text{IP} \\
\text{NP} \\
\text{I'} \\
\text{N} \\
\end{array}
\]

\[
\begin{array}{c}
\text{ur} \\
\text{-a} \\
\end{array} \quad \begin{array}{c}
\text{A. etxera} \\
\text{etor} \\
\text{tze} \\
\text{-a} \\
\end{array}
\]

water article home come TE art

\[(48) \quad \text{(cf. 45a)}\]
\[
\begin{array}{c}
\text{PP} \\
\text{DP} \\
\text{P} \\
\text{NP} \\
\text{DET} \\
\text{N'} \\
\text{N} \\
\end{array} \quad \begin{array}{c}
\text{CP} \\
\text{IP} \\
\text{NP} \\
\text{I'} \\
\text{N} \\
\end{array}
\]

\[
\begin{array}{c}
\text{astelhehe} \\
\text{-a} \\
\text{n} \\
\end{array} \quad \begin{array}{c}
\text{A. etxera} \\
\text{etor} \\
\text{tze} \\
\text{a-n}\text{13} \\
\end{array}
\]

\[
\text{monday loc} \quad \begin{array}{c}
\text{home} \\
\text{come TE loc} \\
\end{array}
\]

(12) Lexical items that have dual categorial status are not rare: in English that (COM and DET), and to (P and INFL) are good examples. Nonetheless, unlike the case at hand, the totally different complement system in either case warrants their duality: that has an IP or NP sister, and to takes DP or VP depending on the categorial status.

[56]
This redundancy is indeed suspect and it simply reveals the failure to properly characterize \textit{te} as a nominal element also when it occurs in NCs.

A second theory-internal objection to Ortiz de Urbina's (and Raposo's) proposal has to do with the case-assignment mechanism they propose. It is not clear why INFL should receive case and be governed in order to assign it in the first place. Given the unconstrained occurrences of \textit{te}, the affirmation that \textit{te} be governed and receive case seems vacuous, since \textit{te} seems to assign case by itself anyway; in other words, there does not seem to be any case in which \textit{te} is not governed and hence is unable to assign case. Furthermore, the assumptions regarding the case-marking in NCs are stipulative: in one instance IP receives case from a postposition in COMP, a somewhat unusual situation in UG. In the other instance, when the article occupies the COMP position, the CP itself receives case, but it is (mysteriously) transmitted down to \textit{te} in INFL.

Finally, on both theoretical and empirical grounds, the contention that Ortiz de Urbina's analysis predicts the DP distribution of NCs is somehow puzzling. Distribution has always been regarded as a criterion for constituency; if two constituents show exactly the same distribution but belong to different categories, and this is claimed to be a prediction of a given analysis, one has reason to believe that the premises of that analysis are questionable.

From now on, I intend to refocus the whole issue of NCs and propose several empirical tests to distinguish DPs from sentences in Basque. On this basis, it will become clear that nominalized clauses do indeed behave (as far as distribution goes) exactly as regular DPs, which is predicted if they have a nominal head. How internal sentential properties and external DP distribution is allowed in the grammar of Basque will be shown in section 2.4 to be another instantiation of a possibility available in UG.

### 2.3.3. Sentences vis-a-vis Determiner Phrases

There are at least five/six major tests specific to Basque which distinguish sentences and DPs:

a. DPs may bear the ergative marker \textit{k}, which is regarded among Basque generativists to be a reflection of the DP's being the subject at D-S (Levin (1983),

\begin{align*}
\text{(13) The locative singular is \textit{an}, but \textit{a} is considered to be the overt realization of the singular article, and \textit{n} the locative postposition proper. In other postpositions, there is no trace of the article (\textit{etxe-tik} 'from the house'; singular DET is zero). It is not clear why Goenaga does not represent (48b) as an instance of a CP (of the type represented in (47b) being a complement to COMP, since after all the postposition is singular:}
\end{align*}

\begin{align*}
\text{i. CP}\quad \text{CP}\quad \text{IP} \quad \text{C}
\end{align*}

\begin{align*}
\text{\textit{te} \quad \{a/\emptyset,[\text{sing}]\} n/\text{tik/\textit{tsi}/...}}
\end{align*}

This raises the question of what under his analysis is the source of the singular interpretation of the postpositions in (48b) in the absence of a determiner or a noun.
Eguzkitza 1986, Ortiz de Urbina 1989, Oyharçabal 1992) (i.e. subjects of both unergative and transitive verbs are marked ergative). Sentences, however, cannot be subjects of these two types of verbs:

(49) [Ainhoa-k] izugarri kezkatzen nau
    -E terrible worry aux
    Ainhoa worries me terribly

(50) a.* [Datorren urtean zer egin(-ek)] kezkatzen nau
    next year-loc what do (-E)
    What to do next year worries me

b.* [Ainhoa etor dadila(-k)] kezkatzen nau
    come aux-comp (-E)
    That Ainhoa may arrive worries me

NCs, on the other hand, can be subjects of transitive and unergative verbs and bear ergative case:

(51) [Ainhoa etortzeak] kezkatzen nau
    arrive-TE-E
    Ainhoa’s arriving worries me

The failure of sentences to be subjects of transitives is accounted for by the rule of ergative insertion given in chapter one. Assuming with Emonds (1985) that sentential subjects are dominated at D-S by a DP node with an empty D (and N), the obligatory placement of the ergative morpheme on a lexical D-S subject is violated if a sentence bears no ergative marker. If a sentential subject does have the ergative morpheme, then the insertion conditions of the ergative morpheme itself (and ultimately, the Projection Principle) are violated, since the former can only be inserted in the context +D_ (and not +C_, +I_).

b. Sentential subjects are possible in Basque with unaccusatives and copulatives verbs. But in this case, they are incompatible with wh-movement of a complement unless they are extraposed, a phenomenon well-known in English (Ross 1967, Emonds 1976, 1985, Koster 1978, Stowell 1981):

(52) a. [Garagardoa] beharrezkoa da nire ustez
    beer necessary is I-gen opinion-inst
    Beer is necessary in my opinion

(14) Ortiz de Urbina (1989) assumes that the complementizer la originates in a pre-IP position and then cliticizes onto INFL. He then ascribes the ungrammaticality of (50b) and similar examples to the fact that no-government for the empty COMP is available for sentential subjects (Chomsky’s 1986b ECP is assumed). This predicts that la-headed CPs could not be adjuncts, which is not correct, since these can be modal or temporal modifiers:

i. Erxe kentorrela, Ainhoa ikusi dut
   home-abl come-LA see aux
   As I was coming from home, I’ve seen Ainhoa

ii. Mahaia hormari deutsala urzi dugu
   wall-D attach-LA leave aux
   We left the table attached “as it is attaching” to the wall.

If this proposal is recast in terms of head-government (required for empty complementizers according to Stowell 1981 and Aoun et al. 1987), it predicts that la-headed CPs should be excluded from sentential subjects (where that-deletion occurs in English). The prediction is incorrect too:

iii. It’s true [that/*0 Mary has arrived]

iv. [That/*0 Mary has arrived] is true

v. Egia da [Miren heldu dela] (= iii)

vi. [Miren heldu dela] egia da (= iv)
b. Noren ustez da [garagardoa] beharrezkoa?
   whose

c. Noren ustez da beharrezkoa [garagardoa]?
   In whose opinion is beer necessary?

(53) a. [Ainhoak garagardoa ekar dezala] beharrezkoa da nire ustez
   beer bring aux-comp necessary is
   That Ainhoa bring beer is necessary in my opinion

b.* Noren ustez da [Ainhoak garagardoa ekar dezala] beharrezkoa?
   In whose opinion is that Ainhoa bring beer necessary?

c. Noren ustez da beharrezkoa [Ainhoak garagardoa ekar dezala]?
   In whose opinion is it necessary that Ainhoa bring beer?

In this regard, NCs behave like DPs:

(54) a. [Ainhoak garagardoa ekartzea] beharrezkoa da nire ustez
   beer bring-TE-art necessary is
   Ainhoa’s bringing beer is necessary in my opinion

b. Noren ustez da [Ainhoak garagardoa ekartzea] beharrezkoa?
   In whose opinion is Ainhoa’s bringing beer necessary?

c. Sentences cannot coordinate with DPs:

(55) a.*Lehendakariak [presoen askapena] eta [governuak suetena
   prisoners-gen liberation and government-E cease-fire
   negoziatu dezala] eskatu du
   negotiate aux-comp demanded aux
   The president demanded the liberation of the prisoners and that the
   government negotiate a cease-fire

b.*Lehendakariak [hurrengo batzarraren lekua] eta [hauteskundeak
   next meeting-gen place and elections
   noizko deitu] aipatu du
   when call mention aux
   The president mentioned the place of the next meeting and when to call
   elections

NCs cannot coordinate with embedded CPs, but they can coordinate with DPs:

(56) *Lehendariak aipatu du/ditu [governuak suerena
   mention aux-sg-obj/pl-obj government-E cease-fire
   negoziatuko duela] eta [presoak aske uztea]
   negotiate aux-comp and prisoners free set-TE-art
   The president mentioned that the government will negotiate a cease-fire
   and letting the prisoners free

(57) Lehendakariak aipatu ditu [presoen askapena] eta [governuak
   mention aux prisoners-gen liberation and government
   suetena negoziatzea]
   cease-fire negotiate-TE-a
The president mentioned the liberation of the prisoners and the
government's negotiating a cease-fire.

d. Coordinating two singular DPs usually triggers plural agreement on the verb. Coordination of sentences does not trigger plural agreement:

(58) Hiru aldeek [presoen askapena] eta [indarkeriaren amaiera] three parties-E prisoners-gen liberation violence end aipatu dituzte
mention aux-pl-obj
The three parties have mentioned the liberation of the prisoners and the
end of violence.

(59) * Hiru aldeek [suetena noiz hasi] eta [presoak noiz askatu] cease-fire when start prisoners when free eztabidatu dituzte discuss aux-pl-obj
The three parties have discussed when to start the cease-fire and when to free the prisoners.

NCs follow DPs in this respect:

The three parties have mentioned /discussed freeing the prisoners and putting down the weapons.

e. Standard generative work on Basque by de Rijk (1972) shows that [-definite] object DPs (and unaccusative subject DPs) surface with the partitive marker (r)ik in a number of contexts: yes/no questions, negative sentences, conditional sentences, polarity items (nekez 'hardly', soilik/bakarrik 'only') and affected predicates in the sense of Klima (1964). De Rijk derives "partitive case assignment" transformationally from the corresponding neutral sentence with the indefinite article:

(61) a. Dirua nahi dut money-art want aux I want the/0 money
b. Dirurik nahi al duzu ? money-part int (yes/no question)
   Do you want money ?

   c. Ez dut dirurik nahi (negation) d. Dirurik nahi baduzu, ...(conditional)
   no If you want money...
       I don't want any money

e. Zuk bakarrik ohos-tu-ko zenuke besteen dirurik you-E only steal aux others-gen
   Only you would steal other people's money

(15) Presently, I am not totally convinced of the strength of this argument based on the distribution of the partitive morpheme because of the high degree of variation in the judgements (see (66) below in the text). However, the existence of at least five other arguments sufficiently supports the point I make in this section.
f. Nekez lortuko duzu *dirurik*  
   hardly get aux money-part

g. Sinesgaitza da zuk *dirurik* nahi izatea  
   Unbelievable is you-E want-TE-art
   Your wanting money is surprising

The descriptive generalization about the partitive morpheme in [-definite] DPs is that it has to be c-commanded by a negative operator or an affective predicate. Many of these c-commanding elements seem to be in spec(I) (cf. chapter one, 1.3.3.) after the application of move α. This is certainly true of *zuk bakarrik* ‘you only’, *nekez* ‘hardly’ and *sinesgaitza* ‘unbelievable’, as can be seen by contrasting (61d-g) with the following ungrammatical examples where the elements that c-command the partitive DP are not immediately followed by the verb:

(61) a. *Zuk bakarrik dirurik ohos-tu-ko zenuke* (cf.(61e))
(62) b. *Nekez dirurik lor-tu-ko duzu* (cf.(61f))
(63) c. *Sinegaitza zuk dirurik nahi izatea da* (cf. (61g))

A similar case can be made for conditionals (the verb moves to COMP). In the spirit of de Rijk, I will take this observation as sufficient evidence that lexical insertion of the indefinite article is post-transformational. In other words, a [-definite, +singular] determiner in Basque remains empty until after S-S; depending on the scope relations at S-S, [D 0] will be realized as *a* or *rik*:

(65) a. D, [-definite, +sing] → *rik*  
   If c-commanded by a negative or affective operator
b. D, [-definite, +sing] → *a*

Tensed clauses, on the other hand, may surface with the negative complementizer *nik* ‘that’, studied by Laka (1990) (and more recently by Uribe-erxebarría 1994); this complementizer is undoubtedly related to the partitive morpheme (*r)ik*. Nonetheless, tensed CPs headed by the negative complementizer *nik* are restricted to negative contexts and are often excluded in contexts where partitive DPs are not:

(66) a. *Zuek etor zaitezten nahi dut*  
   You come aux-comp want aux  
   “I want that you come along”
   b. *Gu etorriko garenik uste baduzu,...*  
   we come aux-comp think if-aux  
   “If you think that we will come along...”

(16) CPs headed by the negative complementizer are also possible in contexts where doubt is expressed, as Laka remarks in a footnote citing an example from Alberde (1929). But this use is also subsumed under the ‘negative complementizer’ account according to her. De Rijk (1972: 170) has the following example, where the negative complementizer is used in a yes/no question:

(i) *Uste tal dezute dirua nik ostu dedaNIK ?*
   Do you think that I have stolen the money?

(i), however, is not a genuine yes/no question, but rather expresses amazement and puzzlement on the part of the speaker that his/her audience might actually believe that the speaker stole the money. In no case can (i) be a question about the beliefs of the audience; it rather translates as “you really think that I stole the money?”.
Nominalized clauses, on the other hand, may take the partitive case morpheme \[(r)ik\] in the same contexts DPs do\(^{17}\):

\[(67)\]

a. Ainhoa etortzea nahi dut  
    come-TE-a  
    “I want Ainhoa’s coming along”

b. Ez dut Ainhoa etortzerik nahi  
    “I don’t want Ainhoa’s coming along”

c. Ainhoa etortzerik nahi duzu ?  
    “Do you want Ainhoa’s coming along ?”

d. Ainhoa etortzerik zuk bakarrik aipatu duzu  
    you-E only mention aux  
    “Only you have mentioned Ainhoa’s coming along”

e. Nekez lor dezake inork Ainhoa etortzerik  
    hardly achieve aux anybody  
    “Hardly anybody can achieve Ainhoa’s coming along”

f. Sinesgaitza da zuk Ainhoa etortzerik nahi izatea  
    unbelievable is you-E want aux-TE  
    “Your wanting Ainhoa’s coming along is unbelievable”

These data clearly show that Nominalized Clauses are indeed dominated by a DP node.

f. Finally, DPs may be a complement to all members of category P in Basque. CPs headed by la can only occur with the postposition ko (which attaches to both DPs and PPs)\(^{18}\); CPs headed by the complementizer n, used in indirect questions

(17) Admittedly, the partitive seems optional in NCs, whereas it is for most part obligatory in regulars DPs.

(18) In some dialects, la may show up followed by the partitive morpheme la+rik when it is a temporal or modal adjunct clause:

i. Etxetik nentorrelarik, Ainhoa ikusi dut (cf. (i) in footnote (14))

It is not clear whether larik is a separate complementizer.
and relative clauses, may take some of the Ps that attach to DP: locative, ablative, instrumental, destinative:

(68)  a. Ainhoa etorri deN-ean...  b. Ainhoa etorri deN-etik...
      arrive aux-N-loc               aux-N-abl
When Ainhoa has arrived...
      Since Ainhoa arrived...
c. Ainhoa etorri deN-ez...
      Since/because Ainhoa
has arrived...
d. Ainhoa etorri deN-erako...
      aux-N-dest
          By the time Ainhoa has arrived...

It is very plausible that (68a,b,d) should be analyzed as headless relative clauses with an empty head noun; nez, on the other hand, has been lexicalized as an independent complementizer. I will not pursue this claim here although I believe there is evidence which show this is the correct approach. I will simply note that, regardless of (68) and unlike CPs headed by la, NCs may be complements to all members of category P in Basque without any restriction (cf. Emonds 1976 for a similar situation with English gerunds). This further supports the claim that nominalized clauses are indeed dominated by a DP node.

In view of these six empirical tests, I conclude that NCs are indeed dominated by a DP node. This, far from being a definitive solution by itself, simply reformulates the problem in its true terms: NCs are DPs but have internal sentential structure. In the following section, I will reconcile these two properties in the light of the proposal advanced for English in section 2.1.

2.4. Nominalized clauses as DP-s

One of the basic tenets of the proponents of the DP hypothesis which has been central to the characterization of functional categories (Fukui & Speas 1986, Abney 1987, Speas 1990) is that the latter differ from lexical categories in that they uniquely have the same XP as their complement. It is in this sense that Grimshaw (1991) refers to CP, IP and DP as the "extended projections" of IP (ultimately VP), VP and NP respectively. Hence I propose to analyze Basque NCs as DPs whose complement is an NP headed by the nominal element te. Since, unlike the case of derived nominals, the insertion of te is not constrained by any purely semantic feature such as ACTIVITY, it follows from the theory outlined in section 2.2.1 that te will be subject to late insertion and hence will not be present until PF:

(19) The evidence is that true headless relative clauses are similar to (68):
   i. Ni heldu naizeN orduAN ez zegoen inor bulegoan ii. Ni heldu naizeNeAN idazkaria zegoen
      At the time I arrived, there was nobody at the office At the [one] I arrived, the secretary was (there)
   Morphological evidence aside, one might argue that (68a) requires no context to be interpreted as a temporal clause. In that case, of course, one would have to say that NEAN has become lexicalized and is a complementizer by itself. This claim would further strengthen the point I am making, since we would no longer consider it a sequence of N (complementizer) followed by the locative Postposition.
This proposal captures the notion that te is invariably a morpheme of category N, a desirable consequence. It also predicts that late insertion of te will result in the verb's being the dominant head, the L-head as defined in chapter one (section 1.2.3.), which is correct. In view of the contrast between NCs with te and with tul/in (cf. (37)), I propose that these morphemes, when subject to late lexical insertion, bear the syntactic feature [aspect, -/+completed] respectively20 (the latter being the marked value):

\[
(70) \quad \begin{align*}
\text{a. } & \text{te}, \text{N, } +V_\{([V:+\text{ACTIVITY}) \text{N=}] [-\text{completed}] \} \\
\text{b. } & \text{nl}=i\text{tu}, \text{N, } +V_\{[+\text{completed}], +\}
\end{align*}
\]

(20) See Zagona (1989) for arguments that [+/-completed] rather than [+/-perfective] is the adequate feature.

(21) The perfective morphemes also form derived nominals (cf. ch. three), but this is irrelevant at this point.
2.4.1. Alternative DP analyses

In a footnote, Ortiz de Urbina (1989: 201-2) credits I. Laka for suggesting a structure of Basque NCs similar to the one proposed by Suzuki (1988) for English:

(71) DP
   | IP
   | D
   | I
   | te

This is also suggested by Elordieta (1990). I believe this Suzuki-style proposal undermines the notion that nominalized clauses and English gerunds are nominal. Leaving aside the fact that the licensing of IP as complement to DET requires some argumentation which Suzuki does not provide, it makes the DP hypothesis vacuous since the DP hypothesis was meant to capture *inter alia* the necessary relation between the functional head DET and a lexical head N in the first place. In other words, a Suzuki-style proposal, besides missing some generalizations about the nature and use of *ing* (and ultimately *te*), simply describes that gerunds have a DP external distribution and internal sentential structure. But by no means does it predict/explain why this should be so. The Nominal Head hypothesis, on the other hand, predicts that if a language has a nominal morpheme (which subcategorizes as +V) that is subject to late lexical insertion, not constrained by a purely semantic feature and not restricted to any subclass of verbs, it will have a nominalized clause of the type represented by English DP-gerunds and Basque NCs, with external noun phrase distribution and internal sentential structure. This is true of a wide range of unrelated languages: English *ing*, Basque *te*, Romance infinitives headed by articles derived by zero-suffixation (Spanish, Portuguese, Italian) (cf. Plann 1981, Salv 1982), Turkish *dik*, *yecék* and *me* (Esen 1973, George & Kornfilt 1981), and Quechua *sq'a* and *na* (Muyssken & Lefebvre 1988, Muyssken 1989).

In the next subsections I look into the possibility that the assignment of "clausal" (i.e. absolutive/ergative) case to the subject of NCs may depend on the movement of [V-N] to DET. Irrespective of this, it will become clear that the INFL-like element present in NCs is the determiner itself (the article), rather than the nominalizing suffix.

2.4.2. The case of lexical subjects

Despite some cases of obligatory control not to be discussed here, nominalized DP clauses in Basque may usually have lexical subjects when they occur in argument positions and as complements to Ps:

(22) Suzuki acknowledges that his proposal predicts that NPs may be complements to Comp, which is unattested (Grimshaw 1991). My understanding is that nothing in his framework prevents CP-D, VP-D, or VP-C combinations, etc.

(23) It appears that the morpheme must also exist in the language as derivational. This is certainly the case in Romance, English, Basque and, apparently, Turkish (Sebaktin 1971) and Quechua (Costa 1972).

(24) Notoriously, purposive clauses headed by the adative postposition RA when they occur with motion verbs:
(72)  a. \([Ainboak bibolina jotzeak]\)  
    harritzen nau
    -E violin play-TE-art-E surprise aux
    Ainhoa’s playing the violin amazes me
  
  b. Auzokoek ez deritzote ondo \([Ainboak bibolina jotzeari]\)
    Neighbors no opine well TE-D
    The neighbors don’t approve [dative] of Ainhoa’s playing the violin
  
  c. Giroa baretu egin zen \([Ainboak bibolina jotzean]\)
    Atmosphere ease aux TE-loc
    The atmosphere eased upon Ainhoa’s playing the violin
  
  d. \([Ainboak bibolina jotzaagatik] \) ez da ezer konpontzen
    TE-mot no aux anything solves
    Nothing is solved because of Ainhoa’s playing the violin
  
  e. Jende asko \([Ainboak bibolina jotzeaz]\) harritzen da
    people many TE-inst amaze is
    Many people are amazed [instrumental] at Ainhoa’s playing the violin

As pointed out in section 2.3, (DP) subjects of unergative and transitive verbs (in the sense of Burzio 1986) bear the ergative morpheme \(k\) (“ergative case” in traditional terms), whereas subjects of unaccusatives bear no marker whatsoever (“absolutive case”), a fact that it is standard to assume reflects the subject’s D-S position. My point of departure is what I consider the null hypothesis: whatever makes case-marking possible in tensed clauses must also be present in NCs. If, by assumption (AGR in) INFL assigns case in tensed sentences by government, then INFL or an INFL-like element must be present in NCs. I will show that this is the case in Basque “clausal” DPs when they are headed by the article (but not otherwise).

2.4.2.1. Arguments for the presence of an INFL-like element inside NCs

a. In Basque, gapping of the verb seems to be dependent on its being moved to (or associated with) INFL; gapping of V alone or INFL alone renders sentences fairly deviant, as is in fact also the case in English\(^\text{25}\):

i. \([e \text{ (?? zuk) filmea ikustera}]\) joan gara
   \(\text{We went \[to } e \text{ (you) see a movie\]}\)
   And also verbs like debekatu ‘forbid’, behartu ‘force’, utzi ‘quit’, ekin ‘engage in same activity’, etc. Interestingly enough, Salaburu (1984) considers the following sentence “grammatical” but pragmatically odd:

ii. Joni eta Miren debekatu diet \([\text{semeek elkar ikustea}]\)
   \(I \text{ forbid Jon and Miren \[their sons’ seeing each other\]}\)
   He also suggests that the empty subjects in NCs may be \(pro\), a position implicitly adopted in Goenaga (1984). This would amount to saying that these instances of obligatory control are in fact \(pro\) control. Ortiz de Urbina also entertains this possibility (and the problems it poses) as well as the alternative that both subject and object gaps are variables bound by empty operators (cf. Huang 1984, 1989). I will not pursue this matter here. As for verbal projections headed by \(te-n\) (\(te\) followed by the locative P) I argue in Artiagoitia (1991) and chapter four that they have a different structure altogether, similar to English bare “VPs” (cf. Emonds 1985: ch.2).

\(25\) I assume that all forms of the reconstructed modal auxiliary verb *ezan (e.g. lezake in the example (73)) are mere spellouts of INFL, unlike the forms of \(ukan\) ‘to have’ and \(izan\) ‘to be’, which are main verbs. Cf. chapter four, section 4.1. Recall also from chapter one that a finite INFL moves to COMP in the unmarked (verb final) word order.
(73)  

a. Ainhoak ardoa *ekar lezake eta Asierrek INFLi patxarana *[v 0] [c [i 0]],
wine bring aux and patxaran
Ainhoa could bring wine and Asier patxaran

In (73a) both V and INFL (in COMP) are gapped and the sentence is grammatical. (73b), where only INFL has gapped, is marginal (although the judgements may vary); in (73c), on the other hand, the verb alone has gapped and the sentence turns out to be ungrammatical. Let us now consider the situation in tenseless (indirect) questions:

(74)  

a. Erabaki dugu *nori [Iv emani] diskoa Vi eta *nori [Iv emani] liburua Vi
decide aux who-D give disk and who-D give book
We have decided who to give the record to and who to give the book to

Unlike in tensed clauses, in tenseless indirect questions like (74), the wh-phrase/verb adjacency is not obligatory, as pointed out by Laka & Uriagereka (1987). This is a consequence of the fact that V-to-I movement is optional for non-finite clauses (cf. Pollock 1989a). As in chapter one, I assume wh-phrases move first to spec(I) and then further to spec(C) in order to satisfy the [+WH] subcategorization requirement of the governing verb (cf. chapter one, 1.3.4). Gapping in (74b) is possible because the verb has moved to INFL and acts as in tensed clause (it may assign the f-feature [+operator]); as a result, it is adjacent to the wh-phrase. Gapping is not possible in (74d) (derived from (73c)) because the gapped verb is standing by itself and no movement to empty INFL has taken place.

That NCs allow gapping of the verb-to-article sequence suggests some INFL-like element is involved:

(75)  

A: Zer erabaki duzue?
What have you decided (on)?
B1: Ainhoak ardoa ekartzea eta Asierrek parxarana ekartzea
wine bring-TE-art and patxaran
Ainhoa's bringing wine and Asier's bringing patxaran

b. Possessive anaphors (extensively studied by Rebuschi 1984, 1985) in Old Basque and in some northeastern dialects require a clausemate DP antecedent that is
marked ergative, absolutive, or dative; that is to say, the three DPs that participate in agreement with INFL:

(76) a. * Pelloki [berei emaztea hildela] esan du  
Pello-E his own wife die aux-comp say aux  
Pello has said that his own wife has died  
b. Pellori [berei emaztea hilaio]  
Pello-D his own wife die aux  
His own wife has died on Pello [dative]  
c. Pelloki [berei emaztea maite du]  
Pello-E his own wife love aux  
Pello loves his own wife  
d. *Berei emaztea Pellorekini haserretu da  
his own wife Pello-with get-angry aux  
His own wife has gotten mad at Pello [commitative]

Remarkably, similar effects obtain in NCs:

(77) a. * Pelloki [berei emaztea Donostian geratzea] nahi du  
San Sebastian stay-TE-art want aux  
"Pello wants his own wife's staying in St. Sebastian  
b. Tamalgarria da [Pellori [berei emaztea hilitzea]]  
Regrettable is Pello-D his own wife die-TE-art  
His own wife's dying on Pello is terrible  
c. Normala da [Pelloki [berei emaztea maitatzea]]  
normal is Pello-E his own wife love-TE-art  
Pello's loving his own wife is normal  
d. *Tamalgarria da [berei emaztea Pellorekini haserretzea]  
regrettable is his own wife Pello-com get-angry-TE-art  
His own wife's getting mad at Pello is terrible

If the agreement process between dative, absolutive and ergative DPs and INFL is what makes them possible antecedents for the possessive anaphors, some INFL-like element must be present in NCs.

c. Zagona (1991) has argued that the availability of a present moment reading for simple present tenses is dependent on the verb's raising to INFL. In English, the simple present cannot have a present moment interpretation because INFL lowers to V, just the opposite of what happens in Spanish. In Zagona's framework, 'times' are expressed syntactically as temporal arguments of a clause. INFL has a temporal 0-grid; it assigns a temporal role to its complement VP, and a temporal role to the external argument, the Speech time (= T), which she assumes must move to spec(C) for its grammatical licensing. Present moment interpretations of the present tense arise from the possibility of satisfying Principle A of Chomsky's (1986a) Binding
Theory\textsuperscript{26}: the external temporal argument binds the internal argument in its Minimal Governing Category (MGC). Assuming that the internal temporal argument VP inherits a temporal coindex from its head V, the Minimal Governing Category for V+INFL in a V-raising language like Spanish containing (V+INFL) and a governor for (COMP) is CP. Since CP contains the temporal subject in spec(C), VP can satisfy Principle A of Binding Theory and a present moment reading is available. In I-lowering languages like English, the MGC for V+INFL is IP, which does not contain the temporal subject. Hence no present moment reading is available for English simple present tenses:

(78) a. \[[\text{CP} T_i \text{[IP María [INFL+V canta]] [VP e; ] ]}]\]
    MGC for INFL+V\textsubscript{j} is CP; T\textsubscript{i} binds INFL+V\textsubscript{j}

b. \[[\text{CP} T_i \text{[IP Mary INFL [VP [V+INFL sings; ] ]]]}\]
    MGC for V+INFL\textsubscript{j} is IP; T\textsubscript{i} doesn’t bind INFL+V\textsubscript{j} in its MGC

Basque simple present tenses do have a present moment interpretation as a result of V-to-I movement (which lends support to the correctness of Zagona’s approach; cf. chapter four, 4.1.2):

(79) Ainhoa erxeta (omen) dator (*omen)
    home apparently comes
    Ainhoa is apparently coming home

A potentially interesting test for Zagona’s analysis comes from English gerunds. DP-gerunds should be temporally interpreted with respect to the matrix verb tense when functioning as complements (cf. Hornstein 1990), but nothing prevents them from having their “independent” tense, if they are in subject position. This is not possible on general grounds because gerunds lack an INFL node proper that could assign an external temporal argument (cf. 2.1)\textsuperscript{27}:

(80) a. Mary’s singing La Traviata may turn out to be a success/ sounds like a good idea/ caused a protest yesterday
    b. A: What is Mary doing?
    B: She is singing La Traviata right now
    A: * [Mary’s singing La Traviata right now] is surprising
    (cf.c. That Mary is singing La Traviata right now is surprising)

Basque NCs, on the other hand, may have a present moment reading provided they are in subject position:

(81) a. A: Zertan dabil Ainhoa? B: Oraintxe bertan kantatzen dabil
    What is Ainhoa doing? now right singing walks
    She is singing right now
    A: Ba [(Ainhoak) oraintxe bertan kantatzea] harrigatria da
    well sing-TE-art surprising is
    Well, (Ainhoa’s) singing right now is surprising

(27) Cf. Hornstein (1990), who states that gerunds lack the S(peech time) point.
This supports the notion that some INFL-like element is present in Basque clausal DPs, which makes it possible for these constituents to have a V-to-I-like situation. The argument can be construed as follows: let us assume that the temporal subject in Basque moves to spec(I) for its grammatical licensing instead to spec(C) as in English or Spanish, and that the functional head DET can assign a temporal role to NP in a nominalization when a verb is the L-head of NP (N is zero until after S-S by late lexical insertion). If we grant for the time being that the \([N V-N]\) head moves up to DET in a nominalized clause (the article is a bound morpheme), the MGC for the verb of the nominalized clause in subject position will be IP: it contains the DP-clause with the verb as the only lexically realized head in DET (the indefinite article is not inserted until after S-S as we just saw in 2.3.3.e above), and a governor of DP, namely INFL itself. IP contains the external temporal argument, which can bind the temporal index of the nominalized verb in DET within its MGC; thus we obtain a present moment interpretation of the DP-clause:

\[(82)\]

\[
\text{CP} \quad \text{C'} \quad \text{C} \\
\quad \text{I/P} \quad \text{I'} \\
\quad \text{Ti} \quad \text{I'} \\
\quad \text{INFL} \quad \text{VP} \quad \text{V} \quad \text{AP} \\
\quad \text{DP} \quad \text{[N V-N]} \text{xD}j \quad \text{V} \quad \text{NP} \quad \text{Nx} \\
\quad \text{e Ainhoak oraintxe bertan kanta-Ø-Ø} \quad \text{kantatzoa in PF} \quad \text{V} \quad \text{e harrigarria da} \\
\]

It should be noted that even if English DET (as in (7)) is taken to be an INFL-like element, there is no \([V-N]\) to D movement anyway, which would license a present moment reading for the gerund in subject position. Nothing can possibly trigger it given that the article is not a bound morpheme.

2.4.2.2. INFL-like element = DET

There are two clear candidates for the INFL-like element in Basque NCs: the suffix \(te\) and the determiner. Regarding \(te\) as the INFL-like element would be in keeping with Suzuki’s and Goenaga/Ortiz de Urbina’s analyses and would seem to

(28) Another alternative is to assume that the temporal subject is in spec(C) as proposed by Zagona, and that the closest governor for the verb in the nominalized clause in subject position is COMP, and not INFL, since INFL moves to COMP (a case of substitution) in the unmarked word order.
undermine the proposal we have made here since we would be forced to assume that te, a morpheme of category N, retains INFLectional properties. I will suggest instead that DET (i.e. the article) is the INFL-like element.

Nominalized DP clauses may take determiners other than the article a]; these include the demonstratives hau ‘this’, hori ‘that’, which differ from the article in that they are not suffixes but independent words:29

(83) a. Batetik bestera ibiltze hau zorakeria hutsa da  
   one-abl other-adl walk-TE this-craziness pure is  
   This going from here to there is crazy
b. Egunero patxarana edaten ibiltze horrek ez dizu onik ekarriko  
   Every day drinking walk-TE this-E no aux good bring  
   “This being drinking patxaran every day won’t do you any good”

(84) a. Batetik bestera ibiltzea zorakeria hutsa da  
   one-abl other-adl walk-TE-art craziness pure is  
   Going from here to there is crazy
b. Egunero patxarana edaten ibiltzeak ez dizu onik ekarriko  
   walk-TE-art-E  
   “Being drinking patxaran every day won’t do you any good”

As we have seen elsewhere in this chapter, the article also differs from the demonstratives in that it may be indistinctively be specified as [+/-definite]. As de Rijk (1972) shows, [-definite] DPs surface with (shift to) the partitive morpheme in certain contexts (cf. section 2.3.3 above), e.g. when c-commanded by negation. DPs headed by demonstratives never do:

(85) a. Ainhoak dirua ekarri du ([+/-definite])  
   money-art bring aux  
   Ainhoa has brought the money/ money
b. Ainhoak ez du dirua ekarri ([+definite]/ *[+def])  
   Ainhoa has not brought the money
c. Ainhoak ez du dirurik ekarri (*[+def]/ [-def])  
   Ainhoa has not brought (any) money

(86) a. Ainhoak diru bau/bori ekarri du  
   Ainhoa has brought this/that money
b. Ainhoak ez du diru bau/bori ekarri  
   Ainhoa has not brought this/that money
c. * Ainhoak ez du diru baurik/boriik ekarri  
   Ainhoa has not brought any (of) this/that money

(29) But not hura ‘that over there’ according to Goenaga (1984: 87):
   i. * [Mendira joate hura] erabaki genuen  
      mountain-adl go-TE that decide aux  
      We decided (on) that going hiking
   I agree with the judgement; however, I do think that NCs headed by HURA are acceptable in the appropriate contexts:
   ii. [Mendira elurretan barrena joate hark] txikitu gintuen  
       That going hiking in the snow killed us (hark = hura-E)
NCs headed by the article behave as [-definite] in this respect, since they alternate with the partitive morpheme (cf. section 2.3.3.e):

(87) a. Dirua ekartzea lortu dugu
money bring-TE-art achieve aux
“We have achieved bringing (the) money”
We have succeeded in bringing (the) money
b. Ez dugu lortu dirua ekartzerik
“We have not achieved (any?) bringing (the) money
We have not succeeded in (any?) bringing (the) money [cf. also c.
Ez dugu lortu dirua ekartzea]

I have assumed that de Rijk’s transformational treatment of partitive assignment to [-definite] DPs is best interpreted as implying that the [-definite] article (whether its realization is a or (r)ik) is not present until PF since its lexical insertion is only possible post-transformationally: a or (r)ik are not inserted under a [-definite] DET until move has applied.

If this is so, we obtain two different S-S representations for NCs depending on whether they are headed by the article or demonstratives:

(88) a. 

\[
\begin{array}{c}
\text{DP} \\
\text{SPEC(D)} \\
\text{D'} \\
\text{NP} \\
\text{SPEC(N)} \\
\text{N'} \\
\text{DP} \\
\text{(XP)} \\
\text{V} \\
\text{N} \\
\emptyset \\
\emptyset \\
\rightarrow
\end{array}
\]

b. 

\[
\begin{array}{c}
\text{DP} \\
\text{SPEC(D)} \\
\text{D'} \\
\text{NP} \\
\text{SPEC(N)} \\
\text{N'} \\
\text{DP} \\
\text{(XP)} \\
\text{N_i} \\
\rightarrow \text{(to-a in PF)} \\
\rightarrow \text{(to-rik in PF)}
\end{array}
\]
Head-movement of the base-generated [V-N] head in (88) is triggered by the lexical entry of the article, which is a suffix. Given the definition of L-head in chapter one, repeated here for convenience:

\[(90) \textit{L(exical)-head: The L(exical) head of } X^0 \textit{ is the rightmost lexically filled } X^0 \textit{ dominated by } X^0 \textit{ (and by no other maximal projection under } X^2).\]

it becomes clear that V is the L-head of DP in (88) as a result of movement, whereas DET is the L-head in (89). The difference between (88) and (89) is a difference in the relative position of the verb with respect to the determiner and its NP complement. In both cases, however, N stands in the same position with respect to V [except that N is not a head in (88) but is a head (though not the L-head) in (89)]. The potential syntactic differences between the two configurations, if any, will be significant to determine what is at stake. And there are indeed three basic differences:

a. As seen above ((72)), lexical (nominative) subjects are possible in NCs headed by the article; in NCs with demonstratives of the type diagrammed in (87), this is ruled out:

\[(91) \text{a. } \text{Zuk}\textit{-E patxaran constantly drink-TE-art craziness pure is} \]

You drinking patxaran constantly is crazy

b. * Zuk\textit{-E patxaran constantly drink-TE this}

"This your drinking patxaran constantly is crazy"

b. Unlike NCs headed by the article, those headed by demonstratives resist gapping:

(30) Note that definition restricts L-heads to their closest dominating XP; this locality condition can only be avoided by head-movement.
(92) Zer gorrotatzen duzu?
What do you hate?

a. [Bazkarian ura edatea] eta [afarian esnea edatea]
Lunch-loc water drink-TE-art and supper-loc milk
Drinking water with lunch and drinking milk with supper
b. [Bazkarian ura edatea] eta [afarian esnea [∅]]
“Drinking water with lunch and milk with supper”
c. [Bazkarian ura edate hori] eta [afarian esnea edate hau]
That drinking water with lunch and this drinking milk with supper
d. * [Bazkarian ura edate hori] eta [afarian esnea [∅]]
That drinking water with lunch and milk with supper

The contrast between (92b) and (92d) correlates to the presence/absence of V in the D position at S-S.

c. Unlike those represented by (88), NCs headed by demonstratives cannot have a present moment reading (cf. example (81) above):

(93) A: Zertan dabil Aihnoa? B: Oraintxe bertan kantatzen dabil
What is Ainhoa doing? She is singing
A: * Oraintxe bertan kantatze hau harrigarria da
sing-TE this
“This singing right now is surprising”

No present moment reading for NCs with demonstrative is possible because the MGC for the verb contained in NP is the DP-clause (the demonstrative is a governor for the V-N complex), and the external temporal subject of the matrix clause cannot bind it inside DP. Again, the availability of a present moment reading for NCs seems to depend on the verb’s being in DET.

In conclusion, these three crucial differences pointed out above indicate that the Determiner is the functional case-marking element in question for the INFL-

(31) A fourth difference is that NCs with articles permit extraction of a constituent, whereas NCs headed by demonstratives do not:

ia. [Bazkalostean patxarana edatea] aholkarzen dut/ gustatzen zait
after-lunch-loc drink-TE-art recommend aux please aux
I recommend drinking patxaran after lunch/ drinking patxaran after lunch is pleasing to me
b. Zer aholkarzen duzu/ gustatzen zaizu [ t edatea bazkalostean]? What do you recommend [drinking t after lunch] ?
“What is [drinking t after lunch] pleasing to you?”
ria. [Bazkalostean patxarana edate hau] aholkarzen dut/ gustatzen zait
I recommend this drinking patxaran after lunch/
This drinking patxaran after lunch is pleasing to me
b. * Zer aholkarzen duzu/ gustatzen zaizu [ t edate hau bazkalostean]? What do you recommend [this drinking t after lunch] ?
“What is [this drinking t after lunch] pleasing to you?”

This contrast is reminiscent of the familiar definiteness effect. See Suzuki (1988), Stowell (1989), and Torrego (1987) on extraction from DPs headed by demonstratives. Torrego assumes that ungrammaticality arises because of subjacency (either because demonstrative-headed DPs are inherent barriers like tensed CPs or else because demonstratives don’t L-mark their complements; hence extraction crosses two barriers =NP, DP).
like properties studied in the previous subsection only obtain when V-N to D movement takes place. The data also suggest that Basque DET is “defective” in that it only shows INFL-like properties when a verb is incorporated to it. Notice also that regarding te as the INFL-like element (cf. Goenaga’s and Ortiz de Urbina’s analysis) would predict that no contrast in terms of case-assignment and gapping should exist between NCs headed by demonstratives and by the article since te is governed by the demonstrative (and therefore it should be able to assign nominative), and V and te are always realized as a single word.

2.4.2.3. Case-assignment in clausal DPs

The mechanism by which lexical subjects in NCs are assigned nominative case is hence dependent on the presence of V in D; or put differently, on the verb’s being the L-head of the DP at S-S. I propose that DET assigns nominative in Basque just in case its terminal element is a verb:

\[(94)\]

The functional category D in DP assigns nominative case if (and only if) a verb is its L-head at S-S.

In other words, the possibility for DET to assign nominative case is dependent on its having a verbal head incorporated into it. Since this is not a possibility in English for independent reasons, it follows that DET in English gerunds can only assign the case usually associated with DPs (namely, genitive). In view of similar other cases where the case displayed by the subject of nominalized clauses is genitive (English, Quechua, Turkish), Basque appears to represent the marked option. This seems a desirable conclusion. Note that most languages, including Basque, assign different case to a clausal subject and a nominal (DP-internal) subject. What \[(94)\] says is that in such languages, a “clausal” subject in DPs will be available under very specific and limited circumstances. Incidentally, the case-assignment mechanism proposed in \[(94)\] predicts that NCs headed by demonstratives should have genitive subjects; that is, the case that DET assigns under the usual conditions. This prediction is borne out by the data:

(32) There are other differences between the demonstrative and the article in Basque: the former does not allow N and N’ gapping in a sister NP, whereas the latter does. This may follow from the fact that Basque demonstratives are not head-governors but articles are (function categories differ crosslinguistically w.r.t. their governing capacities (cf. Contreras 1989):

\begin{itemize}
  \item[i.] Ainhoaren argazkia eta Asierren argazkia
  The picture of Ainhoa and the picture of Asier
  \item[ii.] Ainhoaren argazki hau eta Asierren argazki hori
  This picture of Ainhoa and that picture of Asier
\end{itemize}

(33) Due to their restricted use in modern Basque, so far I have not been able to confirm whether possessive anaphors are licensed in DP-clauses headed by demonstratives.

(34) In fact \[(94)\] is a consequence of the fact that both the Determiner and the nominalizer can be empty at S-S. Late insertion of the determiner in Basque is probably marked. But other factors may intervene crosslinguistically to prevent \[(94)\].
(95) a. Ainhoaren batetik bestera ibiltze hau zorakeria da
-TE this craziness is
-TE this going from here to there of Ainhoa's is crazy"

b. Ainhoaren patxarana etengabe edate horrek harritu egiten nau
-TE that-E surprise do aux
-TE that constantly drinking patxaran of Ainhoa's surprises me"

We may try to generalize (94) as to include the functional head INFL. Obviously, a [+finite] INFL may assign case whether a lexical V occupies the INFL position or not (e.g. in English). But where this is not true, nominative case-assignment may after all be dependent on the presence of V under a functional category (cf. Koopman 1984 on Vata):

(94)’ a. A positively specified F(unctional) category assigns nominative case
if F governs XP, where V is the L-head of XP
b. Otherwise, F assigns nominative case if V is the L-head of FP.

Part (a) is aimed to account for English modals and finite INFL; (b) maximally generalizes the conditions under which DET or INFL may assign nominative case. In languages where both DET and INFL always assign nominative case, i.e. DP-subjects and IP-subjects are always assigned nominative (cf. Abney 1987: ch.1), the specification of V as L-head in (94)’ probably extends to N. Having outlined the general conditions for case-assignment in Basque, I now turn to the discussion of some seemingly sentential properties of NCs.

2.5. Some apparent clausal properties of nominalized DP-clauses

There are two further properties of NCs shared by tensed clauses which, according to Ortiz de Urbina (1989), seem to suggest the existence of a spec(C) position and COMP position respectively: a) the possibility of having wh-phrases inside NCs which pied-pipe the entire nominalized clause to some initial position in the matrix clause; and b) the possible existence of “V-2” phenomena (whereby V-2 we mean the obligatory adjacency between wh-phrase and the verb) in NCs. In this section, first I will briefly show that the first property (pied-piping) is in fact a property of all XPs in Basque, not exclusive of sentences, and that the operator which triggers pied-piping need not be in a spec(C) position inside the pied-piped constituent, as is the case in relative clauses. And second, I will suggest that “V-2” is not obligatory in NCs (it is only so in tensed clauses) and that apparent operator-verb adjacency in NCs can be otherwise explained within the DP analysis pursued here. Crucially, I will suggest that analyzing operator-nominalized verb sequences as movement to spec(C) and COMP respectively is problematic for (and even incompatible with) Ortiz de Urbina’s approach to operator-verb sequences in tensed clauses.
2.5.1. Pied-piping

In Basque (and reportedly also in Quechua (Ortiz de Urbina 1989: ch. 4), wh-phrases in CP complements may directly move to some sentence initial specifier position in the matrix clause (spec(C) in Ortiz de Urbina’s analysis) or else they may pied-pipe the entire CP complement to that position. The trees in (96) correspond to Ortiz de Urbina’s analysis:

(96) a. Norai uste duzu [ti joango dela Ainhoa]?
   Where think aux go aux-comp
   Where; do you think [ti that Ainhoa will go]?

   b. [Ainhoa nora joango dela] uste duzu?
      "[That Ainhoa will go where] do you think?"

   (97) a. \[
   \begin{array}{c}
   \text{CP} \\
   \text{SPEC(C)} \quad \text{C'} \\
   \quad \text{C} \quad \text{IP} \\
   \quad \text{Nora}_i \quad \text{uste duzu} \\
   \text{VP} \\
   \text{CP} \quad \text{V} \\
   \quad \text{SP(C)} \quad \text{C'} \\
   \quad \text{C} \quad \text{IP} \\
   \quad \text{ti} \quad \text{joango dela} \\
   \end{array}
   \]

   b. \[
   \begin{array}{c}
   \text{CP} \quad \text{C'} \\
   \quad \text{CP}_i \quad \text{SPEC(C)} \quad \text{C'} \\
   \quad \text{Nora} \quad \text{C} \quad \text{IP} \\
   \quad \text{joango dela} \quad \text{uste duzu} \quad \text{ti}
   \end{array}
   \]

In (97b), Ortiz de Urbina assumes that the wh-element occupies the embedded spec(C) position. In the case of adjunct CPs or CPs embedded in adjunct PPs, direct
extraction of the wh-element is ruled out because of the familiar Condition on Extraction Domains (Huang 1982) asymmetries; but clausal pied-piping can overcome this:

\[(98)\]
\[\text{a. \text{*Zeri joan da Ainhoa etxera \{cP t: ikusi duzunean\} ?}\
\text{What go aux home see aux-comp-loc}\
\text{What, has Ainhoa gone home [when you have seen t₁] ?}\
\text{b. \{Zer ikusi duzunean\} joan da Ainhoa etxera ?}\
\text{When you have seen what} has Ainhoa gone home ?\]

\[(99)\]
\[\text{a. \text{*Ze filmei aldegin duzue hemendik \{pp [cP t: ikusi] ondoren\} ?}\
\text{Which movie escape aux here-abl see after}\
\text{Which moviei have you taken off [after seeing t₁] ?}\
\text{b. \{pp \{cP Ze filme ikusi\} ondoren\} aldegin duzue hemendik ?}\
\text{[After seeing which movie} have you taken off ?}\]

The (a) examples are clear violations of subjacency; this is avoided in the (b) examples by pied-piping the entire syntactic island. Nominalized DP clauses appear to behave like tensed clauses in this respect: direct extraction of the NC is possible if the DP is in complement position; and a wh-element may always pied-pipe the entire NC.

\[(100)\] Complement NCs:
\[\text{a. \text{Zeri erabaki du Ainhoak \{t: ikastea\} ?}\
\text{What has Ainhoa decided (on) studying ?}\
\text{b. \{zer ikastea\} erabaki du Ainhoak ?}\
\text{what study-TE-art decide aux-E}\
\text{[studying what} has Ainhoa decided (on) ?}\]

\[(101)\] Subject/Adjunct NCs:
\[\text{a. \text{*Zer; erakartzen zaitu \{t: ikusteka\} ?}\
\text{What does [seeing t] attract you ?}\
\text{b. \{Zer ikusteka\} erakartzen zaitu ?}\
\text{what see-TE-art-E attract aux}\
\text{[Seeing what} attracts you ?}\]
\[\text{c. \text{* Zer; joan zara exerantzta \{t: edatean\} ?}\
\text{What have you headed home [upon drinking t] ?}\
\text{d. \{Zer edatean\} joan zara exerantzta ?}\
\text{what drink-TE-loc go aux home-adl}\
\text{[Upon drinking what} have you headed home ?}\]

Based on similar data to the one presented above, Ortiz de Urbina claims that NCs have a spec(C) position, which makes it possible for a wh-phrase in that position to pied-pipe the entire constituent. In other words, pied-piping would be an argument for the existence of spec(C), hence CP. Three arguments speak against this claim: first, pied-piping in Basque is not restricted to CPs, but is also a property of DPs, PPs, and APs, which all lack spec(C) positions.
(102) a. [Nori buruzko istorioak] kondatu dizkizute?  
[Stories about whom] have they told you?
b. [Noizko egunkarian] irakurri duzu berri hori?  
[In the newspaper "from when"] did you read that piece of news?
c. [Noren etxean] geratuko zara lo egiten?  
[At whose house] will you stay to sleep?
d. [Zelako handia] da Euskal Herria?  
How big is the Basque Country?

In fact, it is not clear that the wh-phrases in (101) are in any specifier position at all; cf. nori, noizko.
Second, Artiagoitia (1992) argues that wh-phrases inside relative clauses may pied-pipe the entire syntactic island (the complex noun phrase) in which they are contained without occupying the spec(C) position of the relative clause, which is filled by an empty operator:

(103) a. *Norentzat, desagertu da [ti egin duzun pastela]?  
For whom did [the cake I made t] disappear?
b. [Opi norentzat ti egin duzun pastela] desagertu da?  
[The cake I made for whom] disappeared?

Proof that the wh-phrase is in situ comes from the fact that the answer to (103b) must recapitulate the entire island, which would not be the case if the wh-phrase itself were in spec(C) (cf. Pesetsky’s 1987 Felicitous Principle):

(104) a. ?? Asierrentzat  
For Asier
b. Asierrentzat egin dudan pastela...  
The cake that I made for Asier...

By the same token, the answer to questions (100b) and (101b/d), where wh-phrases have pied-piped the entire NC to the matrix “spec(C)” in Ortiz de Urbina’s terms, must indeed recapitulate the entire NC, which follows if the wh-elements do not occupy a spec(C) position inside the NC:

(35) In relative clauses, INFL does not assign its f-feature [+operator] to spec(I) and moves to COMP (relative clauses are obligatorily verb/complementizer final). As a result, wh-phrases may remain in situ and need not be adjacent to INFL (although scrambling inside the relative clause is generally possible). This is confirmed by sentences which contain more than one argument/adjunct besides the relativized DP (cf. Artiagoitia 1992b):

ia. (?) Etxe honetan norekin bizi den  
-house this-Ioc who-comp live is-comp guy 
[The guy that lives with whom] do you like?
b. (?) Norekin ecxe honetan norekin bizi den  
[The guy that lives with whom] do you like?

(36) “A felicitous answer to a wh-question consists of a phrase structurally identical to the wh-phrase whose index is immediately dominated by the COMP [spec, Comp, X.A.] of the question at LF” Pesetsky (1987: 114).
These two tests suggest that the occurrence of wh-elements inside NCs and the possibility of pied-piping are independent of the existence of a CP constituent. Third, further evidence for the absence of a spec(C) in NCs is provided by the behavior of the reason adverbial zergatik ‘why’. Based on work by Kayne, Rizzi (1990) has convincingly argued that reason adverbials are directly generated in spec(C) (and not inside VP/IP) and bind no variable. Therefore, the possibility of having a reason adverbial in a given constituent will indicate the existence of a CP node. The data show that reason adverbials are barred from NCs, whether direct extraction or pied-piping is involved. This contrasts with tensed CPs:

(108) a. Zergatik; erabaki duzu [ti joango zarela oporretan] ?
why decide aux go aux-comp vacation-loc
b. [(Oporretan) zergatik joango zarela] erabaki duzu?
[That you will go (on vacation) why] did you decide?

(109) a. *Zergatik; erabaki duzu [ti joatea oporretan] ?
[go-TE-art]

Therefore, I conclude that no justification for spec(C) in NCs; instead, wh-phrases remain in situ and may trigger pied-piping. Apparently, they do not even move
to spec(D) since this, in principle, might predict that they could satisfy the subcategorization of [+WH] verbs, which is not correct\(^3\). As noted earlier, spec(D) is merely a "escape hatch" for successive cyclic movement out of NCs.

2.5.2. On apparent V-2 phenomena as V-I-C movement

The status of operator movement in the grammar of Basque is far from being a settled issue (cf. Eguzkieta 1986, Uriagereka & Laka 1987, Ortiz de Urbina 1989, Laka 1990, Uriagereka 1992 and chapter one, sections 1.3.3-1.3.5). In what follows, I will limit myself to pointing out that the obligatory adjacency between operator/verb is in fact a tensed clause phenomenon, which does not carry over to tenseless CPs and NCs. I will also suggest that analyzing apparent V-2 phenomena in NCs as V-I-C movement triggered by operator-like elements is actually incompatible with a CP analysis of these structures. In descriptive terms, wh-phrases in tensed clauses require that the verb be adjacent to the operator; as explained in section 2.5.1 above and chapter one, successive cyclic movement triggers V-preposing for every embedded verb, which Ortiz de Urbina analyzes as V-I-C movement; this appears to suggest that every embedded verb is second with respect to every wh-trace:

\[(110)\]
\[\begin{align*}
\text{a. } & \text{ Nora joango da Ainhoa bihar} \\
& \text{where go aux tomorrow}
\end{align*}\]
\[\begin{align*}
\text{b. } & \text{ * Nora Ainhoa joango da bihar?} \\
& \text{Where will Ainhoa go tomorrow?}
\end{align*}\]
\[\begin{align*}
\text{c. } & \text{ Nora\_ esan duzu } [t_i \text{ joango dela Ainhoa bihar}] \ ? \\
& \text{say aux go aux-comp}
\end{align*}\]
\[\begin{align*}
\text{d. } & \text{ * Nora\_ esan duzu } [t_i \text{ Ainhoa bihar joango dela}] \ ? \\
& \text{Where did you say that Ainhoa will go?}
\end{align*}\]

Uriagereka (1992) has shown that deriving the wh-element/verb adjacency from V-I-C movement in (109) and the like is problematic in many respects (e.g. in terms of learnability) because it relies on the controversial assumption that COMP is initial in Basque (see also chapter one; cf. note 14). The paradigm in tenseless clauses is different. As noted by Laka & Uriagereka (1987), the adjacency between a wh-phrase and the verb is not obligatory in tenseless indirect questions:

\[(39)\] Here are the data:
\[\begin{align*}
\text{i. } & \text{ * [Zer ikustea] erabaki dugu} \\
& \text{We decided what seeing}
\end{align*}\]
\[\begin{align*}
\text{ii. } & \text{ [Zer ikus] erabaki dugu} \\
& \text{We decided what to see}
\end{align*}\]

Actually, that Wh-phrases do move to the highest specifier position of the nominalized clause in the pied-piping cases and yet do not violate Rizzi's (1991) WH-Criterion is the last position adopted by Ortiz de Urbina (1992, 1993). In his analysis, a Wh-phrase in the SPEC position may transmit its [+wh] feature to the XP that immediately dominates the Wh-phrase; then the phrase in SPEC gets marked [-wh] and no violation occurs. This proposal has desirable consequences and raises problems that I cannot address here. My own intuition is nevertheless that the wh-phrases that cause pied-piping in Basque NCs (and also in some tensed clauses) are in situ; the possibility of the [+wh] to percolate up to DP it perhaps related to the fact that the complex V-N moves to DET (and V-I always amalgamates with COMP since complementizers are bound morphemes).
(111) a. Erabaki dugu [nork txerria hil]
    decide aux who-E pig kill
b. Erabaki dugu [nork hil txerria]
    We decided (on) who to kill the pig

(112) a. *? Erabaki dugu [nork txerria hilgo duen]
    who-E pig kill aux-comp
b. Erabaki dugu [nork hilgo duen txerria]
    We decided who will kill the pig

The contrast between the (a) and the (b) examples above crucially shows that the obligatory adjacency between operators and verbs is a property of finite clauses; or more specifically, of finite INFL. The interesting question is what happens with NCs. These cannot satisfy the subcategorization of [+WH] verbs, which follows from my analysis since they lack a spec(C). When direct extraction takes place, the trace of the wh-element does not require immediate adjacency to the verb:

(113) a. Nora/ze eskolatara _ erabaki duzu [t seme-alabak bidaltzea] ?
    where/which school-adl decide aux children send-TE-art
    (cf. (110c))

b. ? Nora/ze eskolatara erabaki duzu [t bidaltzea seme-alabak] ?
    (cf. (110d))
    Where/ to which school did you decide (on) [sending your children t] ?

Furthermore, nominalized clauses containing wh-phrases that pied-pipe the entire DP need not be adjacent to the verb (although adjacency is more common), as long as they appear in the canonical/unmarked order (S-IO-O-V):

(114) a. [Asierrek txokolatea nori ematea] espero duzu?
    -E chocolate who-D give-TE-art expect aux
b. [Asierrek nori txokolatea ematea] espero duzu ?
c. *? [Nori Asierrek txokolatea ematea] espero duzu ?
d. *? [Nori txokolatea Asierrek ematea] espero duzu ?
    Who do you expect [Asier's giving the chocolate to t] ?

What is more, if the remaining DPs are extraposed/dislocated to the right, the wh-word/nominalized verb adjacency gives raise to ungrammatical sentences:

e. *? [Nori ematea Asierrek txokolatea] espero duzu ?

This actually follows from the DP analysis proposed in this chapter and the proposal made in chapter one with respect to the properties of INFL in Basque: given that no INFL node is present in NCs, I predict that no element may move to a potential spec(I) position to receive the feature [+operator] and hence be adjacent to the verb in INFL. Ortiz de Urbina (1989: 172) provides a possible counterexample to this generalization, where a pied-piped NC is ungrammatical:

(40) (113b) is marginal but slightly better than example (114e) below or (71) of chapter one (taken from de Rijk 1969).
(115) a. [Itsasoko uretan azkenez zer murgiltzean] larritu ziren marinelak?
sea-KO water-loc finally what submerge get-upset aux sailors
(adapted from O.de U.'s (65i))
b. * [Zer itsasoko uretan azkenez murgiltzean] ...
(adapted from O.de U.'s 65ii))
[Upon what finally submerging in the waters of the ocean] did the
sailors get upset?

I agree with the judgement, but I rather suggest that (115b) is ungrammatical
not because the verb is not adjacent to the wh-element but because of the presence
of the adverb azkenez 'finally', which alters the underlying order. In fact, once we
remove it, the pied-piped DP displays the unmarked order, and the sentence is
grammatical:

(116) [Zer itsasoko uretan murgiltzean] larritu ziren marinelak?
[Upon what submerging in the waters of the ocean] did the sailors get upset?

Another problem faced by the V-I-C analysis of V-2 phenomena with regard to
(115b) is that if NCs were indeed CPs as suggested in tree (39), repeated here for
convenience, where COMP is assumed to be final in NCs, the COMP position would
be occupied by the postposition an (cf. (45b) above):

(39) CP
    SPEC (C)------------- C'
        IP
            NP I'
                VP
                    I
                        tze murgil
                            an

(→ t₁ t₂ [[[murgil]-tze]-an)

Hence there would be no "landing site" for murgiltzean 'upon submerging' since
the amalgamated form already contains the COMP position itself (namely the mor-
pheme -an). The asymmetry introduced by Ortiz de Urbina in analyzing tensed CPs
(COMP precedes IP) and nominalized clauses (IP precedes COMP) and the fact that
all elements appearing in COMP in his account are bound morphemes make it
impossible to maintain that the (optional) order wh-phrases + nominalized verb ne-
cessarily corresponds to the constituents spec(C)-COMP respectively, unless the
elements in the final position of NCs (postpositions and the article) are assumed not
to be in COMP and the existence of a CP node over the NC is stipulated. This in
turn entails that the COMP/CP analysis of NCs is misguided and should be abandon-
ed. The preceding discussion suggests then a) that the obligatory operator-verb adjacency in Basque should be treated as a tensed clause phenomena; and b) that analyzing optional V-2 phenomena as V-I-C is untenable in a sentential analysis of NCs. As for the ungrammaticality of (114c/d) I have no definite explanation to offer at this point; it could be the case that the trace of the "dislocated" wh-element fails to be antecedent-governed/bound by the wh-phrase itself due to the presence of the intermediate (possibly topicalized) DPs. This situation, of course, does not arise when the wh-phrase remains in situ (112a/b).

2.5.3. Summary

So far I have shown that the morpheme te in Basque must be treated as nominal in both its "derived" and "syntactic" use, and that this dual behavior is predictable from its lexical entry in (70), repeated here for convenience, if we adopt Emonds's hypothesis that grammatical formatives may be inserted at D-S or after S-S (in their way to PF):

(70)  a.  te], N, +V____ \{[(V:+ACTIVITY)] \}
       \{N = [-completed]\}

b.  n]i]j]tu] N, [+completed], +V____

After rejecting the sentential analysis of Basque nominalized clauses on both empirical and theoretical grounds, I have also argued that the existence in Basque of constituents which display external DP distribution and have internal clausal structure is a legitimate option in VG made possible the X-Bar schema proposed in chapter one along the lines of Lieber (1992) and the Empty Head Transparency generalization, which allow a selectionally dominant head to prevail over the structural head of an XP if the latter (= structural head) is empty at a given stage in the derivation. I have also shown that the array of INFL-like properties found in Basque NCs (namely, clausal subjects, gapping, present moment interpretation) correlate with the existence of V-N to D movement, impossible in English on independent grounds. Finally, two apparent sentential properties of Basque NCs were discussed: pied-piping and operator-verb adjacency (V-2) phenomena. I established that the possibility of pied-piping in Basque is in fact a property of virtually all maximal phrases and hence cannot be used as a constituency test. As for V-2 phenomena, I claimed that the adjacency between operators and the verb is only an obligatory property of finite clauses (a reflection of Spec-Head agreement between spec(l) and INFL), which does not extend to NCs and non-finite clauses. Therefore, surface operator-verb adjacency cannot be used as a diagnostic for sentencehood.

2.6. Spanish nominal infinitives

2.6.1. Analysis

In this section I will illustrate how the Spanish nominal infinitives studied by Plann are also a language particular instantiation of the dual insertion possibility for grammatical formatives. Plann (1981) has conclusively shown that there are two kind of nominal infinitives in Spanish: a) those which have the internal structure of
any other derived nominal (adjectival modification, prepositional complements, etc.); and b) those which have the internal structure of a clause (adverbial modification, DP complements, and so on) but have external noun phrase distribution; I will call the latter nominalized (infinitival) clauses:

(117) a. El (dulce) lamentar de los pastores es cosa de Carlos
    The (sweet) complaining of the shepherds is Carlos' thing
b. El constante murmurar de palabras obscenas es ofensivo
    The constant murmuring of obscene words is offensive

(118) a. El contemplar el lago distradamente me relaja
    Looking at the lake absent-mindedly makes me relax
b. El murmurar palabras obscenas constantemente es ofensivo
    Murmuring obscene words constantly is offensive

Plann gives about a dozen tests that distinguish the two kinds of nominals as well as several tests that distinguish the latter kind from simple infinitival clauses dominated by an S'(=CP) node. She assumes that the infinitive is of category N in the first kind of nominal infinitive; as for the second kind of nominal infinitive, she assumes that S' is a sister to an empty N head:

(117)'

(118)'

That the first nominal infinitive is indeed nominal seems uncontroversial; I will take this to be a simple case of the well-known morphological process of zero derivation. As Plann herself notes, this kind of nominalization is restricted to a handful of verbs that otherwise lack a derived nominal. Furthermore, most of her examples involve, loosely speaking, activity oriented verbs like *chismear* 'gossip', *venir* 'come', *despertar* 'wake up', *iririr* 'shiver', *murmurar* 'murmur', *correr* 'run', *sollozar*, 'cry'... (i.e. mainly transitive, unergative and motion verbs). It can be shown that
stative and psych verbs cannot have a zero derived nominal even if they lack any other form of derived nominal:

(119) a. *? El constante quedarse en casa de Ainhoa
   Ainhoa's constant staying at home
b. *? El dulce yacer en la cama de Ainhoa
   Ainhoa's sweet lying in bed
c. *? El (despiadado) asustar de niños
   The merciless frightening of kids

Hence I propose the following provisional entry for the zero morpheme (call it \( n \)); not surprisingly, the restrictions on the verbal stems that may undergo \( n \)-suffixation in the base are parallel to those found for English \( \text{ing} \) and Basque \( \text{te} \):

(120) \( n (=\emptyset), N, +V_\{V:+\text{ACTIVITY}\} \)

Plann’s assumption that CPs can be sisters to an empty nominal head is problematic since the nature of the empty nominal is left unexplained: what kind of complements other than CP may it have? what are its properties? what licenses it? Here I will propose that the zero morpheme at work in the first kind of nominal infinitives can also function as an inflectional morpheme just like English \( \text{ing} \) and Basque \( \text{te} \). In this way we can collapse both nominal infinitives under the same zero suffixation process, retaining Plann’s original insights. Since the second instance of the morpheme is in fact unconstrained and not restricted to any verb class, it follows that it will be subject to late insertion. Therefore, (120) has to be modified accordingly:

(121) \( n (=\emptyset), N, +V_\{V:+\text{ACTIVITY}\} \)

The two nominal infinitives have then the following structures:

(122) a. 

\[
\begin{align*}
\text{DP} & \quad \text{SPEC (D)} \\
\text{D} & \quad \text{SPEC(N)} \\
\text{D'} & \quad \text{NP} \\
\text{NP} & \quad \text{SPEC(N)} \\
\text{NP'} & \quad \text{(YP)} \\
\text{N} & \quad \text{(XP)} \\
\text{V} & \quad \text{N} \\
\text{murmurar} & \quad \text{\( n \)}
\end{align*}
\]

(41) The alternative would be to consider the infinitival ending \( r \) as morpheme of category N. I believe this is wrong because the occurrence of non-nominal infinitives (bare Vs) would be left unexplained.
b. DP
   SPEC (D)  D'
   D  NP
   SPEC(N)  N'
   N  (XP)
   V  N
   murmurar  Ṁ (n in PF)

[Needless to say, even though the morpheme n is lexically null, (122b) is aimed at distinguishing the stage prior to the insertion of the zero morpheme itself].

The second kind of nominal infinitive has basically the same structure as English DP gerunds and Basque nominalized clauses. Its behavior with respect to the possibility of lexical subjects is interesting in this respect: most speakers seem to reject lexical subjects in structures like (122b):

(123) El correr (*Juan y Tomás) rápidamente por las calles no llamaría la atención (Plann’s 64a)
Juan and Tomas running fast on the streets would not draw attention

This shows that the conditions for case-assignment are not met in Spanish nominalized clauses; “nominative” case appears to be a marked option (cf. Basque). And “genitive” case (subject preceded by the preposition de) is not available either, possibly because, unlike in English, D does not assign case in Spanish (42).

However, some speakers do seem to accept lexical subjects in nominalized clauses according to Yoon and Bonet-Farran (1988):

(124) El cantar yo La Traviata traerá malas consecuencias
I singing La Traviata will have bad consequences

Unfortunately, they do not discuss whether this is possible in all positions in which nominalized clauses may occur. In fact, the observation regarding the presence of lexical subjects in clausal infinitives is that they seem to display anti-ECP effects (Olarrea 1991): they occur in the subject position (usually of the copula ser ‘be’), and in adjunct position as complements to certain prepositions. Yoon and Bonet-Farran’s discussion of lexical subjects in clausal infinitives agrees for most part

(42) Nominalized infinitival clauses in Spanish cannot have a present moment reading either:
   i. *El correr ahora mismo es una sorpresa
      Running right now is a surprise
   (i) cannot be paraphrased as “that somebody is running right now is surprising” but rather has a future reading (“that someone might be/ start running in a moment is surprising”).
with Olarrea's paradigms\(^{43}\). But they fail to discuss whether the same generalization is true of nominalized infinitival clauses, although the answer seems to be affirmative:

\[(125) \ast \text{Esto prueba el cantar t\'u La Traviata muy bien}\(^{44}\) \text{This proves you singing La Traviata very well}\]

I will not attempt here to provide an account of the restricted distribution of lexical subjects in infinitives, whether they are dominated by a DP or a CP nodes (but see Olarrea 1991); obviously both cases seem to fall under the same generalization. Rather, I will suggest that nominative case-assignment in Spanish NCs is licensed in a similar way to Basque. Recall from the discussion in section 2.4 that in Basque NCs D may assign nominative case (a cover term for ergative/absolutive) just in case the verb is the L-head as S-S; this is possible because the article in Basque is a bound morpheme and head-movement of the verb into the D position is obligatory. Obviously, this is not the case in Spanish. But let us suppose that abstract incorporation, i.e. head-coindexing, la Baker (1988) is available as a marked, somewhat marginal option, possibly because of the clitic-like nature of the article:

\[(126) \text{Eli murmurar,\text{-}\text{n} palabras obscenas ...} \]

This predicts that gapping of D-V-N should be possible in the same fashion [[V]-[I]] gapping is, which is correct:

\[(127) \begin{align*}
\text{a. El dar de comer al hambriento y [\emptyset] ([\emptyset] = D-[V-N]) de beber al sediento es precisamente lo que el Papa no hace} \\
\text{Giving to eat to the hungry and to drink to the thirsty is precisely what the Pope doesn't do} \\
\text{b. El dar yo de comer al hambriento y [\emptyset] t\'u de beber al sediento es otra cursilada de Carlos} \\
\text{"I giving to eat to the hungry and you to drink to the thirsty is another nonsense of Carlos"}
\end{align*} \]

This analysis also predicts that any intervening head should block head-coindexing and, therefore, the possibility of D's assigning nominative case. This seems correct too; the presence of the adjective \textit{mero}, the only adjective allowed in these nominal infinitives, blocks gapping and case-assignment:

\[(128) \begin{align*}
\text{a. \ast El mero dar de comer al hambriento y [\emptyset] de beber al sediento...} \\
\text{Mere giving ...}
\end{align*} \]

\(^{43}\) Actually they assume that some factive verbs may have CP infinitives with lexical subjects; but the infinitive has to be an auxiliary or modal verb:
\begin{itemize}
  \item \text{Esto prueba ser t\'u el que mat\'o a la v\'ictima} \\
  \text{This proves you to be the one that killed the victim}
\end{itemize}
Olarrea (p.c.) and I strongly disagree with this judgement.
\(^{44}\) I find (ii) terrible, far worse than (i) in note (43):
\begin{itemize}
  \item \text{\ast Estoy prueba el ser t\'u el que mat\'o a la v\'ictima} \\
  \text{This proves you being the one that killed the victim.}
\end{itemize}
b. *El mero cantar tú La Traviata traerá malas consecuencias
   You mere singing...

It can be concluded then that the (marginal) possibility of nominative subjects in
nominalized infinitival clauses in Spanish is only possible as a result of abstract
incorporation, a process similar to V-N to D movement observed in Basque NCs.45

2.6.2. Extraction from English, Basque and Spanish NCs

Finally, another systematic difference between Spanish on the one hand and
English/Basque on the other must be considered. English DP gerunds allow extrac­
tion if the spec(D) position is not filled; if it is filled, the familiar subjacency
violations result. In Basque, on the other hand, subjects do not occupy the spec(D)
position, so extraction is always possible:

(129) English
   a. What does Suzzane hate [ti smoking t1]?
   b. * What does Suzzane hate [Mary’s smoking t1]?

(130) Basque
   Zeri gorrotatzen du Suzzanek [ti (Ainhoak) ti erretzea]?

I have adopted Rizzi’s version of the ECP throughtout and assumed that head-
government is a PF condition. Consequently (129b) does not violate the ECP since
the noun smoking at PF head-governs the trace; crucially, the latter is bound by what.
Only subjacency is at work here (cf. Stowell 1989). Interestingly enough, extraction
from Spanish nominalized infinitival clauses is always ungrammatical (whilst the
corresponding simple infinitival clauses do allow extraction):

(131) a. Susana odia [el fumar marihuana]
   Susana hates smoking marihuana
   b. *Qué odia Susana [el fumar t1]?
   What does Susana hate [smoking t]
   c. Qué odia Susana [fumar t1]?
   d. [El leer el periódico por la mañana mientras desayuno] me encanta
      Reading the newspaper in the morning while I have breakfast thrills me
   e. *Qué te encanta [leer t por la mañana mientras desayunas]?
      What does [reading t in morning while you have breakfast] thrill you?
   cf. f. Qué te encanta [leer t por la mañana mientras desayunas]?

(45) Yoon and Bonet-Farran (1988) give one example of a nominalized infinitival clause with a genitive subject
and then claim that the three variants of nominalized infinitival clauses (the subjectless ones, those with nominative
subject, and this third type) are the exact equivalent of English PRO-ing, ACC-ing and POSS-ing. This is suspect; I
have found no speaker that considers NICs with genitive subjects grammatical. Their alleged three-way paradigm
seems forced upon Spanish by the English paradigm. This is corroborated by the fact that the Spanish data are in
many ways empirically different from English: NICs with nominative subjects occur only in some dialects, and even
then, they cannot occur in complement position.

[89]
These extractions from Spanish nominalized infinitival clauses are excluded despite the fact that extraction of objects from DPs headed by the article is otherwise acceptable (when no subject is present) in the same situations (complement to a verb, subject of emotive verbs):

(132) a. Este es el único concursante [del que] he visto [la foto t]
   (Mallén’s 1989 (31))
   This is the only contestant of whom I have seen [the picture t]

b. (?) De qué actriz odias [la foto t; que has visto en el periódico] ?
   Of which actress do you hate [the picture t you saw in the newspaper]?

c. (?) De qué actriz te gusta [la foto t; que has visto en el periódico] ?
   Of which actress is [the picture t you saw in the newspaper] pleasing to you?

d. (?) De qué cuadro te gusta [la reproducción t; que viste en el museo]?
   Of which painting is [the reproduction t (that you saw at the museum)] pleasing to you?

Leaving aside the potential marginality of the examples in (132) (which are far better than the cases of extraction from nominalized infinitival clauses in any case), (131b,d) clearly contrast with the corresponding English and Basque data. One might try to pursue some ad hoc strategy and suggest that Spanish nominalized infinitival clauses only project to the D’-level and lack a escape hatch. However, the account for this difference is straightforward in terms of the assumptions made in this chapter: the obvious difference between English and Basque on the one hand and Spanish on the other, is that the nominal suffix is lexical in the former languages, but null in the former. Since these morphemes, by hypothesis, are not present until PF, the level where the (head-government requirement of the) ECP applies, the reason for the ungrammaticality of (131b,d) is evident: in Spanish the null morpheme n cannot head-govern the original trace of the extracted wh-element at PF because null elements lack any governing capacity. This situation does not arise in English and Basque at PF, because both ing and te are present at that level and hence do govern the object trace. No explanation for this contrat could be simpler. The zero-suffixation account of both Spanish nominal infinitives also makes a secondary prediction: extraction of genitive objects out of derived nominal infinitives should also yield an ECP violation (zero morphemes do not head govern); this is the opposite of what happens in any other derived nominal, where the suffix is lexical. The prediction turns out to be correct:

(132) a. * De qué palabra obscena odias/te gusta [el susurrar t] ?
   Of which obscene word do you hate/like [the murmuring t]?

b. * De qué persona detestas/te gusta [el andar t] ?
   Of which person do you detest/like [the “walking” t]?

c. * De qué música odias/te encanta [el tocar t] ?
   Of which music do you hate/does [the playing t] thrill you?

cf. d. (?) De qué cuadro detestas/te gusta [la reproducción t; que viste en el museo]?
Of which painting do you detest/like the reproduction that you saw at the museum?

cf. e. (?) De qué edificio recomiendas [la rehabilitación t₁]

Of which building do you recommend [the renewal t]?

This clear paradigm lends additional support to the zero-derivation account that I have proposed in this section for both instances of nominal infinitives.

2.7. Final remarks

This chapter has proved that the intuition that two basic uses of te ("derivational" and "inflectional") are indeed nominal is elegantly captured by the theory of the grammar once we adopt the hypothesis that grammatical formatives may be inserted at two levels (at D-S and after S-S), a fact that is predictable from their lexical entry. I have claimed that the mixed behavior of Basque te is just a reflection of the general UG mechanism that allows grammatical formatives that are subject to late insertion to be present in terms of X-Bar theory but absent in terms of government and related modules (case theory) (cf. Empty Head Transparency in chapter one); this has been further exemplified by English ing, Romance infinitives with the article, and is possibly extendable to Quechua and Turkish nominalizations. In fact we predicted that any language which allows a verb to select +V (or, where appropriate, +V^[F (Aspect)], where F (Aspect) is [+/-completed]) and has a nominal suffix not restricted to a particular semantic class of verbs will exhibit a constituent with external DP distribution and internal clausal structure; case-assignment to the subject will depend on specific parametric choices of the language in question (genitive subjects vs nominative subjects). In pursuing my proposal, I have argued against previous analyses of both English gerunds and Basque nominalized clauses both on empirical and theoretical grounds. On empirical grounds, it was shown that the nominal head hypothesis for NCs correctly predicts the external DP distribution of gerunds and NCs, as well as their internal sentential structure, without any IP and VP projections proper being in fact realized. On theoretical grounds, the proposal made here avoids many ad hoc assumptions as to the combinatorial nature of functional categories and neutralized categories, and is consistent with X-Bar theory and the current view of the unique relation between functional and lexical elements (Fukui & Speas 1986, Grimshaw 1991).
3. The so-called perfect participle morpheme in Basque and why it is not (always) perfect and why it is not (necessarily) participial

The purpose of this chapter is relatively modest in scope: to show that the perfect morpheme of Basque, which is usually taken to be the counterpart of the Indo-european "past participle", is lexically specified as a morpheme of category Noun and Adjective, and to argue that all uses of the morpheme, especially its occurrence in the so-called "passive" construction, arise as a result of and are predictable from this dual lexical specification. By deriving the properties of the relevant morpheme from its lexical entry, the differences between it and its Indo-european counterpart studied in Emonds (1989) will become evident. In writing this chapter, I have greatly benefited from Eguzkitza's (1981) and Ortiz de Urbina & Uribe-etxebarria's (1991) insights regarding the Basque "passive" construction. In fact, the dual category approach I have independently pursued here leads me to analyze "passive" structures as tenseless relative clauses, a result which is very similar to the proposals advanced in these two articles. The following discussion assumes Emonds' Double Lexical Insertion Level Hypothesis outlined in chapter one that grammatical formatives are inserted at D-S when their insertion is constrained or induced by a purely semantic feature, and after S-S otherwise. If the latter option is chosen, the morphemes remain empty until PF and are inert for government and case by virtue of the Empty Head Transparency:

(1) Empty Head Transparency: Under the same X^2, empty heads induced by subcategorization distinct from the L-head are transparent in the syntax (where transparent = do not govern and do not block government)

The chapter is structured as follows: section 3.1 studies the formation of derived nominals and derived adjectives, which I show results from the D-S insertion of the perfect morpheme. As will become clear, this derivational process is invariably associated with the absorption of the verb's internal argument. Section 3.2 focuses on the licensing of perfect nominalized clauses of the type studied in the previous chapter; some instances of it in adjunct positions are discussed. Section 3.3 analyzes some occurrences of the perfect morpheme in two different types of predicate phrases, which I argue are both PPs. I claim that these predicative phrases are selected as V^[+completed] and P respectively, but are licensed because of the N(ominal) value of the perfect morpheme, whether D-S or post S-S insertion is involved. Finally, section 3.4 tackles the issue of the so-called "passive construction" in Basque and shows that the latter is best analyzed as a sentence which contains a subject, a copula and a complex NP (where the noun is zero) that includes a tenseless relative formed with the perfect morpheme (the N value). Based on Emonds's insights regarding the relationship between the passive and the perfect morpheme in Indo-european (which he considers essentially the same morpheme), I derive the lack of a true passive in Basque from the absence of the absorption feature on the perfect morpheme when the latter is inserted after S-S (in its way to PF).
3.1. The perfect morpheme in derived morphology

There are three basic perfective endings in Basque: $n$, $i$, and $tu$. The first two are native Basque morphemes, whereas the latter is undoubtedly a borrowing from Latin (cf. Lafon 1943, Irigoyen 1985 and references therein); only $tu$ is presently a productive morpheme (cf. (2d)):

(2) a. egon, jasan, jaso, eman, ekin, etzan, entzun, egin, eten,...
stayed, suffered, lifted, given, engaged onself in, lied, heard, done, interrupted, ...
b. ikusi, etorri, erori, ikasi, eskeini, irabazi, irakurri,...
seen, come, fallen, learned, offered, won, read,...
c. garbitu, geratu, dimititu, askatu, begiratu, buurrakatu, zoratu,
cleaned, remained, resigned, liberated, looked at,...
fought, gotten crazy...
d. Eng. flash $\rightarrow$ Basque flashatu, *flashan, *flashi
Fr. tromper $\rightarrow$ Basque tronpatu, *tronpan, *tronpi
Sp. gustar $\rightarrow$ Basque gustatu, *gustan, *gustai

As a first approximation, it is evident that this perfective ending forms both derived adjectives (cf. (3)) and derived nominals (cf. (4)):

(3) a. Berebil erabil-i-ak / berebil zaharr-ak
   car used-art old
   Used cars / old cars
b. Denbora gal-du-a / denbora urri-a
   time wasted-art scarce-art
   Wasted time / scarce time
c. Amets apur-tu-ak / amets urdin-ak
   dream broken-art blue
   Broken dreams / blue dreams
d. Urrats desbidera-tu-ak / urrats handi-ak
   step deviated-art big -art
   Strayed steps / big steps

(4) a. Konutan har aitonaren esan-n zaharrak
   account-loc take grandpa-gen saying old
   Take into account grandpa’s old sayings (cf. esan = ‘to say’)
b. Guk irabazi-ti handiak atera ditugu
   we gain big-art accomplish we-have-them
   We have had big gains (cf.irabazi(i) = ‘to gain’)
c. Ainhoak eritz-i aldakorrak ditu
   opinion variable has-them
   Ainhoa has variable opinions (cf. eritz(i) = ‘to opine’)

(1) $n$ is not really the perfect ending but rather part of the bare verbal root. The perfect ending for verbs whose root ends in $n$ is $\emptyset$. Nonetheless, following Lafon (1943), and for ease of exposition, I will refer to $n$ as a perfect ending.
(2) In the Southern Basque Country, the participle is also the citation form of a verb.
Section 3.1.1. below concentrates on the examples of deverbal derived adjectives in (3); section 3.1.2, in turn, analyzes the examples of deverbal derived nouns in (4).

3.1.1. **On the derived adjectives**

Unlike in Indo-European languages, deverbal adjectival modification inside noun phrases of the type exemplified in (3) is rare in Basque and sounds “foreign-like” in many cases. A much more common strategy is to resort to adnominal modification with a tenseless relative clause, as can be seen in (5), where tenseless relatives are paraphrasing and replacing the adjectives of (3):

\[
\begin{align*}
\text{(5) a. } & \text{[pp Erabil-i-ta-ko] berebilak } \text{(cf. (3a))} \\
& \quad \text{use-perf-TA-KO cars} \\
& \quad \text{Used cars (“cars that someone [has] used”)} \\
\text{b. } & \text{[pp Gal-du-ta-ko] denbora } \text{(cf. (3b))} \\
& \quad \text{waste-perf-TA-KO time} \\
& \quad \text{Wasted time (“time that someone [has] wasted”)} \\
\text{c. } & \text{[pp Apur-tu-ta-ko] ametsak } \text{(cf. (3c))} \\
& \quad \text{break-perf-TA-KO dreams} \\
& \quad \text{Broken dreams (“dreams that [have] broken/ someone [has] broken”)} \\
\text{d. } & \text{[pp Desbidera-tu-ta-ko] urratsak } \text{(cf. (3d))} \\
& \quad \text{deviate-perf-TA-KO steps} \\
& \quad \text{Strayed steps (“steps that have deviated/turned aside”)}
\end{align*}
\]

I will return to these relative clauses later in section 3.2.1.2. The *rareness* of the deverbal perfect adjectives in Basque squares well with the fact that the only productive morpheme to form derived adjectives is the borrowed (and more “recent”) suffix *tu*.

When adjectives are derived using the perfect morpheme *en* in English, it is generally assumed that the morpheme suppresses the external argument. Not surprisingly, many authors (cf. Bresnan 1982, Levin and Rappaport 1986, Grimshaw 1990, Zubizaretta 1987) refer to these adjectives as “adjectival passives”, distinguishable from “verbal passives” by several tests discussed extensively in Wasow (1977): a) like regular adjectives, adjectival passives may undergo *un* prefixation even with verbs that do not otherwise accept the prefix *un*, but verbal passives cannot; b) adjectival passives can be complements to verbs that generally take AP complements such as *seem, remain, sound*, etc; verbal passives can only be complements to *be* and *get* (cf. Emonds 1989); c) adjectival passives can be in attributive position just like regular adjectives but verbal passives obviously cannot, and so on. Both Levin and Rappaport (1986) and Grimshaw (1990) assume that adjectival passives are derived from verbal passives. Obviously, the term “adjectival passive” is a misnomer since
"adjectival passives" exist that are derived from unaccusative verbs (though not from unergative verbs), a fact noted at least since Bresnan (1982: 21-32):

(6) a. swollen feet, a failed attempt, a fallen dictator, ...
   b. Your feet seem swollen

(7) a. *a run person, *a coughed person, ...

Levin and Rapport (1986) suggest that the source of participial adjectives in (6) is perhaps the perfect participle (cf. their note 36), and that the contrast (6)-(7) should be expressed in terms of the unaccussative/unergative distinction rather than be determined by a "thematic condition" (as in Bresnan 1982); but they stop short of offering a definite solution. Grimshaw (1990) maintains the dual source for participial adjectives: unaccasatives may form adjectives of the "passive" kind because the process simply adds an external argument R to the argument structure of the derived adjective; this will be impossible for unergatives verbs on the assumption that they already have an external argument:

(8) a. melt (x) → melted (R (x))  b. (x (y)) /→ (R (x (y)))

Adjectival passives of transitive verbs are, on the other hand, derived from the corresponding verbal passive, as in Levin & Rappaport (1986) [the verbal passives already contain a surpressed argument]. The interesting point about Basque deverbal perfect adjectives is that they follow the same pattern as English despite the fact that there is no verbal passive in Basque (cf. Eguzkitza (1981)) as we shall see below (cf. 2.4.2.): in other words, there are adjectives which derive from unaccusative verbs (e.g. 3d above), and those derived from transitive verbs also have a "passive" meaning:

(9) a. Denbora joa-n-a
time go-perf-art
(The) gone/past time
b. Arbola eror-i-a
tree fall-perf-art
(The) fallen tree
c. Pitxer ibil-i-a
pitcher walk-perf-art
(The) "walked"/used pitcher
d. berebil erabil-i-ak
(= cars that have been used/somebody has used) (=3a)

This suggests that Levin & Rappaport's and Grimshaw's approach to adjectival "passives" is untenable (at least for Basque). Instead, I will follow Zubizarreta's (1987) insight that adjectival ("passive") participle formation is independent from verbal passives and that it should predict that unaccusatives will also form adjectives of this kind. She reduces the process to a change in category (V→A) and the insertion of the semantic feature STATE, borne by the resulting adjective. In the terminology used throughout this article, I therefore assign them the following provisional lexical entries:

(3) There are, however, two well-known exceptions:
   i. Hauek haur ikas-i-ak dira
      these kid learned are
      "These are learned kids" (=smart kids)
   ii. Ainhoa pertsona irakurr-i-a da
       person read
       is Ainhoa is a [well-] read person

*ikas* may also translate as *study*. Both verbs take optional DP complements. I have no explanation for these two exceptions. Note that English also has a similar exception.
(10)  

a. English:  
\[ A, +V____, \text{STATE} \{ V = +\text{ACTIVITY}/+\text{MOTION} \} \]

b. Basque:  
\[ i, n, A, +V____, \text{STATE} \{ V = +\text{NATIVE}, +\text{ACTIVITY}/+\text{MOTION} \} \]

\[ tu, A, +V____, \text{STATE} \{ V = +\text{ACTIVITY}/+\text{MOTION} \} \]

According to Zubizarreta (cf. also Levin & Rappaport 1986), no mention of specific \( \theta \)-roles or argument structures is needed in the rule; on the assumption that adjectives do not take internal arguments (i.e. that unaccusative adjectives don’t exist), it follows that the internal argument of the verb will become the external one after adjective formation; if the verb is transitive, the external argument will be incorporated into the predicate. Crucially, this “absorption” of the external argument (when there is one) presupposes the existence of a level of representation independent of subcategorization proper that includes “a set of structured predicate-argument relations” (Zubizarreta 1987: 7).

Since in chapter one (1.2.2) I have explicitly rejected the notion that such a level plays any role in syntax or is pertinent subcategorization, I implement this restriction at D-S by elaborating (10). I propose to do so by specifying the noun phrase complement to the verb and adopting Emonds’s Phrasal Absorption Convention:

(11)  

**Phrasal Absorption Convention**: Phrasal Absorption by bound affixes. If \( \beta \) is an affix bound to a lexical category \( Y^0 \), an additional phrasal subcategorization frame \( +____\alpha \) is satisfied by an empty \( \alpha \) in positions that would satisfy \( Y^0 \), \( +____\alpha \) \([“+\alpha” in my notation]\). In such cases we can say that \( \beta \) absorbs the complement of \( Y^0 \)

(12)  

a. English:  
\[ en\], \( A, +V____ + N, \text{STATE} \{ V = +\text{ACTIVITY}/+\text{MOTION} \} \]

b. Basque:  
\[ i, n, A, +V____ + N, \text{STATE} \{ V = +\text{NATIVE}, +\text{ACTIVITY}/+\text{MOTION} \} \]

\[ tu, A, +V____ + N, \text{STATE} \{ V = +\text{ACTIVITY}/+\text{MOTION} \} \]

(4) (10) includes the restriction that the verb must be \(+\text{ACTIVITY}/+\text{MOTION} \) because not just any unaccusative verb may form a derived adjective; non-motion verbs like *stay, lie, stand in English, and *egon, etzan, ian in Basque cannot form derived adjectives: *a stood person, *Mary seems stayed at home, ... The feature \(+\text{NATIVE} \) in (10) simply identifies the set of verbs taking the suffixes \( n \) and \( i \) as the core, non-derived and usually oldest verbs of Basque (cf. -\(-/\)-Latinate in English). It doesn’t imply that all verbs taking \( TU \) are non-native. [e.g. many verbs taking \( tu \), even though they are part of the native vocabulary, are derived from nouns/adjectives: \( \text{garbi} \) ‘clean’ = = \( \text{garbi-tu} \) ‘to clean’, \( \text{ikara} \) ‘fear’ = = \( \text{ikara-tu} \) ‘to frighten’. This is virtually never the case with \(+\text{NATIVE} \) verbs].

(5) See Zubizarreta (1987: 10s) for motivation.

(6) Zubizarreta’s approach contrasts with Bresnan’s (1982: 23), who views perfect adjective formation as a unified process but makes specific reference to the theme \( \theta \)-role in the rule. Similarly, although Williams (1981: 92-95) and Di Sciullo and Williams (1987: 57) don’t discuss perfect adjectives derived from unaccusatives, they derive adjectival passives by the operation *Externalize (Theme)*. One expects that this operation will also affect unaccusative verbs. The bottom line, though, is that mention of specific \( \theta \)-roles is involved in the morphological operation, as in Bresnan’s account.

(7) Emonds (1989) uses the feature *perfective*, which is “semantic” according to him. I disagree because, as will be argued in chapter four, [+/-perfective] or [completed] are syntactic features. Besides, it is too simplistic to say that adjectival passives have a perfective, “completed”, reading:
By (11), we ensure that the adjective formation with \(i, n, tu\) is only executed when the verb subcategorizes for a noun phrase (i.e. for transitive and unaccusative verbs) without resorting to the more abstract predicate-argument level\(^8\).\(^9\)

After discussing the formation of adjectives derived from the perfect morphemes, I now turn to the formation of derived nouns (cf. (4) above).

3.1.2. On the derived nouns

Unlike nominals derived from the morpheme \(te\) studied in the previous chapter (sec. 2.2) (which may vary from an event to a result reading), nominals that are derived from the perfect morphemes lack argument structure in the sense of Grimshaw (1990) and must all be interpreted as result nominals. Hence, with respect to all the tests proposed in Grimshaw to distinguish event nominals or nominals with argument structure from result nominals, they pattern together with the latter: only "possessive" genitives are allowed, but no object genitive; adjectives like \(etengabe\) 'constant' are ruled out; these nouns may pluralize, they do not accept durative modifiers, etc... (see Grimshaw 1990: ch. 3). As expected, the judgments are reduplicated in the English glosses:

(13) a. Aitonaren (*istorioen) \(esa-n-a\)
    Grandpa-gen stories-gen say-perf-art
    Grandpa's saying (*of stories)

b. Aitoraren istorioen kondaketa
    narration
    Grandpa's narration of stories

(14) a. *Aitonaren \(esa-n\) etengabe-a
    *Grandpa's constant saying

b. Aitonaren istorioen kondaketa etengabe-a
    Grandpa's constant narration of stories

(15) a. Aitonaren \(esa-n\) zaharr-a-k
    Grandpa's old sayings

b. *Aitonaren istorioen kondaketa (*zahar)-ak
    *Grandpa's (*old) narrations of stories

(16) a. *Aitonaren \(esa-n-ak\) ordu batez iraun zuen
    hour one-inst last aux
    *Grandpa's saying lasted one hour

i. The door remained closed during the noon hour

Contra Emonds, (i) doesn't imply that the "closing" was completed by noon. It simply asserts that the state of the door was all the same during that time.

(8) I am assuming that external arguments are not expressed in subcategorization as in Chomsky (1965) and Emonds (1991), and that unaccusative verbs subcategorize for an object noun phrase.

(9) J. Emonds (p.c.) points out to me that the notation may have to include the subscript on the noun phrase complement to specify it as (obligatorily) null. If so, (12) should be modified as follows:

i. \([i, n], A, +V_\_\_ N, \text{state} \ldots (\text{where Na = obligatorily null at D-S})

I leave this notational problem open.
b. Aitonaren istorioaren kondaketak ordu batez iraun zuen
   Grandpa’s narration of the story lasted one hour

   The most widely used nouns of the type illustrated in (4) seem to be derived from
   the \textit{in} morphemes; fewer are derived from \textit{tu}: \textit{erratu} ‘mistake’/‘mistaken’, \textit{begiratu}
   ‘look, glance’/‘looked’, \textit{beldu} ‘adult’/‘matured’, \textit{ikutu} ‘touch’/‘touched’. [In fact, it is
   not clear whether \textit{erratu} was not borrowed in Basque as a full noun; cf. English
   \textit{erratum}]. The rest are derived from either \textit{i} or \textit{n}, usually \textit{i}. Furthermore, stative verbs
   like \textit{egon} ‘stay/remain’, \textit{etzan} ‘lie’ do not form a noun. We might express these
   restrictions as follows:

   \begin{equation}
   (17) \text{Noun derivation with perfect morpheme (tentative)} \tag{10}
   \begin{align*}
   n], i], N, +V_{V = + NATIVE, +ACTIVITY/+MOTION} & \\
   tu], N, +V_{V = +ACTIVITY, +MOTION} & 
   \end{align*}
   \end{equation}

   In Grimshaw’s framework (1990), the fact that the nouns in (3) are “result”
   nominals and lack argument structure is expressed by virtue of an argument-structure
   operation: assign the \textit{R}eferal role to the derived noun (cf. also Di Sciullo &
   Williams 1987):

   \begin{equation}
   (18) \begin{align*}
   \text{a. esan } & V, (x (y (z))) & \text{b. -n, -i, N(oun) R} \\
   \text{say} & & \text{c. esan ‘saying’ N, (R = y) such that} \\
   \text{irabaz-} & (x (y)) & \text{x says y (to z) ‘gain’ N,} \\
   \text{win/gain} & & \text{irabazi (R = y) such that x gains y}
   \end{align*}
   \end{equation}

   But once again, this is expressible in the subcategorization frame if we extend
   “phrasal absorption” to nouns, thus making the argument-structure operation un-
   necessary:

   \begin{equation}
   (19) \text{Noun derivation with perfective morpheme (replaces (17))} \tag{10}
   \begin{align*}
   n], i], N, +V_{V = + NATIVE, +ACTIVITY/+MOTION} & \\
   tu], N, +V_{V = +ACTIVITY/+MOTION} & 
   \end{align*}
   \end{equation}

   (19) predicts that the verbs which undergo \textit{n}-, \textit{i}-, and \textit{tu}-nominal derivation
   must be transitive or unaccusatives (of the motion-type), as desired. By extending
   the phrasal absorption feature to the nominal value of the perfect morpheme, we
   capture the fact that constraints on the formation of derived nominals and derived
   adjectives are parallel and that both processes are restricted to roughly the same
   verbal bases.

   \begin{enumerate}
   \item Some residual problems remain: the lexical entry leaves a gap for cases where a derived nominal is expected
   but inexistent (cf. \textit{eman} ‘the giving/gift’, although the compound \textit{barrman} [\textit{har} ‘take’ + \textit{ema-n} ‘give ’] ‘relationship’
   exists). This could just be an accidental gap, an unrealized possibility. (17) also excludes a noun like \textit{izan} ‘the being’;
   this noun, however, has an almost idiomatic use. J. Emonds (p.c.) points out that the reason \textit{izan} might escape the
   generalization is that, in so far as it is grammatical verb, it is not present at D-S. Another factor to be considered is
   that the relationship between the verb and derived nominal is fairly idiosyncratic in many cases, probably because
   some nouns have become “lexicalized”.
   \end{enumerate}
3.2. Non-derivational uses of the perfect morpheme

The preceding section has established that the so-called perfect morpheme in Basque forms both derived adjectives and derived nominals; by the hypothesis adopted throughout this article, their lexical entry predicts these suffixes will already be present at D-S because their insertion is conditioned and/or induced by purely semantic features (on the stem V or on the suffix): STATE in the adjectival use, or +ACTIVITY/MOTION in both uses. The next logical step is to investigate whether these grammatical morphemes are ever semantically "unconstrained" and hence also insertable after S-S, on their way to Phonetic Form. In chapter four, I will argue that is exactly the case for adjectival /n/tu when they function as aspect markers in periphrastic verbs forms; in this case they bear the feature [+completed]. Leaving this late insertion option of adjectival /n/tu aside for a moment, let us turn to the nominalized clauses (NCs henceforth) studied in chapter two. It is immediately obvious that these nominalized clauses have their perfective counterparts, as was pointed out there:

(20) a. Espero dut [DP Ainhoa Seattle-ra etorr-tze-a]
   expect aux -adl arrive-TE-art
   lit: "I expect [ Ainhoa's coming to Seattle ]"
   I hope that Ainhoa will come to Seattle

   b. Espero dut [DP Ainhoa Seattle-ra etorr-i-a]
   expect aux -adl come-perf-art
   lit: "I expect [ Ainhoa's having come to Seattle ]"
   I hope that Ainhoa has already arrived in Seattle

(21) a. Damu dut [DP hori orain esa-te-a]
   regret I-have that now say-TE-art
   I regret [ saying that now ]

   b. Damu dut [DP hori lehenago ez esa-n-a]
   regret I-have that before no say-perf-art
   I regret [ not having said that before ]

Not surprisingly, the perfective nominalizers are exactly the morphemes /n/tu. I specify this in (22); a tree diagram for the bracketed NCs is given in (23):

(22) /n/, N, [+completed], +V
    /tu/, N, [+completed], +V

(11) The feature [completed] simply designates whether or not the event denoted by the verb is terminated (cf. Zagona 1989). As Zagona suggests, it might as well be the case that what is crucial is that some aspect of the event be prior to a given reference point.
The properties of these perfective nominalized clauses are essentially the same as those of the NCs studied in the previous chapter (nothing new needs to be said), except that the nominalizer *te* studied there is lexically specified as [-completed] whilst *i/n/tu* are specified as [+completed].

We can now factor out the derivational and syntactic uses of nominal *i/n/tu*:

(24) Lexical entry (Nominal *i*, *n* and *tu*; merges (19) & (22))

\[
\begin{align*}
\text{Nominal} & , \text{N} , +V & \{ +N (V = +\text{NATIVE, +ACTIVITY/MOTION}) \} \\
& & \{ N = [+\text{completed}] \}
\end{align*}
\]

\[
\begin{align*}
\text{tu, N} , +V & \{ +N (V = +\text{ACTIVITY/MOTION}) \} \\
& & \{ N = [+\text{completed}] \}
\end{align*}
\]

If the parenthesized option is chosen, the derivational use of the perfect morpheme will result: crucially, the formation of derived nominals will be restricted to a specific subclass of verbs, where additional absorption of the noun phrase complement of the verb is obligatory. Otherwise the lexical entry predicts that NCs of the perfective type are generated.

3.2.1. Perfect nominalized clauses in adjunct positions

3.2.1.1. Verbal adjuncts

The nominalized clauses of the perfect type are in principle able to occur as complements to any contentful postposition, although this option is not often realized probably due to stylistic reasons. These NCs, however, are frequent when they bear the grammatical formative *ta* or *(r)*ik depending on the dialect; hence-

(12) This is also true of English perfect gerunds:

i. a. After seeing you, Ainhoa is happy again
b. After having seen you, Ainhoa is happy again

ii. a. Miles enjoyed playing with Bird
b. Miles enjoyed having played with Bird

Obviously, the (a) sentences may include the interpretation of the (b) sentences, while the reverse is not true.

(13) This *(r)*ik is homophonous with the partitive morpheme, but different. See de Rijk (1972b) for the differences between partitive *(r)*ik and this "stative RIK" (de Rijk's term).
forth I will refer only to *ta*, but the generalizations extend to both *ta* and *(r)ik* morphemes:

(25) a. *Ardoa eda-n-da* edozein afari animatzen da
    wine drink-perf-TA any party get-lively aux
    (With) the wine drunk, any party is lively

b. *Hitzaldia amai-tu-ta,* parlamentariak zutik jarri ziren
    speech finish-perf-TA deputies up stand aux
    (With) the speech finished, the deputies stood up

c. *Kalera irte-n-da,* Ainhoa pozik jarri zen
    street-adl leave-perf-TA happy get aux
    Gone out to the street, Ainhoa got/turned happy

The English translations show that this structures are indeed similar to the traditional *absolute constructions*; but unlike in English, a nominative subject can always be licensed in Basque:

(26) a. *Asierrek ardoa eda-n-da edozein afari animatzen da*
    (With) Asier having drunk wine, any party is lively

b. *Lehendakariak hitzaldia amai-tu-ta,* parlamentariak zutik jarri ziren
    (With) the president having finished the speech, the deputies stood up

c. *Gu guztioik kalera irte-n-da,* Ainhoa pozik jarri zen
    With all of us gone out to the street, Ainhoa got/turned happy

I suggest that this is because the internal structure of the italicized constituent is as in (23) above, namely a nominalized clause in the sense of the previous chapter. Recall from the discussion in chapter two that nominative (where “nominative” stands for ergative/ absolutive) subjects in nominalized DP clauses are assigned case by DET under certain conditions:

(27) The functional category D in DP assigns nominative case iff a verb is L-head of DP at S-S

I assume this is also the source for the nominative subjects in (26). The only element that still has to be accounted for is the grammatical formative *ta*. Obviously, the morpheme *ta* serves the function of licensing the nominalized DP as an adjunct (an adjunct DP cannot stand by itself —it would receive neither θ-role nor case). Since the tenseless structures in (25-26) are always adjuncts, I will assume that *ta* is in fact a morpheme of category P(ostposition) (i.e. a dummy, contentless P), which selects a perfect NC as +V^[+completed]. The article remains phonetically unrealized just like in any other singular PP in Basque. Further evidence in favor of the P membership of *ta* is provided in section 3.4.3

(14) This analysis squares well with the fact that *ta* derives historically from another closed class item, namely the conjunction *eta* ‘and’. The alternative would be to analyze these tenseless structures as pure CPs and *ta* as a complementizer; this is problematic since the obvious resemblance with NCs of the perfect type would be missed and, in order to preserve the generalization that the perfect morpheme is either nominal or adjectival, one would have to postulate the existence of an empty auxiliary and an abstract INFL node to assign case.
3.2.1.2 Nominal adjuncts

Characterizing these *ta*-headed adjunct structures as PPs whose DP complement is a nominalized clause of the perfect type (the internal structure of which was studied in detail in chapter two) sheds further light on the nature of Basque tenseless relatives (cf. Artiagoitia 1991). Tenseless relatives are formed by attaching the postposition *ko* to any *ta*- (or *(r)*ik)-headed “clausal” PP:

    wine drink-perf-TA-KO woman get-sick aux
    The woman [that has] drunk wine has gotten sick
    (lit: “the wine-drunk woman ...”)

   b. [[Atxagak idatz-i-ta-ko] nobela berria] itzel gustatzen zait
    name-E write-perf-TA-KO novel new a lot be-pleasing aux
    I like a lot the new novel [that] Atxaga [has] written
    (lit: “the new Atxaga-written novel ...”)

The postposition *ko* is ordinarily obligatory on any PP or CP (argument or adjunct) when they occur DP-internally:

(29) a. Zurrumurrua da Ainhoa gaisorik dagoela
    rumor is sick stays-comp
    The rumor is that Ainhoa is sick

   b. [Ainhoa gaisorik dagoela-KO zurrumurrua] egia da
    sick stays-comp-KO rumor true is
    The rumor that Ainhoa is sick is true

(30) a. Autobusa Bilbora doa
    bus Bilbao-adl goes
    The bus goes to Bilbao

   b. Hau [Bilbora-KO autobusa] da
    this Bilbao-adl-KO bus is
    This is the bus for/to Bilbao

Naturally, this confirms that *ta* must be either a postposition or a complementizer. In Artiagoitia (1991), it was extensively argued that the bracketed structures in (28) and the like have the behavior of Complex Noun Phrases and that the head noun is modified by a tenseless relative “clause” which contains an empty operator. Hence, the exact representation of (28) should be as in (31), with the empty operator in the spec (D) position:\(^\text{15}\):

    The woman [that has] drunk wine has gotten sick
    (lit: “the wine-drunk woman...”)

    I like the new novel [that] Atxaga [has] written a lot
    (lit. “I like the new Atxaga-written novel... a lot”)

(15) The tests for “Complex Noun Phrase-hood” were various in Artiagoitia (1991): pronominalization, impossibility of extraction, pied-piping, etc.
(32) a.

```
( n-∅-ta-ko in PF)
```

b.

```
( i-∅-ta-ko in PF)
```
The fact that spec(D) is an operator position in tenseless relatives formed with perfective NCs is hardly a surprise. We already saw in chapter one that spec(I) in Basque may be described as an operator position; subjects do not need to raise to that position in order to receive case from INFL (cf. Koopman & Sportiche 1991). Given the parallelism between IP and DP, spec(D) is expected to be an operator position (DP-subjects do not move to spec(D)), although it is not a possible landing site for [+WH] elements, as seen in chapter two. A similar situation arises in English DP-gerunds, which lack a COMP or spec(C) position proper in standard analyses like Stowell’s (1983). However, to the extent that spec(D) is empty when no overt subject is present (cf. section 3.2.1, chapter two), an operator may indeed occupy that position, as it is surely the case in parasitic gap constructions:

(33) a. Which linguisti did you hate t_i [pp after [DP Op_i PRO meeting t_i ]?

b. 

\[
\text{PP} \\
\text{P} \\
\text{DP} \\
\text{SP(D)} \quad \text{D'} \\
\text{D} \\
\text{NP} \\
\text{SP(N)} \\
\text{N'} \\
\text{N} \\
\text{DP} \\
\text{PRO meet} \\
\emptyset \\
\text{t}_i
\]

(ing in PF)

Unlike in Basque, where overt subjects need not raise to spec(D) and spec(I), overt subjects in English do raise to the latter positions. This predicts that parasitic gaps will not be licensed in gerunds with overt subjects because the operator position, namely spec(D), is occupied by the subject that moves from spec(N) to spec(D):

(34) *Which linguist did you hate after Mary’s meeting?

Consequently the data support the claim that spec(D) may be occupied by [-WH] operators in both English and Basque. The prediction is perhaps that English should have relative structures formed with DP-gerunds. It is generally assumed that this is not the case. However, the so-called reduced relatives studied in Emonds (1976: 166-172) and taken to be dominated a VP node (Cf. Fabb 1983) and more recently by an AP node (cf. Emonds 1990), might be analyzed in this fashion:
Going back to the contrasts between (28a/31a) and (28b/31b), the preceding analysis of tenseless relatives in Basque also predicts that the gap in the relativized "clausal" DP may correspond to either the subject or the object. This is possible because the subject position of these "clausal" DPs is assigned nominative case by DET under the conditions studied in chapter two (cf. (27) above) without the subject’s moving to the spec(D) position. Recall that the nominalized DP clause is generated when the nominalizer is subject to late lexical insertion, as is predictable from its lexical entry:

\begin{equation}
\begin{aligned}
(24) & \quad i/n\], N, +V \{ (+N \{ V = +\text{NATIVE}, +\text{ACTIVITY/MOTION}) \}\} \\
& \quad tu\], N, +V \{ (+N \{ V = +\text{ACTIVITY/MOTION}) \}\} \\
& \quad N = [+\text{completed}] \\
& \quad N = [+\text{completed}]
\end{aligned}
\end{equation}

Crucially no “argument absorption” is associated with this (non-parenthesized) value of i/n/tu.

The proposal made in this section avoids the hypergeneration of maximal phrases in the analysis of tenseless clauses, which was a problem in Artiagoitia (1991), where a full clausal structure (IP, CP) was assumed; and it also sets the basis for a unified analysis of perfect and non-perfect tenseless relatives formed with the nominalizer te. This generalization was not captured in Artiagoitia (1991). The situation with the Basque perfect morpheme in nominal adjuncts contrasts with English, where "perfect" morphology is always associated with the category adjective and with phrasal absorption (cf. Emonds 1989) (and the external argument is surpressed (cf. Grimshaw 1990)17. Therefore, the English counterparts to (28/31) are impossible, unless the subject is expressed by an adjunct by-phrase (cf. Zubizarreta 1987) or a relevant compound is available:

\begin{equation}
\begin{aligned}
(35) & \quad \text{en\], A, +V\{ \{\text{STATE} \} + \text{NP}\}} \quad \text{(Emonds 1989: 31)} \\
& \quad \{+[V \emptyset]\} \\
(36) & \quad a. [\text{The woman *(that has) drunk wine} has gotten sick} \\
& \quad b. [I like [The new novel *(that) Atxaga *(has) written]} \\
& \quad c. [I like [The new novel written by Atxaga]} \\
& \quad d. *[... [The new Atxaga-written novel]} \\
& \quad e. [The new computer-operated device] \\
& \quad f. [The new woman/man-controlled system]
\end{aligned}
\end{equation}

cf. e. f. [The new computer-operated device]

cf. e. f. [The new woman/man-controlled system]

To sum up, late insertion of the nominal value of the perfect morpheme gives raise to (perfective) NCs of the type studied in the previous chapter. These NCs are

(i) [Those people travelling to Tokyo] should go to gate 1.
(ii) [Those people [DP Op, [NP t; travelling to Tokyo]]] 

This suggestion is not without problems because DPs are generally not licensed as DP-internal adjuncts.

(17) As far as I understand his proposal, the supression of the external argument in Emonds's framework follows from his assumption that a morpheme (present at D-S) coindexed with the absorbed phrasal complement must receive the interpretation of the complement. Otherwise, any other suffix slot is interpreted as subject by default (i.e. if there is no coindexing or if no morpheme is present).
selected by the dummy postposition ta in order to form verbal adjuncts. Tenseless relatives can be construed by attaching the suffix ko to a PP headed by the postposition ta. This type of nominal adjunct, although similar in meaning to English adjectival passives in attributive position, differs from the latter in that the modified noun may indistinctively bind the subject or the object argument inside the tenseless relative.

3.3. The perfect morpheme in predicative contexts

In this section I will discuss two predicative uses of the perfect morpheme, when it occurs as complement to the verb egon 'be, stay' (cf. Sp. estar), and I will show that these predicative phrases are both dominated by a PP node. In the case of “stative” PPs (cf. (37)), I claim that these are selected as P heads in the base; crucially, the postposition ta subcategorizes for the perfect morpheme (the nominal value). In the case of the *experiential* perfect construction (cf. (38)), I propose that the PPs are in turn selected as \(+V^[+completed]\); I will try to argue that the insertion of ta in these cases is triggered by the Minimal Structure Principle discussed in chapter one pace the 0-Criterion. The relevant data are given in (37)-(38):

(37) a. Dena esa-n-da dagoenean istorioak berrasmatzen ditugu all say-perf-TA stays-comp stories reinvent aux
When everything is said, we reinvent stories
b. Independentziaren sua [itzal-i-ta] dagoela dirudi independence-gen fire extinguish-perf-TA stays-comp seems
It seems that the fire of independence is extinguished
c. Ainhoa [ikaratuta] dago frighten-perf-TA stays
Ainhoa is frightened

(38) a. Asier [Ameriketan ego-n-da] dago
America-loc stay-perf-TA stays
Asier has been in America (once at least)
(lit: “Asier stays stayed in America”)
b. Gu [filme hori ikus-i-ta] gaude we movie that see-perf-TA stay
We have seen that movie
(lit: “We stay/remain seen that movie”)
c. Ainhoa [Gorbeiara igo-n-da] dago
Gorbea-adl climb-perf-TA stays
Ainhoa has climbed to Mt. Gorbea (once at least)
(lit: “Ainhoa stays climbed to Mt. Gorbea”)
3.3.1. *Stative PPs*

The sentences with deverbal predicates in (37) have the property that their subjects generally correspond to the internal argument of the verb to which the perfect morpheme is affixed; the derived predicate may not have the full range of complements that the verb usually has:

\[(39)\]
\[
a. \text{Dena } ([*? \text{ umeei}) \text{ sta-n-da] dago}
\]
\[
\quad \text{all kids-dat say-perf-TA stays}
\]
\[
\quad \text{Everything is/remains said (*? to the kids)}
\]
\[
b. \text{Lana } ([*? \text{ irakasleari}) \text{ ema-n-da] dago}
\]
\[
\quad \text{work teacher-dat give-perf-TA stays}
\]
\[
\quad \text{The papeer stays/is given to the teacher}
\]

(39) proves that the verb is not the selectionally dominant head, like in English adjectival passives. The derived predicates in (37) resemble the English adjectival passives in yet another important aspect: they are complements to verbs like irudi ‘seem’, and they may also function as secondary predicates:

\[(40)\]
\[
a. \text{Su honek [itzal-i-ta] dirudi}
\]
\[
\quad \text{fire this-E extinguish-perf-TA seems}
\]
\[
\quad \text{This fire seems extinguished}
\]
\[
b. \text{Ainhoa [ikara-tu-ta] ikusten dut}
\]
\[
\quad \text{frighten-perf-TA see aux}
\]
\[
\quad \text{I see Ainhoa frightened}
\]

In principle it might seem natural to derive the existence of these deverbal predicates from their “adjective-hood”, which was summarized in the lexical entry given in (12):

\[(12)\]
\[
\text{Basque:}
\]
\[
[\text{i}], n, A, +V____ + N, \text{STATE } \{V = +\text{NATIVE, +ACTIVITY/+MOTION}\}
\]
\[
[\text{tu}], A, +V____ + N, \text{STATE, } \{V = +\text{ACTIVITY/+MOTION}\}
\]

Yet in (37) and (40) we find that the presence of the postposition ta (or \((r)ik\) in other dialects) is obligatory. Despite the momentarily unexplained presence of ta, one might try to argue for the adjectival character of esanda, itzalita, ikaratuta in (37) and (40) on the following bases:

a) APs (with the feature +A) are selected on the same environments; i.e. as complements to egon, to verbs like irudi ‘seem’ and as secondary predicates:

\[(41)\]
\[
a. \text{Ainhoa urduri dago}
\]
\[
\quad \text{Ainhoa is nervous (state)}
\]
\[
b. \text{Ainhoak urduri dirudi}
\]
\[
\quad \text{Ainhoa seems nervous}
\]
\[
c. \text{Ainhoa urduri ikusten dut}
\]
\[
\quad \text{I see Ainhoa nervous}
\]
This evidence is nonetheless inconclusive because nominal, postpositional, and clausal (modal) predicates are possible in the same environments:

(42) a. Ainhoa irakasle / problemekin / zer egin ez dakiela dago
teacher problems-com what do no knows-comp is
Ainhoa is ("stays") [as a] teacher / with problems / not knowing
what to do (lit: "that she doesn’t know what to do")
b1. Ainhoa datorren urtean irakasle ikusiko dugu
next year-loc teacher see aux
We’ll see Ainhoa [as a] teacher next year
b2. Ainhoa problemekin / zer egin ez dakiela ikusten dut
I see Ainhoa with problems / not knowing what to do
(lit: "that she doesn’t know what to do")

b) These ta-headed predicates seem to admit several specifier elements such as oso ‘very’ and nahikoa ‘rather’, etc.:

(43) a. Ainhoa oso ikara-tu-ta / oso urduri dago
Ainhoa is very frightened / very nervous
b. Ainhoak oso ikara-tu-ta / oso urduri dirudi
Ainhoa seems very frightened / very nervous
c. Ainhoa oso ikara-tu-ta / oso urduri ikusten dut
I see Ainhoa very frightened / very nervous

This again is not sufficient to posit that ta-headed predicates are APs; these specifier elements also modify some locational PPs and hence should be regarded as both spec(A) and spec(P):

(44) Osasuna sailkapenean oso / nahikoa beherantza joan da
name eague-loc very quite down-dir go aux
Osasuna has gone very/quite downwards in the league standings

Furthermore, some spec(A) modifiers that appear post-adjectivally are incompatible with these predicates; samar ‘rather’, the diminutive txo, and the comparative:

(45) a. Ainhoa *ikara-tu-ta samar / urduri samar dago
Ainhoa is rather frightened / rather nervous
b. Ainhoa *ikara-tu-ta-txo / urduritxo dago
Ainhoa is a little frightened / a little nervous
c. Ainhoa Asier baino *neka-tu-ta-ago / urduriago dago
than more
Ainhoa is more frightened / more nervous than Asier

Finally, the fact that these predicates cannot be DP-internal modifiers also refutes the idea that they might be considered adjectival:
(46) Amets apur-tu-ak ez ditu etorkizunak berreraikiko
dream break-perf-art no aux future-erg rebuild
The future will not rebuild broken dreams

(47) * Amets apur-tu-ta-ak ez ditu etorkizunak berreraikiko
break-perf-TA-art
The future will not rebuild broken dreams

Therefore, I conclude that these predicates are not dominated by an AP node. Instead, I will assume that they are dominated by a PP node headed by ta and selected as a P head. I adopt de Rijk’s suggestion that ta and (r)ik are associated with the feature STATE (they are “stative”; cf. note (13)) and propose that they have the subcategorization frame P, +N__, STATE (where N must be i, n or tu). The feature STATE will force D-S insertion of ta; at that level, on the basis of (24) we equally predict that the only possible realizations of the nominal value of the perfect morpheme will be circumscribed to unaccusative and transitive verbs.

(48) a. ta] (rik]), P, \{+V^[+completed]\} b. PP
       \{+N__, STATE\} P' P
       N P
       \{ itzal, i ta \}
       \{ esa, n ta \}
       \{ neka, tu ta \}

An interesting issue arises when we ask why these deverbal predicates are not selected as A(djectives), which is indeed a possibility by virtue of the lexical entry (12); if selected as mere Adjectives, we do not expect the presence of the postposition ta. I have no explanation for this, except to suggest that perhaps the selection of a P head is preferred to selection of a deverbal adjective because the Adjectival value of the perfect has been “imported” by Basque from Indo-european. I will simply point out that in some dialects (notably in Gipuzkoan Basque), the adjectival option is in fact realized; the deverbal predicates studied in this section do not surface with the postposition tal(r)ik, but rather with number agreement (=the article), which is absent in this position in standard Basque:

(18) Perhaps the feature [+completed] is also present on the perfect morpheme when the latter is subject to D-S insertion. If so, (48) can be further generalized:
   i. ta], (rik]), P, \{+V^[+completed]\}
       \{+N__, STATE, [N = [+completed]]\}
Interestingly enough, this adjectival variant of deverbal predicates seems an innovation (hence a change) with respect to Old Basque and the rest of the dialects. One final remark needs to be made with respect to (24), repeated here for convenience:

(24) \[
\begin{align*}
&i\}, n\}, N, +V_0 \bigl( \langle+V \{V = +\text{NATIVE}, +\text{ACTIVITY/MOTION}\}\rangle \bigr) \\
&tu\}, N, +V_0 \bigl( \langle+V \{V = +\text{ACTIVITY/MOTION}\}\rangle \bigr)
\end{align*}
\]

Although referential nouns derived from the perfect morpheme are in principle possible with the three perfect endings, this option is seemingly more common with morphemes \(i\) and \(n\). The solution proposed in this section to account for the \(ta\)-headed deverbal predicates assumes implicitly that this is accidental. Nonetheless, we can maintain (24) as basically correct, and posit that the relative scarcity of (referential) \(tu\)-derived nouns is actually a reflection of its being the only productive morpheme to form derived nominals (cf. Lieber 1992: 4-9 on frequency vs productivity). The apparently larger number of nouns derived from \(i\) and \(n\) may thus be regarded as mere "lexicalizations", historically but non-synchronically related to the corresponding verbs. Support for this view comes from the fact that many verbs may productively form \(tu\)-derived nouns which are not listed in corpora and dictionaries:

(50) a. \[[\text{Zapaltzaileek eta } zapal-du-ek]\] elkar gorrotatzen dute 
    cf. b. \[[\text{The oppressors and the oppress-ee-s}\] hate each other 
    cf. c. \[[\text{Los opresores y los oprim-ido-s}\] se odian (Spanish)

Without adopting a definitive position here, I note that the formation of nouns from the perfect morphemes is predicted to be possible by virtue of (24) and, when so, it is circumscribed to a semantic class of verbs.

(19) In the dialects where the nominal option is chosen and the postposition \(ta\) appears on the surface, the comparative morpheme \(=\text{spec}(A)\) is possible for many speakers without the postposition itself (and without number agreement):

i. Ainhoa Asier baino neka-tu-ago dago (cf. (49b))

This means that the "adjectival" perfect morpheme can be selected when the comparative is used. This could be taken to support the claim that the comparative (Degree) is the head of the predicate (Degree Phrase). Be it as it may, (i) is consistent with the fact that the perfect morpheme in Basque is both nominal and adjectival, and that when the former option is chosen to form predicates, a grammatical postposition is required.

(20) There are a couple of exceptions to the non-agreement status of APs as complements to e.g. the adjective on when applied to food/dinks:

i. \(\text{Ardoa(-k)} \text{ onda / ona(-k)} dago\) (daude) The wine(s) is (are) good (pl).
3.3.2. The VP type of participial PP

The participial predication of the type illustrated in (38) (sometimes referred to as an antipassive construction cf. Rebuschi 1983), is, as far as I know, exclusive to Western Basque and has the interpretation of an experiential perfect (cf. Comrie 1976: 58). The bracketed predicates in (38) have three salient properties: a) they behave like simple "VP"s (cf. 51) in that verbs appear with their corresponding complements (any verb is possible) and in that the subject of the sentence is always the external argument as in a regular sentence:

(51) a. Asier [*(Ameriketan) ego-n-da] dago
    Asier has been *(in America) (once at least)

b. *Umea [ipuina konda-tu-ta] dago
    kid tale tell-perf-TA stays
    The kid has been told the story (lit: "the kid stays told the story")
    [o.k. meaning "the kid has told the story"]

b) these predicates are only possible as complements to the verb egon, which acts as a "semi-auxiliary" verb (cf. 52):

(52) Asier [Ameriketan ego-n-da] dabil / da
    stay-perf-TA stays
    Asier has been in America (once at least)

(53) * Asier [Ameriketan ego-n-da] dabil / da
    walks is

c) the morpheme ta (or (r)ik) appears obligatorily on the perfect morpheme:

(54) Asier [Ameriketan ego-n-da / *ego-n-∅] dago
    Asier has been in America

Properties (a) and (b) follow from the assumption that the verb egon can select a verbal head together with the feature [+completed], which later triggers the insertion of the perfect morpheme, not present until PF:

(55) egon, V, +V^[+completed]

Property (c) is all the more intriguing. In section 3.2.1, we have characterized the morpheme ta as a member of category P, although the alternative possibility that it is of category C was mentioned in note 14. This has been further supported by the discussion in 3.3.1 above. Consider (38b) and (56) below, where a tensed CP with an impersonal sentence (the external argument is not realized syntactically) in the predicate position yields an ungrammatical result:

(38b) Gu [filme hori ikus-i-ta] gaude
    we movie that see-perf-TA stay
    We have seen that movie (lit: "We stay/remain seen that movie")
(56)  *Gu [filmea ikusi de-la] gaude we movie see-perf aux-comp stay
*We “stay”/are [that the movie has been seen] (... one has seen the movie)

(56) would be the perfect counterpart to (38b) if the bracketed constituent in (38b) were indeed a CP. The fact that (56) is ungrammatical lends additional support to the claim that ta is indeed a postposition (and not a complementizer). Given that ta is now undoubtedly a postposition, the question still remains as to why a postposition should be projected in (38) in the first place. The reason becomes clear once we bear in mind that the Basque perfect morpheme is nominal; thus, if egon selects as proposed in (55), nothing in principle could prevent the generation of a nominalized DP clause with its own internal subject. But in that case the subject of egon will not receive any θ-role: neither from the subcategorized verb since all θ-assignment will be internal to the DP clause, nor from egon since crucially egon does not assign any θ-role. This ungrammatical result is illustrated in (57a) and (57b):

(57)  a.  *Asier [Ainhoa Gorbeiara igo-n-da] dago
Asier “stays”/has [Ainhoa climbed to Mt. Gorbea]
(cf. Asier is going home vs *Asier is [Ainhoa’s going home]
b.  *IP

We now understand why ta must be inserted; the postposition ta is licensed by the Minimal Structure Principle pace the θ-Criterion to prevent the nominalizing
suffix (\(v\) in this case) from projecting into a normal phrase, and hence from leaving
the main subject without a 0-role, as in (57b):

\[
(58) \quad \text{IP} \quad \text{VP} \\
\quad \text{DP (\(\emptyset\))} \quad \text{VP} \quad \text{VP} \\
\quad \text{PP} \quad \text{V} \quad \text{P'} \\
\quad \text{PP} \quad \text{P} \\
\quad \text{V} \quad \text{N} \\
\text{Asier} \quad \text{Gorbeiarra} \quad \text{igo} \quad \emptyset \quad \emptyset \quad \text{egon} \quad (\text{n-da in PF})
\]

This is in line with Chomsky's (1991) notion of Economy of Representation. In (58)
the perfect morpheme has the nominal value, bears the feature [+completed], as
argued before, and is subject to late lexical insertion. Considering the perfect mor­
pheme merely adjectival like in English would make the insertion of the postposi­
tion a total puzzle. I assume the postposition \(ta\) is inserted under the empty P node in
PF because it may also subcategorize for a noun morpheme specified as [+completed]:

\[
(59) \quad [\text{ta}], \text{P}, \,+\text{N}^\wedge[+\text{completed}] \\
\quad \text{[where late inserted nominal \(tu,i,n\) are specified as [+completed]]}
\]

We thus arrive at the following lexical entry for \(ta\):

\[
(60) \quad [\text{ta}], \text{P}, \quad \text{a. } +\text{V}^\wedge[+\text{completed}] \\
\quad \text{b. } +\text{N}^\wedge, \text{STATE (N = i,n, } tu) \\
\quad \text{c. } +\text{N}^\wedge[+\text{completed}]
\]

In other words, \(ta\) may take perfective nominalized clauses as complements
(option \(a\), cf. 3.1) or may be an affix on nominal elements (options \(b\) and \(c\)). In the \(b\)
case, the semantic feature STATE guarantees that P is already present at D-S and
simply forms derived words of category P; the fact that the noun derivation based on
the perfect morpheme is itself restricted to transitive and unacussative verbs at D-S
by (24) explains all the facts about stative PPs discussed in section 3.3.1. Option \(c\),
on the other hand, asserts that \(ta\) is bound affix insertable after S-S on any noun
specified as [+completed]; this accounts for (58) and the examples discussed in this
section. Given the similarity between the non-phrasal subcategorizations, it is
tempting to further generalize (60). If the suggestion in note 18 is on the right track
(viz. if the feature [+completed] is present on the perfect morpheme even when inserted at D-S), we can maximally generalize the lexical entry of ta:

\[(60') \text{ta} \mid P, \quad +V^[+\text{completed}] \\
\quad +N[^\text{(STATE)} \{N = [+\text{completed}]\}]\]

After discussing these two kind of PP predicates both licensed by the nominal properties of the perfect morpheme, I now turn to the so-called “passive” construction in Basque.

3.4. On the so-called passive

So far I have established that the so-called perfect morpheme in Basque has in fact dual categorial status (N and A), and further that it can be inserted at both D-S and after S-S (on its way to PF). Its occurrences are in fact predicted from the respective lexical entries, summarized here as (61) and (62):

\[(61)\]
\[a. \quad i], n], A, +V_\{(+N, \text{STATE} \{V = +\text{NATIVE}.. \\
\quad \ldots +\text{ACTIVITY/MOTION}\}) \}
\quad A = [+\text{completed}] \\
\[b. \quad tu], A, +V_\{(+N, \text{STATE} \{V = +\text{ACTIVITY/MOTION}\}) \}
\quad A = [+\text{completed}]\]

\[(62)\]
\[a. \quad n], i], N, +V_\{(+N \{V = +\text{NATIVE}.. \\
\quad \ldots +\text{ACTIVITY/MOTION}\}) \}
\quad N = [+\text{completed}] \\
\[b. \quad tu], N, +V_\{(+N \{V = +\text{ACTIVITY/MOTION}\}) \}
\quad N = [+\text{completed}]\]

Moreover, the occurrence of the postposition ta with the perfect morpheme was claimed to arise as a result of the nominal value of the perfect, which is selected by the postposition. In this section, I will focus on the so-called “passive construction” of Basque and show that it is in fact a tenseless relative structure of the kind pointed out in section 3.2; this is in line with Eguzkitza’s (1981) and Ortiz de Urbina & Uribe-etxebarría’s (1991) proposals.

3.4.1. More on tenseless relatives

In section 3.2.1.2, I have analyzed tenseless participial relatives as PPs which contain nominalized DP “clauses” of the perfect type headed by an empty operator in the spec(D) position; this is a welcome move since it solves an oversight from Artiagoitia (1991), where tenseless non-perfective relatives were analyzed as having a nominal head, as opposed to tenseless perfective relatives, which had no nominal head. Recall from section 3.2.1.2, that the formation of tenseless relatives involves

(21) As was noted at the beginning of section 3.2, the late insertion option of an adjectival perfect morpheme will be discussed in the next chapter. This option has been reflected in the lexical entry (61b) for ease of exposition.
ta-headed PPs which surface with the dummy postposition ko; this postposition affixes to any DP-internal PP or CP:

(63) a. [[[Op; e; ardoa eda-n-Ø DP]-da pp]-ko pp] andre#i gaisotu egin da (=31a)
The woman [that has] drunk wine has gotten sick
b. [[[Op; Atrxagak e; idatz-i-Ø DP]-ta pp]-ko pp] nobela; berria] itzel
gustatzen zait (=31b)
I like a lot the new novel [that] Atxaga [has] written

Depending on the dialect, (r)ik is used instead ta in sentences like (63). There is even more dialectal variation: in some subdialects of Biscayan Basque, and apparently in northern dialects too (cf. Lafitte 1962), tenseless relatives are possible without either ta or (r)k mediating between the DP and ko22:

(64) a. [Ardoa eda-n-Ø-eko andrea] gaisotu egin da
wine drink-perf-Ø-KO woman get-sick aux
The woman [that has] drunk wine has gotten sick
b. [Atrxagak idatz-i-Ø-ko nobela berria] itzel gustatzen zait
write-perf-Ø-KO novel new a lot be-pleasing aux
I like a lot the new novel [that] Atxaga [has] written

The last variation on tenseless relatives is found in dialects where no overt postposition intervenes between the relative DP and the head noun:

(65) a. [Ardoa eda-n-Ø andrea] gaisotu egin da
b. [Atrxagak idatz-i-Ø nobela berria] itzel gustatzen zait

For congruence reasons, I will assume that an empty postposition is present even in (65) to license the “relative” DP. Having established a few further facts about tenseless relatives in Basque, I now return to the question of the “passive” construction.

3.4.2. Explaining the non-existence of the passive

That there is no “passive” or “passive transformation” proper in Basque has long been recognized by generative syntacticians (cf. Wilbur 1979). This is for example de Rijk’s (1978) position, who credits Bouda for the suggestion that the apparent passive is derived from a relative clause: “there is no Passive rule in Basque... there is a resultant “Passive”,... derived from a bi-clausal source by means of Relative Clause Reduction, as Bouda (1973: 27) and, no doubt, many others too, have recognized” (de Rijk 1978: 84-85). Eguzkitza’s (1981) article is a more elaborate attempt to formalize this notion; Eguzkitza extensively argues that Bollenbacher’s (1977) claim that there exists a passive transformation in Basque is empirically

(22) This is probably because ko may also attach to attributive DPs.
i. Bihotz on-eko andrea
heart good-KO
A woman of good heart

[115]
untenable. He proposes that what might look like a passive in Basque is in fact derived from a tensed relative clause reduction, as suggested by de Rijk/Bouda. Some examples of the apparent passive construction are given below:

(66) a. Liburu hau *(Leizarragak) aspaldian idatz-i-a* da
    This book is the (one) written by Leizarraga long ago
    (lit: “this book the long ago Leizarraga-written (one)”)  
    b. Liburu hauek *(Leizarragak) aspaldian idatz-i-ak* dira
    These books are the (ones) written by Leizarraga long ago
    (lit: “these books are the long ago Leizarraga-written (ones)”)  

(67) a. Liburua *(Kepak) Edurneri ema-n-a* da
    The book is the (one) given by Kepa to Edurne
    b. Liburu hauek *(Kepak) Edurneri ema-n-ak* dira
    These books are the (ones) given by Kepa to Edurne

What is taken to be the Basque passive usually consists of a subject noun phrase, the corresponding form of the copula IZAN ‘be’, and a constituent headed by the perfect form of the verb and the article, which agrees with subject. This last constituent may or may not contain a noun phrase bearing ergative case. The basic arguments disputing the “passive” status of (66)-(67) are fairly conclusive and I summarize them below, cf. also Eguzkitza (1981), Ortiz de Urbina & Uribe-etxebarría (1991). The argument (b) and, partially, (d) are my own:

a) In Basque the inflected verb displays agreement with datives; hence, in (67) the verb should in principle agree with the dative/indirect object Edurneri, but this is impossible:

(68) *Liburu hau/hauek Kepak Edurneri ema-n-a zaio/zaizkio
    This book is (dat-agr)/ these books are (dat-agr) the (one/s) given by Kepa to Edurne

b) Sentences (66a/b) are in the present tense but contain a time PP/adverbial modifier, aspaldian ‘long ago’, which must modify a past event. If (66a/b) were true passive structures, there should be a similar active counterpart in the present tense; but this counterpart does not exist, because aspaldian is incompatible with the present tense of idatzi ‘to write’ (cf. 64a below). Rather, the only “active” sentence that comes close to (66) is a sentence in the past tense:

(69) a. * Leizarragak aspaldian liburu hauek idazten ditu
    -E long ago book these write aux

(23) Although from now on I gloss the ergative noun phrase of the Basque examples as a by-phrase (no tenseless “perfect” relative clause exists in English), the ergative is best translated actively, as will become clearer.
Leizarraga writes these books long ago
b. Leizarragak aspaldian liburu hauek idatzi zituen
Leizarraga wrote these books long ago

This strongly suggests that there are two separate sentences involved in (66): the main clause with the copula in the present tense, and some embedded sentence-like structure the verb of which *aspaldian* modifies.

c) Even though Basque is a free word-order (scrambling) language, the elements inside the italicized structure in (66) can never be moved out, "scrambled", which contrasts with the free worder in a sentence that would be considered "active":

(70) a.* Leizarragak liburu hauek [aspaldian idatz-i-ak] dira
Leizarraga-E book these long ago write-perf-art are
b.*Liburu hauek [idatziak] dira aspaldian Leizarragak
 c.* Aspaldian liburu hauek [Leizarragak idatziak] dira
d.*Liburu hauek [Leizarragak idatziak] dira aspaldian

(71) a. Leizarragak liburu hauek aspaldian idatzi zituen
Leizarraga-erg book these long ago write aux
Leizarraga wrote these books long ago
b. Liburu hauek idatzi zituen aspaldian Leizarragak
c. Aspaldian liburu hauek Leizarragak idatzi zituen
d. Liburu hauek Leizarragak idatzi zituen aspaldian

d) In that respect, the italicized elements of (66) behave like a complex noun phrase (CNP):

(72) a. Liburu hauek [Leizarragak aspaldian idatzi zituenak] dira
book these -E long ago write aux-com-art aux
These books are the (ones) that Leizarraga wrote long ago
b.*Leizarragak liburu hauek [e aspaldian idatzi dituenak] dira
 c.* Nork dira liburu hauek [aspaldian idatzi dituenak]?
*Who are these books the (ones) that e wrote long ago?

This claim is confirmed by other properties of CNPs in Basque such as pied-piping and the impossibility of a short answer to a wh-phrase in a pied-piped structure:

(73) Q: [(Aspaldian) nork idatz-i-ak] dira liburu hauek ?
long ago who write-perf-art are book these
These books are [ the (ones) written by whom ] ?
A1: *Leizarragak
A2: Leizarragak idatz-i-ak dira...
The (ones) written by Leizarraga

Q: [(Aspaldian) nork idatzi zituenak] dira liburu hauek ?
long ago who write aux-comp-art are book these
These books are [ the (ones) that who wrote long ago ]?
A1: *Leizarragak
A2: Leizarragak idatzi dituenak...
The (ones) that Leizarraga wrote...

In conclusion, the four tests above demonstrate that the italicized/bracketed structures are a separate constituent, a syntactic island, instead of a VP; moreover, this constituent appears to be a complex noun phrase, which contains an empty head noun and a tenseless relative. Once the "passive" structure has been identified with a complex noun phrase containing a headless relative structure (in fact the postpositionless type discussed in 4.1.), the apparent resemblance of the Basque structures to the Indo-European passive is obscured; for instance, nothing prevents the Basque CNP from having an overt head:

(75) a. Liburu hauek [Op: Leizarragak aspaldian e idatz-i liburuak] book these -erg long ago write-perf book-art dira (cf. 66b) are
These books are the books written by Leizarraga long ago
(lit: "these books are the long ago Leizarraga-written books")
b. Liburu hauek [Op: Kepak Edurneri e; ema-n liburuak] dira book these give-perf book-art are (cf. 65b)
These books are the books given by Kepa to Edurne
(lit: "these books are the Kepa-given books to Edurne")

Similarly, and for the reasons explained in section 2.1.2 above, the noun modified by the relative clause may be the subject of the embedded structure:

(76) a. Leizarraga [liburu hauek aspaldian idatz-i autorea] da author
Leizarraga is the one (author) [that has] written these books long ago
b. Kepa [liburu hauek Edurneri eman (lagun)-a] da friend
Kepa is the one (friend) [that has] given these books to Edurne

Naturally, even though the postpositionless type of tenseless relatives is the only one mentioned in discussions about Basque "passives", other types of tenseless relatives may also be used for this kind of predication:

(77) a. Liburu hauek [Leizarragak aspaldian idatz-i-ta-ko-ak] dira
These books are the ones [that] Leizarraga [has] written long ago
b. Liburu hauek [Leizarragak aspaldian idatz-i-ta-ko liburuak] dira
These books are the books [that] Leizarraga [has] written long ago
c. Leizarraga [aspaldian liburu hauek idatz-i-ta-ko-a] da
Leizarraga is the one [that has] written these books long ago

(24) There are other problems for a "passive" approach, such as considering ergative DPs as adjuncts (in a parallel fashion to English by-phrases); this point is made in Ortiz de Urbina & Uribe-ecexebetria (1991). Eguuskirri (1981) also notes that the optionality of the ergative DP under the "passive" approach would conflict with the productive "detransitivization" phenomenon in Basque.

[118]
d. Leizarraga [aspaldian liburu hauek idatzi-ta-ko idazlea] da
Leizarraga is the writer [that has] written these books long ago

Again all these sentences lack a corresponding “active”, as was pointed out in (69a), because *aspaldian* cannot modify the verb *idatzi* in the present tense.

It now becomes clear that what was wrongly termed “passive” in Basque is just an example of a sentence construed with the copula, a subject noun phrase, and a headless noun phrase which contains a tenseless relative. The reason why this remained partly unnoticed is because it was the postpositionless kind of headless relative clause (itself limited to northern dialects) that dominated the debate over “passive sentences” in Basque, since the latter is superficially the closest one to Indo-European passives. The preceding discussion has illustrated the fact that the Basque “passive” as such does not exist; it is rather a CNP (with a zero noun) together with the copula which serves as predicate. A similar proposal has been independently made in Ortiz de Urbina & Uribe-etxebarria, although some non-trivial differences exist between their analysis and mine \(^{25}^{26}\).

(25) Most notably, that they don’t relate the so-called “passive construction” to the whole array of tenseless relative structures. In fact their analysis resembles that of a headless noun phrase containing a tenseless relative clause, but neither term is ever used. Less importantly, they assume a CP status for the tenseless relative clause as in Ariaigoitia (1991), a position which I argued against in section 3.2.1.2. O&U also include some examples with the verb *ukan* ‘have’, used as a “semicopulative” verb [O&U’s terminology]:

i. Nik liburu bau idazlea [dedika-tu-a] dut
   I-erg book this writer-erg dedicate-perf-art have
   This book of mine is dedicated by the author

ii. Nik lagunak aljeriarrak ditut
   I-erg friends-art Algerian-art have
   Friends of mine/my friends are Algerian
   (lit: ‘I have this book the (one) dedicated by the writer”)

My analysis remains unaffected if we reject the assumption that *ukan* assigns a 0-role to the DPs *liburu bau* and *lagunak*. This is shown by the fact that the restrictions on the “objects” in (i-ii) are the same to the restrictions on subjects of copulative sentences (both are incompatible with the partitive case). Sentence (iii) and (iv) illustrate the use of semicopulative *ukan* ‘have’; the noun phrase cannot be in the partitive case in a negative sentence:

iii. Nik lagunak aljeriarrak ditut (=ii) iv. *Ex dut lagunik aljeriara
   Friends of mine are Algerian
   No friend of mine are Algerian
   (lit: ‘I have no friend Algerian”)

In (v) and (vi) the regular copula *izan* ‘be’ is used, and the subject noun phrase cannot be in the partitive case either, as in (iv):

v. *(Nire) lagunik ez da aljeriarra
   My friends are Algerian
   No friend (of mine) is Algerian
   (lit: ‘I have no friend Algerian”)

vi. Nik ez dut [aljeriar lagunik]
   I-erg no have Algerian friend-part I have no (Algerian) friend(s)
   Therefore we can conclude that *liburu bau* in (i) is not a bona fide object of *ukan* and that the sentence must be analyzed in a similar fashion to the apparent “passive” structures, except that the verb *ukan* ‘to have’ functions as a copula, with its subject being interpreted as the possessor of the referential noun phrase in object position.

(26) Another crucial difference is that O&U identify all instances of participial predication with DPs containing open sentences; the analysis pursued in this chapter, on the other hand, suggested that some participial predicates are PPs (or APs in some dialects cf. (49)), whilst others manifest themselves as headless DPs containing a tenseless relative. Let us examine the following sentences:

i. (%Jonek) bilaroko paper hau [sina-tu-a] ekarriko du
   Jon-erg tomorrow-for paper this sign-perf-art bring aux
   Jon will bring this paper signed for tomorrow (O&U’s 22a)

ii. Jonek paper hau [gurasoek] sina-tu-a ekarriko du
   parents-erg sign-perf-art bring (O&U’s 22b)
   Jon will bring this paper [which] (his) parents have signed
   (lit: Jon will bring this paper parents-signed)
The issue, however, is not that Basque does not have a true passive, but rather why it cannot have a passive if it has a perfect morpheme, similar to the corresponding Indo-European passive and past participle morpheme in several respects. This, in turn, presupposes that we have a deep understanding of what the lexical properties of the past participle en and the passive morphemes are (they are identical in many Western European languages). In work in progress, Emonds (1989) proposes that the "perfect" use of the passive morpheme in periphrastic verb forms may have been a result of the absorbed NP's becoming optional. This captures the generalization that in Indo-European languages the perfect morpheme is always the same as the passive, which he identifies with the category Adjective:

The only superficial difference between (i) and (ii) is the presence of the subject of the verb sinatu 'to sign' in (ii). Under O&U's account, both bracketed structures would be assigned the same structure, namely that of a headless relative clause, predicated of paper hau. Under the proposals formulated here, however, sinatu in (i) is just a case of a deverbal AP used as secondary predicate; this is supported by the fact that other dialects use a deverbal PP with the postposition ta (r), as expected from my analysis (cf. section 3.3.1):

(iii. Jonek biharko paper hau [sina-tu-ta] ekarriko du
Jon-erg tomorrow-for paper this sign-perf-TA bring aux
Jon will bring this paper signed

Furthermore, it is possible to have a wh-phrase that "inquires" about this secondary predicate:

how bring aux Jon-erg paper this sign-perf-ART

How will Jon bring this paper? Signed?

If the structure of (i) and (ii) were the same, in the latter sentence it should be equally possible to have a deverbal PP predicate with the postposition ta; but this is not the case:

(v. *? Jonek paper hau [gurasoek sina-tu-ta] ekarriko du
Jon-erg paper this parents-erg sign-perf-TA bring aux
Jon will bring this paper parents signed

What is more, no wh-phrase that refers to the participial structure in brackets is allowed:

(vi. a: *? Nola ekarriko du Jonek paper hau? Gurasoek sina-tu-a?
How will Jon bring this paper? The one [that] his parents (have) signed?

b: *? Nola ekarriko du Jonek paper hau? Gurasoek sina-tu-ta?
How will Jon bring the paper? Parents-signed?

The only wh-phrase that may replace the bracketed structure in (ii) is zer 'what', but in this case paper hau is also part of the replaced constituent:

(vii. Speaker A: Zer ekarriko du Jonek? Speaker B: paper hau gurasoek sina-tu-a
What will Jon bring? This paper [that] parents [have] signed

This shows that [paper hau gurasoek sina-tu-a] is a constituent, the DP object of ekarriko in (ii). I suggest that this constituent is a complex noun phrase and that [gurasoek sina-tu] is simply an extraposed tenseless relative; (ii) is in fact derived from (viii.a) below, via a postpositionless kind of tenseless relative:

(viii. a. Jonek [gurasoek sina-tu] paper hau ekarriko du
Jon-erg parents-erg sign-perf paper this bring aux
b. Jonek [gurasoek sina-tu] paper hau ekarriko du
Jon will bring this paper [that] parents [have] signed

This is the phenomenon that de Rijk (1972a: 168-171) terms Pseudo-extraposition, very common in tensed relative clauses in Basque. The article is added to extraposed relative and agrees in number with the antecedent:

(ix. Behin bazen [tsazpi seme-abala zituneN-] errege bat
Once was seven son-daughter had-cmp king one

x. Behin bazen [tsazpi seme-abala zituneN-a]-art
Once upon a time, there was a king who had seven sons and daughters

Hence, in (ii) the article on sinatu is just a reflection of the number agreement (with paper hau) of the extraposed tenseless relative.

Otherwise, my analysis of (ii) doesn't differ in crucial respects from O&U's; the fundamental difference lies in the treatment of predications like those in (i), which I claim contain no clausal structure but are simply APs (restricted to some dialects) or PPs (the more general option).
Regardless of whether this is historically true or not for Romance and/or Germanic, a comparison between (78) and (61-62) (repeated below) shows that in Basque absorption of the NP complement by the perfect morpheme, in both the adjectival and nominal use, is only possible under “early” or D-S insertion; since no absorption feature is ever associated with the morpheme when inserted after S-S structure, it follows that the adjectival perfect morpheme, when and if subject to late lexical insertion, will only appear in periphrastic constructions (cf. next chapter). If nominal, it will display the properties of a nominalized tenseless clause, as explained in (20) above:

(61) a. i], A, +V_ {(+N, STATE {V = +NATIVE,.. +ACTIVITY /MOTION })} A = [+completed]
    b. tu], A, +V_ {(+N, STATE {V = +ACTIVITY /MOTION })} A = [+completed]

(62) a. n], i], N, +V_ {(+N {V = +NATIVE,.. +ACTIVITY /MOTION })} N = [+completed]
    b. tu], N, +V_ {(+N {V = +ACTIVITY /MOTION })} N = [+completed]

In sum, the lack of a true passive in Basque can be minimally reduced to the lexical properties of the grammatical formatives i/tu/n, which unlike their Indo-European counterparts, lack the necessary absorption feature associated with the passive morpheme when the latter is inserted after S-S. Given the parallelism between the nominal and the adjectival values of the Basque perfect morpheme, we can factor out what (61) and (62) have in common and propose the following unified lexical entries:

(79) a. i], [+N], +V_ {(+N, [+N]: {V = +NATIVE,..})} (A: STATE) [+N] = [+completed]
    b. tu], [+N], +V_ {(+N, [+N]: {V = +ACTIVITY,..})} (A: STATE) [+N] = [+completed]

[where + N = obligatorily empty at D-S; cf. note 9]

I take [+N] to be an “archicategory” that includes nouns and adjectives, as in Chomsky (1970) and Emonds (1990). If the bracketed option is chosen, the affixes are inserted at D-S with the corresponding semantic restrictions on the verbal bases (the adjectival use is additionally associated with the semantic feature STATE); in either case (A or N), the affix absorbs the first noun phrase complement of the verb. Otherwise, the affixes are not inserted until after S-S on their way to PF, and are invariably associated with the feature [+completed].
Addendum to chapter three

Rebuschi (1983, 1989) has argued that the stative PP predicates studied in section 3.3.1 (and alternatively realized as APs in other dialects (cf. 49)) may show up with the external argument marked ergative, in what he assumes is a passive structure:

(1) a. (*) Azak [aitak landa-tu-ta] daude
   Cabagges father-E plant-perf-TA stay
   The cabagges stay/are planted by the father
b. (*) Eskutitzak [Pellok idatz-i-ta] daude
   letters
   -E write-perf-TA stay
   The letters are written by Pello

Although some speakers might accept sentence (1) as grammatical, others (including myself) find it a mere copy of the corresponding Romance sentence, which contains the verb estar and an adjectival passive:

(2) a. Las berzas estan plantadas por el padre
   b. Las cartas estan escritas por Pello

Rebuschi derives (1) and (2) by movement of azak ‘cabagges’ and eskutitzak from inside the bracketed constituent and considers aitak and Pellok as adjuncts:

(1)' Azaki [aitak ei landa-tu-ta] daude
(2)' Eskutitzaki [Pellok ei idatz-i-ta] daude

This analysis is problematic on two counts: first, assuming that the moved constituents originate in the e positions and are part of a clause-like constituent at D-S, there is no reason whatsoever for these noun phrases to move if they are sisters to landatuta and and idatzita since adjunct “clausal” PPs headed by ta are possible as we saw in 3.2.1.1 and nothing prevents the verb from assigning case to its object. Rebuschi assumes that the constituent is a VP, which suggests he has little to say about the categorial status of ta in either the verbal adjunct (“clausal”) use or the one at issue here. Second, Rebuschi’s account makes an incorrect prediction: if (1) is a passive structure, then all transitive verbs are in principle possible targets for this construction, which is incorrect:

(3) a. Filme hau [ (*guk) ikus-i-ta dago]
   movie this we-E see-perf-TA stays
   This movie is heard (*by us)
b. Lehioa [ (*umeek) apur-tu-ta] zegoen
   window kids-E break-perf-TA stayed
   The window was/remained broken (*by the kids)
c. Ainhoa [ (*mamuek) ikara-tu-ta] dago
   (storm-E) frighten-perf-TA stays
   Ainhoa is/remains scared (*by the ghosts)
In fact, a close look at the examples shows that the sentences given by Rebuschi all correspond to Romance adjectival passives that allow an adjunct por-phrase (similar to English by-phrase). Where the Basque examples à la Rebuschi are uncontroversially ungrammatical as in (3), so are the Romance adjectival passives with a por-phrase:

(4)  
- a. Esta película ya está vista (*por nosotros)
- b. La ventana estaba rota (*por los niños)
- c. Ainhoa est asustada (*por los fantasmas)

[(4c) is ok with the reason interpretation of por, but not with agentive interpretation].

As a matter of fact, the same tends to be true of the corresponding English adjectival passives. This proves that speakers who accept (1) are merely translating Romance sentences and systematically substituting por-phrases for ergative DPs, where the former is licensed (cf. Grimshaw 1990). To the extent that this phenomenon is spreading, we are confronted with an ongoing change in the grammar of Basque: the source of the ergative marker need not always be the spec(V) position (or put it differently, the nominative case of unergative and transitive verbs); it is also becoming some kind of postposition similar to the prepositions por (Spanish) and by (English). To the extent that (1) is rejected by many speakers, we have good reason to consider it an ungrammatical sentence in Basque. In any event, the preceding discussion leaves no doubt that sentences like (1) are to be equated with adjectival passives and not with true passives. Actually, Rebuschi himself notes that the verb egon, used mainly in the South Basque Country, is pretty much the equivalent of Spanish estar.
4. The lexical nature of Basque participles

This chapter argues that the hypothesis that aspect is a functional category (in the sense of Fukui & Speas 1986) which heads its own maximal projection in Basque is untenable on a number of counts. My argument will focus on the following idea: even though Basque superficially provides evidence for a syntactic head position related to aspect, uncontroversial considerations nevertheless show that these heads are actually lexical heads of category N, A or P. The solution presented is appealing because two of the heads that supposedly represent the category aspect in Basque are precisely the morpheme te and the perfect morphemes i/n/tu shown on independent grounds in chapters two and three to be marked for aspect features when subject to late lexical insertion. I will argue that the use of such morphemes as “aspect markers” in periphrastic verbal constructions is not surprising, but rather predictable from their lexical entries. The discussion is organized in the following manner: section 4.1 reviews the basics of Basque verbal forms and argues that the auxiliary verbs izan ‘be’ and ukan ‘have’, as opposed to the modal auxiliaries *edin and *ezan, do not originate under the INFL node but are actually main verbs. Section 4.2 shows that analyzing the complements to the auxiliary verbs izan ‘be’ and ukan ‘have’ in Basque as Aspect Phrases (or simple VPs) makes incorrect predictions with respect to coordination and cannot account for the similar distribution of non-present participles and a subclass of locative PPs. In section 4.3, it is claimed that the shortcomings of the Aspect Phrase analysis can only be adequately solved if these maximal projections are rather projections of lexical heads (A and N-P in particular); this approach in turn makes crucial use of the theory of selection and subcategorization discussed earlier in this article and of Lieber's (1992) Percolation Conventions.

4.1. Basque auxiliary verbs are main verbs
4.1.1. Basque verbal forms revisited

As pointed out in chapter one, of the two types of verbal forms in Basque, viz synthetic and periphrastic, the latter is by and large the most common, whereas the former option is restricted to a handful of verbs. Traditional grammarians describe synthetic forms in the present and the past tenses as having “punctual aspect” (i.e. they are incompatible with a habitual interpretation):

(1) a. Ainhoak egunkaria dakar
    -E paper brings
    Ainhoa is bringing the newspaper (*brings)

    b. Ainhoak egunkaria zekarren
    brought
    Ainhoa was bringing the newspaper (*brought/ *used to bring)

Periphrastic forms, on the other hand, generally consist of a) a verb stem and some affixes conveying aspectual information, and b) an auxiliary verb izan ‘to be’ or ukan ‘to have’, which bears agreement (subject and object) markers as well as tense
morphology. Unlike in English, a given auxiliary may combine with any among three participles:

(2)  
\[\text{Ainhoa}-\text{E paper bring-perf has} \]
Ainhoa has brought the newspaper

\[\text{Ainhoa-} \text{E paper bring-perf has} \]
Ainhoa brought the newspaper

(3)  
\[\text{Ainhoa-} \text{E paper bring-TE-loc} \]
Ainhoa brings the newspaper (*is bringing)

\[\text{Ainhoa-} \text{E paper bring-TE-loc} \]
Ainhoa brought the newspaper

(4)  
\[\text{Ainhoa-} \text{E paper bring-perf-KO} \]
Ainhoa will bring the newspaper

\[\text{Ainhoa-} \text{E paper bring-perf-KO} \]
Ainhoa would bring the newspaper (= was to bring the newspaper)

I refer to the uninflected verb forms in italics as the perfect, the non-perfect and the future participles respectively. The perfect participle in (2) is formed by the verbal stem and the perfect morpheme studied in the previous chapter; the non-perfect participle in (3) is formed by the verbal stem, the morpheme te (cf. chapter two) and the locative postposition \(n\); the future participle in (4) is formed by attaching the perfect morpheme and the postposition \(ko\) to the verbal stem. A second type of periphrastic verb conjugation is formed with the bare verbal stem and the auxiliary verbs *edin 'be able to' (unaccusatives) and *ezan 'be able to' (transitives and unergatives). These verbs are cited with an asterisk because they are reconstructed (unattested) infinitival forms and lack lexical meaning. These conjugated verb-auxiliary pairs translate as modal verbs and are also the base of the subjunctive forms in subordinate clauses and imperatives:\(^1\):

(5)  
\[\text{Ainhoa-} \text{E paper bring-TE-loc} \]
Ainhoa brought the newspaper

\[\text{Ainhoa-} \text{E paper bring-TE-loc} \]
Ainhoa used to bring the newspaper (*was bringing)

\[\text{Ainhoa-} \text{E paper bring-TE-loc} \]
Ainhoa will be able to bring the newspaper

\[\text{Ainhoa-} \text{E paper bring-TE-loc} \]
Ainhoa would be able to bring the newspaper

\[\text{Ainhoa-} \text{E paper bring-TE-loc} \]
Ainhoa is able to bring the newspaper

(1) Verbs that have synthetic present and past tenses can also use the present as imperative and, in an almost literary use, as a subjunctive.
4.1.2. Previous analyses

Goenaga's (1980) amalgamation analysis for synthetic verbs has been recast in Ortiz de Urbina (1989), accurately in my view, as V-to-I movement, as in Chomsky (1986b):

\[(6)\]
\[\begin{array}{c}
\text{a. Ainhoak egunkaria dakar} \\
\text{paper brings} \\
\text{Ainhoa is bringing the newspaper} \\
\text{b.} \\
\text{IP} \\
\text{DP I'} \\
\text{VP I} \\
\text{DP V} \\
\text{Ainhoak egunkaria t_i ekar_i \rightarrow (dakar at PF)} \\
\text{Ainhoa is bringing the newspaper}
\end{array}\]

Although no argument for V-raising is given in Ortiz de Urbina (1989), support for a V-raising analysis of Basque synthetic verbs comes from the order of the verb with respect to modal particles like *omen* 'apparently' and *bide* 'surely', assumed by most authors (e.g. Eguzkitza 1986) to be generated under INFL (cf. 1.3.1). Recall from chapter one that non-finite verbs in Basque require that their complements be immediately to their left (disregarding the cases of object focalization). The fact that inflected verbs are separated from their complements by the modal particles constitutes evidence that V-raising rather than I-lowering takes place in Basque:

\[(7)\] Ainhoak liburua (omen) dakar (*omen)
-E book apparently brings
Ainhoa is apparently bringing a book

Under the proposal made in chapter one (namely that the unmarked word-order in Basque results from V movement to INFL and subsequent movement of INFL into COMP), (7) has the following structure:

\[(8)\] \[\text{[CP [IP [t_i] [VP Ainhoak liburua [V t_i] ] ] [C [I (omen) dakar_i]]]}\]

Assuming that the modal particles originate under the INFL node, initial lowering of INFL to V would produce a structure of the form [V V-INFL] (or more precisely [V V-[I Particle/INFL]]); this would predict that the modal particle could follow the verb, which is not the case. If V moves to INFL, as proposed here, then the new head will be of the form [I INFL-V] or rather [I [I Particle/INFL]-V], and the right order is predicted\(^2\).

\(\text{(2) The argument still holds, of course, if one assumes that INFL is final in Basque, as Eguzkitza (1986) and Ortiz de Urbina (1989) do.}\)
In the case of verb + auxiliary periphrastic forms, Eguzkitza (1986) and Ortiz de Urbina (1989) assume that no movement takes place and that the features of INFL (AGR and TENSE) are spelled out in the auxiliary (whether the latter is *izanlukan or *edinizan):

(9)

\[ \text{IP} \]
\[ \text{DP} \]
\[ \text{VP} \rightarrow \text{INFL} \]
\[ \text{DP} \]
\[ \text{V} \]
\[ \text{[AGR,TNS]} \]

Ainhoak egunkaria ekar-tzen → (du at PF) (=3a)

Ainhoa brings Ican(may) bring-the newspaper

Ainhoa is bringing the newspaper

Although her analysis agrees for most part with Eguzkitza's and Ortiz de Urbina's, Laka (1990) further proposes that an Aspect Phrase mediates between VP and IP. In the case of synthetic (i.e. "non-perfective and non-habitual") verb forms, the verb moves from V to INFL through Aspect; otherwise, aspect markers are overtly realized and the verb only moves to Aspect:

(10)

\[ \text{IP} \]
\[ \text{DP} \]
\[ \text{AspP} \]
\[ \text{VP} \rightarrow \text{Asp} \rightarrow \text{INFL} \]
\[ \text{DP} \]
\[ \text{V} \]
\[ \text{[AGR,TNS]} \]

Ainhoak egunkaria ekar-tzen \( t_i \) \( t_i \) \( \text{ekar}_i \) → (dakar at PF) (=6a)

Ainhoa brings the newspaper

Ainhoa is bringing the newspaper
In the case of modal auxiliaries (i.e. *edin/*ezan), Laka must assume that the verb moves to Aspect, realized as a zero morpheme in this case (cf. her footnote 9). Laka's proposal attempts to account in a natural fashion for the presence of the aspect markers, which do not receive special attention under Ortiz de Urbina's and Eguzkitza's analyses. Laka assumes that affixation of the verb to Asp is derived by morphological subcategorization of the Asp head independent of the selection of VP by AspP. By adscribing the morphemes (i.e. i/n/tu, ten and i/n/tu + ko) to the category Aspect, their syntactic presence is recognized. In what follows, I will show that izan 'be' and ukan 'have', unlike *edin and *ezan 'be able to' (which are mere spellouts of INFL), are syntactically main verbs and hence head their own VP. The nature of the maximal projection complement to the auxiliary verbs izan and ukan will be the subject matter of sections 4.2 and 4.3.

4.1.3. izan and ukan as main verbs

The main verb status of auxiliaries have and be in English has long been recognized (cf. Ross 1969, Emonds 1976, Zagona 1988a, Pollock 1989a). This is so despite the fact that have and be pattern with modals in many cases; this paradigm is standardly assumed to reflect the fact that these two verbs are the only ones that raise to INFL in English (cf. Emonds 1976, Pollock 1989a). In the case of Basque, there are two kinds of arguments which can be adduced to argue that izan and ukan, but not *edin/*ezan, are main verbs: a) arguments based on the distribution and form of auxiliaries in contexts other than inflected auxiliary forms; and b) arguments that rely on the government properties of both izan/ukan 'be/have' in contrast to *edin/*ezan 'be able to'. I begin with the first kind.

4.1.3.1. Distribution

One simple observation is that both ukan and izan are also main verbs, meaning 'have' and 'be' respectively. If synthetic verbs (including the main verbs ukan and izan) which undergo V-to-I movement head their own VP, X-Bar theory dictates that the same should be the case for the auxiliary verbs ukan and izan, especially if the actual forms of the verbs are exactly the same in both the main verb and the auxiliary verb uses:

(12) a. Ainhoak kristalezko bihotza du  
-E glass-inst-ko heart has  
Ainhoa has a heart made of glass
b. Ainhoak euritako ahaz-tu du  
-E umbrella forget-perf has  
Ainhoa has forgotten (her) umbrella
VERBAL PROJECTIONS IN BASQUE AND MINIMAL STRUCTURE

This point will become more compelling in the next subsection when it is shown that, unlike in English, there is no syntactic/distributional difference between main verbs (among which *ukan*/*izan* are included when not used as auxiliaries) and the auxiliaries *ukan*/*izan* (cf. Pollock 1989a on main verb *have* vs auxiliary *have*).

Furthermore, suffixes that attach to normal verbs may also attach to *ukan* and *izan* even in cases when they function as auxiliaries (e.g. in combination with the perfect participle):

(14) a. iza-te-a / uka-te-a
   being / having
b. Ainhoa etorr-i iza-n-ak pila bat poztu nau
   Ainhoa's having arrived has made me very happy

In some periphrastic verb forms, the perfect or the future participles of auxiliaries *ukan* and *izan* can appear next to their inflected forms, just like any other verb:

(15) a. Ainhoa Bilbora etorr-i iza-n da
   Bilbao-adl come-perf be-perf is
   Ainhoa has usually come to Bilbao in the past
b. Ainhoak egunkaria ekarr-i uka-n du
   -E paper bring-perf have-perf has
   Ainhoa has usually brought the newspaper in the past
c. Ainhoa Bilbora hel-du iza-n-go da
   arrive-perf be-perf-KO is
   Ainhoa will have arrived in Bilbao

*edin/*ezan, on the other hand, have no lexical meaning, no attested infinitival form (ergo cannot undergo any kind of suffixation), and cannot function as main verbs. In fact, they never occur outside a tensed clause with a VP complement headed by a bare verbal stem (as in (5a), which I repeat here for convenience):

(5) a. Ainhoak egunkaria ekar-Ø dezake
   can
   Ainhoa can/may bring the newspaper

(3) The actual infinitival form of the transitive auxiliary is historically *e(d)un*, a form which no longer exists (but it is attested in Old Biscayan texts: eutea 'having'). In dialects where *ukan* is not used as the infinitival form for 'have', *izan* itself is used to derive the uninflcted bare forms of *ukan* with the meaning 'have' (in Biscayan Basque, *euki* is used):

i. iza-te-a 'having/being'
ii. a. iza-n naiz 'I have been' am  b. iza-n dut 'I have had' have

This dialectal difference doesn't affect the argument that *izan* and *ukan* are main verbs.

(4) The only exception is the semi-idiomatic expression *ba liteke Nominalized Clause*:

i. Ba-liteke [Asier hemen ego-te-a] "Asier's being here could"
   aff-edin here be-TE-art It could be that Asier is here
These arguments show that *edin/*ezan are in fact similar to English modals in being spellouts of INFLectional features, i.e. they never appear in non-finite positions.

4.1.3.2. The syntax of verbs in Basque

Consider the following examples involving operator-verb structures; under the heading operator I include wh-phrases, foci, and the negative and the emphatic markers (cf. chapter one):

(17) \[ \text{Ba dator Ainhoa etxera} \quad \text{(18) Ez dator Ainhoa etxera} \]
    aff arrives home-adl 
    Ainhoa is coming home 
    neg 
    Ainhoa is not coming home  
(19) \[ \text{ETXERA dator Ainhoa} \quad \text{(20) Nora dator Ainhoa?} \]
    It’s home that Ainhoa is coming 
    where 
    Where is Ainhoa coming?

In chapter one, when discussing the basics of Basque word order, I proposed that the left dislocation effects (cf. de Rijk 1969, Ortiz de Urbina 1989b) in sentences with wh-phrases, focused phrases and the negative and affirmative markers (ez and ba) arise because INFL in Basque must assign the functional feature [+operator] to an element in spec(I) or inside INFL. I also argued that the unmarked SOV order obtains when no feature assignment takes place and INFL moves to COMP (a case of substitution) to avoid a violation of the Principle of Functional Feature Assignment, which requires an element of category F specified for some functional feature to obligatorily assign it if it is under FP (chapter one, section 1.1.1). The trees of sentences (17)-(20) under the INFL-initial analysis are given below:
It was also claimed in chapter one that when the requirement that INFL assign its functional feature is satisfied internally to the INFL node (i.e. it is assigned either to the negative marker or the affirmative marker), the subject is free to occupy the spec(I) position without being interpreted as focus:

(23) \[\text{IP Ainhoa; } [I \text{ ba / ez dator}_i] t_j \text{ etxera } t_j\]

What is crucially at stake here is the fact that izan/ukan behave like synthetic verbs and differently from the modal auxiliaries with respect to operator constructions. With the negative and affirmative morphemes, the auxiliary verbs ukan/izan move to INFL just like any other synthetic verb (cf. 17, 18), leaving the main verb (= the participle) behind:

(5) In these cases too (i.e. when the assignment of the functional feature takes place INFL-internally with the verbs izan and ukan), the subject may move to spec(I) without being interpreted as the focus of the sentence (cf. chapter one, section 1.3.3):

i. Ainhoa [I ba da] etxera etorriko ti (cf. (24))
ii. Ainhoa [I ez da] etxera etorriko ti (cf. (25))

The word-order in (i) and (ii) is actually more common than that in (24) and (25).
Although wh-phrases and foci generally precede the entire periphrastic verbal sequence (main verb + aspect markers + ukan/izan), the auxiliary verbs ukan or izan may be the only verbal material adjacent to the these operators (the “main” uninflected verb remains in its original position). This (stylistically marked) behavior is exactly what we expect if ukan/izan are main verbs:

\[(26)\]

a. [IP ETXERA [I dai] Ainhoa etorr-i-ko t↓i]  
   home-adl is come-perf-KO  
   Ainhoa will come HOME

b. [IP ETXERA [I etorr-i-ko, dai] Ainhoa t↓i t↓i]  
   Ainhoa will come HOME

\[(27)\]

a. [IP Nora [I dai] Ainhoa etorr-i-ko t↓i]?  
   Where will Ainhoa come?

b. [IP Nora [I etorriko, dai] Ainhoa t↓i t↓i]?)  
   Where will Ainhoa come?

The possibility of the participle’s preceding the auxiliary verb in INFL in \((26b)\) and \((27b)\) arises because the main uninflected verb may adjoin to the auxiliary as discussed earlier in chapter one (section 1.3.3)\(^6\).

The modal auxiliaries, on the other hand, must be preceded by the main verb if a wh-phrase of a focused XP occupies the spec(I) position:

\[(28)\]

a. *? [IP ETXERA [I daiteke] Ainhoa etor ]  
   home-adl can come

b. [IP ETXERA [I etor; daiteke] Ainhoa t↓i ]  
   Ainhoa can come HOME

\[(29)\]

a. *? [IP Nora [I daiteke] Ainhoa etor ]?  
   where

(6) This adjunction is ruled out when the neg/aff morphemes are present:

i. * Etorr-i-ko [I ex/ba da] Ainhoa etxera  
   come-perf-KO neg/aff is home-adl  
   Ainhoa WILL (not) come home

This prohibition against adjunction of the participle to INFL in the presence of NEG/AFF may be derived as follows: if NEG originates left-adjointed to INFL and INFL is the only head in Basque that precedes its sister, one can assume that NEG is in a sense the head within the INFL complex. Adjunction of the uninflected main verb will create the following structure inside INFL:

ii. [(\[\{\neg\neg\} V-aspi \[\neg ez [\{\neg aux\}]]]] .... t↓i t↓j

Given Chomsky’s (1986b) proposal that all verbs must agree and be coindexed in a series of V* aspectual verbs, the agreement process between the two verbs is blocked (as a subcase of minimality) by Neg, a non-agreeing head; the same is true of affirmative ba. If indices i and j cannot agree (i.e. i does not equal j), then the participle cannot antecedent govern its original trace and the chain [V-aspi... t↓i] is ill-formed. In the absence of either ez or ba, the head-adjunction process is free to apply as in chapter one (cf. 1.3.3); the participle can agree with the auxiliary without any intervening head, i equals j, and Relativized Minimality is respected.
Under the INFL initial analysis proposed in chapter one, the ungrammaticality of (28a)-(29a) reduces to the lack of any governing capacity of the modal auxiliaries. No movement is involved, but a bare INFL is unable to govern into (and hence assign nominative case to) the subject position inside the VP (and possibly unable to assign or discharge its functional feature). Another alternative, suggested to me by J. Emonds (p.c.), is to assume that modal auxiliaries are inserted after S-S; the INFL node is empty at D-S and S-S and thus cannot govern the subject position, as just mentioned. (28b) and (29b), on the other hand, are grammatical because the adjunction of the participle to INFL makes the latter a governing head. With regard to the negative/affirmative morphemes, the modal auxiliaries are for most part incompatible with them, although there is some variation in the judgments:

(30) ?? (%) [IP [I Ez daiteke] Ainhoa etxera etor ]
    neg edin     home-adl come
    Ainhoa cannot come home

(31) *? [IP [I Ba daiteke] Ainhoa etxera etor ]
    aff
    Ainhoa can come home

(30) and (31) are accounted for in exactly the same manner as (28a) and (29a): Basque modals are unable to govern and assign case to the subject. (30) is acceptable in some dialects on the assumption that ez makes a modal INFL a governing head.

(7) (28b) and (29b) are reminiscent of Koopman's (1984) analysis of Vata and Gbadi in that she claims that some instances of V-movement are triggered by the Case Filter: "V-movement must apply in order to allow nominative case to be assigned" (1984: 138). The difference is, of course, that V-movement in these languages takes place when no element occupies the INFL node, whereas V-movement in Basque takes place even when the modal auxiliaries occupy INFL. This difference is accounted for if modal INFL in Basque is somehow defective for government.

(8) (30) is good for speakers of the North Basque Country. In the dialects where (30) is grammatical, ez has a wider distribution than in the rest, and can negate a sentence with the auxiliary verbs izan/ukan and the modal particle ahal:

i. Ez daiteke Ainhoa etxera etor
   Ez da Ainhoa etorren ahal
   Ainhoa cannot come home

In the rest of the dialects, negation with the modal verbs *edin and *ezan requires the related word ezin 'not be able to':

iii. Ezin daiteke Ainhoa etxera etor
    Ainhoa cannot come home (in dialects where (i) is *)

Negating a sentence with the auxiliaries izan/ukan requires ezin, too:

iv. Ezin da (du) Ainhoa(-k) etxera etorri
   (where (ii) is *)

ezin can perhaps be analyzed as a main verb rather than a negative modifier.

In Biscayan (Western) Basque, the main verb egin 'do' has replaced the modal verb *ezan; in some varieties of this dialect, egin is even used on a par with *edin 'be able to' with unaccusative verbs. My prediction is that in these varieties, where both forms coexist, negated forms of egin will be grammatical (a main verb is used as modal), but negated forms of the modal auxiliary *ezan will not. This is borne out by the data:

v. Ainhoa ez leiteke etxera etorri
   neg do (egin) home-adl come
   * Ainhoa ez leiteke etxera etorri
   neg be able to (*edin)
   Ainhoa could not come home
   Ainhoa could not come home

vi. (cf.) Ainhoa ezin leiteke etxera etorri
   neg be able to (*edin) Ainhoa could not come home

I thank J.I. Markaida and Elena Bengoetxea for these data.
In summary, the contrast in the behavior of the auxiliary verbs *izan*/*ukan* ‘be/have’ and the modal auxiliaries with respect to the syntax of operators provides significant evidence for the conclusion that the former must be analyzed as main verbs, whereas the latter cannot be. A second related distributional argument comes from gapping phenomena. I assume that gapping must at least involve a verb and its corresponding INFL element. Main synthetic verb forms (verbs that have undergone V-to-I raising) may be the target of gapping; the same sentences are of course bad if the verbal stems remain *in situ*, and INFL alone is gapped:

(32) Ainhoa Bilbora doa eta Asier Irueara [C [I/V ə]]
    Bilbao-adl goes and Asier Pamplona-adl
    Ainhoa goes to Bilbao and Asier to Pamplona

Not surprisingly, the auxiliary verbs *izan*/*ukan* may also be the target of gapping in periphrastic verb forms:

(33) Ainhoa mendira joa-n-go da eta Asier hondartzan
    mountain-adl go-perf-KO is and beach-loc
    gera-tu-ko [C [I/V ə]] ([ə] = da)
    remain-perf-KO
    Ainhoa is to go hiking and Asier to remain at the beach

Periphrastic verb forms with modal auxiliaries, on the contrary, produce marginal sentences when the auxiliaries are gapped:

(34) ?(? Ainhoa mendira joan daiteke eta Asier hondartzan
    mountain-adl go edin
    [v gera] [C [I ə]] ([ə] = daiteke)
    Ainhoa can go hiking and Asier remain at the beach

The facts confirm that *izan*/*ukan* behave like main verbs, but *edin*/*ezan* do not. If, contrary to the evidence, *izan* and *ukan* were regarded as mere spellouts of INFL, the rule of gapping would have to state that INFL alone may gap depending on which elements occupy it. This would require an additional stipulation. In conclusion, the arguments given in this section indicate that the auxiliary verb *izan* and *ukan* are not spellouts of INFL but main verbs, as in (35):
4.2. Some inconsistencies in the aspect phrase hypothesis

Thus far, we have rejected on empirical and theoretical grounds the assumption that the auxiliary verbs *izan* and *ukan* originate under INFL and hence do not head their own VP projection; the distribution and properties of these verbs are similar to those of other synthetic verbs. Turning now our attention to the sister constituent of these two auxiliary verbs headed by the three different participles (the perfect/non-perfect/future participles) (cf. (2)-(4) above), two positions have been considered: it is a VP (Eguzkitza 1986, Goenaga 1980, 1984, Ortiz de Urbina 1989) as generally assumed for English (cf. Chomsky 1986b), or an Aspect Phrase, as in Laka (1990). The first position gives up the possibility of accounting for the presence of the participial morphemes syntactically and assigns them no categorial status. In this section, I concentrate on the second view, although my arguments also hold against the VP position. I point out two deficiencies of Laka's AspP hypothesis: first it makes wrong predictions with respect to coordination, and second the existence of some grammatical PPs that share the same distribution as the non-perfect participle raises some questions about the exact nature of this participle, questions which my hypothesis of section 4.3 will answer.

4.2.1. Unfulfilled predictions

As was emphasized in the presentation of periphrastic verb forms with the auxiliary verbs *ukan* and *izan*, a given form of the auxiliary combines with all the three participles, contrary to what happens in English. If the projection headed by the participles is uniformly an Aspect Phrase, we predict that coordination of any
two different AspPs or participles should in principle be possible on the assumption that only maximal phrases of the same type can be coordinated. This prediction, though, is not borne out by the data. Although coordination of "aspectual" participles is generally barred in declarative sentences, it is possible to coordinate two negated participial constituents (with ez functioning as coordinating conjunction and having scope over each of the participial structures). The two participial constituents, however, must be of exactly the same type:

(36) a. Ainhoak ez du ez egunkaria eros-i, ez egunkaria irakurr-i
g - has neg paper buy-perf neg paper read-perf
Ainhoa has neither bought the paper nor read the paper
b. *Ainhoak ez du ez egunkaria eros-i, ez egunkaria irakurr-tze-n
   neg has neg paper buy-perf neg paper read-TE-loc
   Ainhoa has neither bought the paper nor (is) "reading" the paper
c. *Ainhoak ez du ez egunkaria eros-i, ez egunkaria irakurr-i-ko
   neg has neg paper buy-perf neg read-perf-KO
   Ainhoa does not buy the paper nor (will) read the paper

The ungrammaticality of (36b) and (36c) cannot be attributed to some kind of semantic incompatibility, for there is no principled reason to exclude coordination of constituents specified differently for tense and aspect:

(37) a. Ainhoa [went to the store] and [will be back in a minute]
b. Ainhoa may [have gone to the movie] and [be at home now]

(37a) involves coordination of two I' (cf. Burton & Grimshaw 1992 and McNally 1992) with different tense specifications; (37b), on the other hand, is an example of VP coordination where the first VP is perfective and the second is not. The same prediction, namely that AspPs should be able to coordinate, fails to obtain in cases of Across-The-Board (ATB) "auxiliary inversion" with a wh-operator (see 1.2.2. above (sentences (26a)-(27a)). I assume Williams' (1978) notation for Across-The-Board rule application. In ATB cases, the participles must also be of the same type in order to be coordinated (cf. (39) and (40)):

(38) a. \[
\begin{array}{ccc}
\text{IP} & \text{VP} & \text{DP subject} \\
1 & 2 & 3 & 4
\end{array}
\]
   \[
   \begin{array}{ccc}
   \text{IP} & \text{VP} & \text{DP subject} \\
1 & 2 & 3 & 4
\end{array}
\]

1 2 3 4

b. \[
\begin{array}{ccc}
\text{IP} & \text{VP} & \text{tj} \\
1 & 2 & 3 & 4
\end{array}
\]
   \[
   \begin{array}{ccc}
   \text{IP} & \text{VP} & \text{tj} \\
1 & 2 & 3 & 4
\end{array}
\]
   \[
   \begin{array}{ccc}
   \text{VP} & \text{tj} & \text{tj} \\
1 & 2 & 3 & 4
\end{array}
\]

(9) The examples in (36) are not CP coordination; when negated CPs are coordinated, it is possible to have different lexical subjects even though the inflected verb in the second conjunct may gap:

i. Ez du Jonek ezer eda-n ez eta (Miren) ez eda-n-go ere
   neg has anything drink-perf neg conj Miren-erg anything drink part
   John hasn't drunk anything and (Miren) will not drink anything either
(39) Ainhoa Durangora trenez bel-du-ko da eta (Ainhoa) handik mendian Durango-adl train-inst arrive-perf-KO is and hence mountain-loc gora abia-tu-ko da up head-perf-KO is Ainhoa will arrive in Durango by train and (Ainhoa) will go up the mountains from there.

(40) Nori da [tj; Durangora trenez bel-du-ko tj] eta [tj handik mendian gora who abia-tu-ko tj] Who will arrive in Durango by train and will go up the mountains from there?

(41) Ainhoa Durangora trenez bel-du da eta (Ainhoa) handik mendian gora Durango-adl train-inst arrive-perf is and abia-tu-ko da Ainhoa has arrived in Durango by train and will go up the mountains from there.

(42) *Nori da [tj; Durangora trenez bel-du tj] eta handik mendian gora [tj who abia-tu-ko tj] Who has arrived in Durango and will-go up the mountains from there.

By assumption, the bracketed structures (Williams’ “factors”) must be dominated by the same node; the fact that (42) is ungrammatical suggests that the different participial constituents in (41) and (42) are dominated by a different node (i.e. the values of XP do not coincide in (41)-(42)). The coordination facts presented here cast serious doubt on the correctness of the AspP hypothesis and its claim that the different participles that appear as complements to the auxiliaries izan and ukan are all dominated by the same node. I will return to these data in section 4.3.

4.2.2. The problem posed by locative PPs

Recall from section 4.1.1 (sentences (3a,b)) that the non-perfect participle that appears as complement to izan and ukan is formed by the verbal stem, the nominal suffix te and the locative postposition n:

(3) a. Ainhoak [egunkaria ekar-tze-n] du paper bring-TE-loc has Ainhoa brings the newspaper (*is bringing)
b. Ainhoa [egunkaria ekar-tze-n] zuen had Ainhoa used to bring the newspaper (*was bringing)

The constituent headed by this non-perfect participle (Laka’s AspP) is also licensed as a complement to at least four other different types of verbs: aspectual verbs,
semi-auxiliaries verbs, perception verbs, and epistemic ("connaissance") verbs (cf. Lafitte 1962, Goenaga 1985).10

(43) Ainhoa [arda eda-te-n] has-i da
wine drink start is Ainhoa has started drinking beer

(44) Ainhoa [arda eda-te-n] dabil/dago/ari da
walks/stays/ARI is Ainhoa is drinking wine

(45) Ainhoak [arda eda-te-n] Asier ikus-i du
see has-him
Ainhoa has seen Asier drinking beer

(46) Ainhoak [piano jo-tze-n] ikas-i du
piano play learn has-it
Ainhoa has learned to play piano

The data in (43)-(46) are reminiscent of English “bare VPs” with ing, which I have analyzed as AP gerunds in chapter one (section 1.2.4.1) following Emonds (1990). Let us tentatively reflect these facts by stating that these four types of verbs may subcategorize (in the standard sense) for an AspP of the relevant kind:

(47) a. hasi ‘start’, V, +AspP [-perfect]_
   b. ibili ‘walk’, V, +AspP [-perfect]_
   c. ikusi, ‘see’, V, +AspP [-perfect] DP_
   d. ikasi, ‘learn’, V, +AspP [-perfect]_

What is troublesome for this view is the fact that these verbs may also alternatively take certain locative PPs headed by the postposition -n (i.e. the same one that attaches to tze in examples (43)-(46) above). The set of nouns that may appear in these PPs forms a closed class of 15-20 members or so: jolasean ‘at the game, playing’, bertson ‘at the verses, improvising verses’, lanean ‘at work, working’, dantzanez ‘at the dance, dancing’, musean ‘at mus (=card game), playing mus’, berriketan ‘at chat, chatting’, etc.

(48) Ainhoa[ lanean] has-i da
   *kantan start-perf is
Ainhoa has started “at work, working”/ “at the song, singing”

(10) This situation is parallel to English VP-ing but there are some differences; a) epistemic verbs in English don’t take V+ing complements; and b) the non-perfect participle also appears in tough (Complex Adjectival) constructions in Basque:
   i. Liburu hauek gaitzak dira [liburutegian topa-tze-n]
   book these tough-art are library-loc find-TE-loc These books are tough to find at the library

In Basque the PP participle is perhaps not a true complement to the adjective, but a VP adjunct (extraction is not possible from the participle). If so, then liburu hauek may receive a θ-role from both the adjective and the participle. Crucially, these two are not θ-related, so Emonds’ Revised θ-Criterion is respected. Unlike in English, then, no null operator analysis need to be invoked (cf. Chomsky 1981).
(49) Ainhoa\{ ametsetan\} dabil
        \{*tristuran\} walks
Ainhoa is "at dreams, dreaming"/ "* at sadness, feeling sad"

(50) Ainhoa\{ dantzan\} ikus-i dut
        \{*kantan\} see-perf have
I have seen Ainhoa "at the dance, dancing"/ "* at the song, singing"

(51) Ainhoa\{ bertsotan\} ikas-te-n du
        \{*musikan\} learn-TE-loc has
Ainhoa learns "at verses, improvising verses"/ "* at the music, playing music"

It may seem too trivial to simply extend the subcategorization frames above to
include these special PPs. But further complications arise: these locative PPs can
freely conjoin with ten participles, which suggests that they are dominated by the
same node.

(52) Ainhoa \{lanean\} eta \{unibertsitatera joa-te-n\} has-i da gaur
        work-loc and university-adl go start is today
Ainhoa started "at work" (= working) and going to the university today

(53) Lazkao Txiki \{bertsotan\} eta \{istorioak konta-tze-n\} entzun dut irratian
gaur goizean
    verse-loc and stories tell hear I-have-it radio-loc
today morning-loc
This morning I heard Lazkao Txiki "at verses" (= improvising verses) and telling
stories on the radio

(54) Hik \{ordenagailua erabil-tze-n\} eta \{musean\} ikasi arte, ez daukagu
        you computer use and mus-loc learn until neg we-have-it
        zer egink
        what do-part
Until you learn to use the computer and "at mus" (= playing mus), we
have nothing to talk about

If one regards the coordinated maximal projections as PPs and AspPs respective­ly,
these distributional similarities are purely accidental and puzzling. If, on the
other hand, based on the paradigm above, one regards the two as PPs (a natural
position since they are both headed by the locative postposition n), the coordination facts
follow and nothing needs to be stipulated. What emerges is an apparent paradox:
what was considered a pure VP in standard analyses and more recently termed AspP
by Laka has the external distribution of a certain kind of locative PP, even though
the internal structure of the constituent looks like the verb is the selectionally
dominant head (e.g. takes accusative objects). The unravelling of this apparent
paradox is the subject matter of the next section to which I now turn.
4.3. Aspect markers are lexical heads

4.3.1. The Non-Perfect Participle as a PP

The realization that ten participles are PPs, far from being a final solution in itself, raises some interesting questions for the standard theory of subcategorization, which holds that heads select maximal phrases. To be more explicit, consider (55) and (56):

(55) Ainhoak *lanean / *jolasean / *dantzan du
work-loc game-loc dance-loc has-it
Ainhoa has *"at work", *"at the game", *"at the dance" (= *works, *plays, *dances)

(56) Ainhoak egunkaria ekar-tze-n / irakur-tze-n du
-E paper bring-TE-loc read-TE-loc has
Ainhoa brings / reads the newspaper

Since the closed class of locative PPs and the non-perfect ten participles share the same distribution as complements to aspectual/semiauxiliary/perception/epistemic verbs as shown in 4.2.2 above (assuming that subcategorization is for XPs), one could mistakenly conclude that they are both subcategorized for in the same way, and hence must always have the exact same distribution. The contrast between (55) and (56) shows that this is incorrect: although the four types of verbs studied in the previous section may license both grammatical PPs and ten participles, the grammatical locative PPs cannot be complements to the auxiliary verbs izan and ukan.11

At a purely intuitive level, (55) must be ungrammatical because it lacks a true verbal element, contrary to what happens with ten participles. Here is the paradox: the internally selectionally dominant head, the verb, seems to be selected as such from the outside, yet the maximal projection dominating it is a PP. Although this paradox is problematic for a standard view of subcategorization (which asserts that c-selection is only selection of XPs), it is exactly what we expect in the approach to subcategorization that I have taken in this article following ideas of Baltin (1989) and Emonds (1990): subcategorization reduces to selection of heads, and the structural head X of the XP which minimally contains it need not correspond to the selected head, as was shown to be the case in nominalized clauses in chapter two.

4.3.1.1. The non-perfect participle as complement to auxiliary verbs

In this light, let us implement the idea that the auxiliary verbs izan and ukan select a verbal head together with a grammatical formative, namely the feature [-completed] in the case of the non-perfect ten participles:

(11) Incidentally, this contrast also shows that the alternative of considering that both grammatical locative PPs and ten participles are dominated by an AspP node is not viable. It would need to stipulate that the locative postposition is also of category Asp and can take a DP complement (!!), and that subcategorization of XPs can analyze the internal structure of XP.

[140]
(57) izan/ukan, V, + V^[-completed]

Since the feature [-completed] is not a feature on verbal stems per se, some other element must be generated to minimally satisfy (57). Two options arise: a) either a full clausal structure is generated with a non-perfective inflected finite verb (= [CP [IP INFL [vp V]] COMP]). This is excluded inter alia because the "main" subject of izan/ukan would not receive any θ-role (auxiliaries don't assign θ-roles to their subjects); or b) the insertion of a grammatical formative specified as [-completed] can be projected in connection with (attached to) the verb. Recall from chapter two that there is indeed a morpheme specified as [-completed], namely the nominalizing suffix te:

(58) te], N, +V____ [\{V = +ACTIVITY\}]
    \{ N = [-completed]\}

By (58), the nominal suffix te can be generated as a sister to V in order to satisfy (57); the late insertion option of te (that is, ignoring the parenthesized material), is moreover predicted, since no semantic constraint on the verb is expressed in (57).

(59)

If nothing else is said, the subtree in (59) would project into a full NP and DP structure. This would conflict with the θ-Criterion since it would presuppose the existence of an additional DP-subject internal to the nominalized structure which would leave no θ-role available for the DP-subject of the sentence (Koopman & Sportiche's NP* position):
Crucially, auxiliary verbs do not assign \( \theta \)-roles to their subjects; if they did, then simple sentences with auxiliary verbs and non-perfect participles should be treated as cases of control, which is incorrect as we shall see below in 4.3.1.2.

I suggest that *pace the \( \theta \)-Criterion, Emonds' Minimal Structure Principle (cf. chapter one, section 1.2.3) licenses the insertion of an empty P in (61) at D-S; notice that (61) is a more compact structure than (60), lacking a full DP projection.
Generating (61) minimally satisfies the subcategorization frame in (57) because only one maximal complement phrase is generated (as opposed to a full clause). Since \textit{ti} is not restricted to any class of verb and its insertion is induced by the syntactic feature [+[-completed]] in (57), it is predicted that it will remain empty until PF. The empty P node will be filled by the unmarked locative postposition \textit{n} in PF, if the following lexical entry is assumed:

\begin{equation}
(62) \quad n, P, \text{LOCATION, } + N (\_\_\_) (N = [-\text{completed}])
\end{equation}

The last parentheses imply that the complement to the \textit{n} may be specified with the feature [-completed]. I thus derive the VP-like behavior and the PP distribution of ten non-perfect participles: the verb in (61) and all similar cases is the L-head of the PP at D-S and S-S, it selects all the complements inside the PP structure with no interference by the empty \textit{N} and \textit{P} by virtue of \textit{Empty Head Transparency} (chapter one, 1.2.3), and is able to assign accusative case to a potential DP complement (the \textit{V} constitutes a sister to DP; cf. 1.2.3).

(12) I assume that the DP subject originates as an adjunction to the lower PP (the "main" VP in standard analyses), as in Koopman & Sporliche 1991), and adjoins to the VP to receive case from INFL. I have omitted the trace of the subject adjoined to the lower PP for ease of exposition.

See chapter one, sections 1.3.4 and 1.3.5 for arguments that the INFL is initial in Basque and that the unmarked order results from a substitution movement of INFL into COMP.
4.3.1.2. Non-perfect participles cannot be clausal

A theory like Baker's (1988) prevents deep "syntactic" and surface "morphological" subcategorization from interacting with each other in the manner described in the preceding section to satisfy subcategorization features in a minimal way. As a result, it is forced to choose between two alternatives: a) either ten participles are not PPs (i.e. are not formed by a nominalizing suffix and the locative morpheme) and are selected as AspPs; this runs counter the evidence from coordination presented in 4.2.1. b) Or a maximal phrase must be generated for every morpheme, and hence PP participles are of the form \( [\text{pp} [\text{DP} [\text{NP} [\text{VP} V] N] D] P] \), with all heads ending up on \( P \) as a result of head-movement or incorporation triggered by morphological subcategorization, in compliance with the Mirror Principle\(^\text{13}\). Position \( b \) corresponds \textit{grosso modo} to the tree given in (60) above, which I rejected on theoretical grounds: if the 0-role assignment of the main verb is internal to the PP-structure, we are forced to posit that periphrastic verb constructions are obligatory control structures. But in the case at hand, this kind of approach also conflicts with Subjacency. Some extraction data illustrate this point.

The verb \textit{etzan} 'lie, consist of' subcategorizes for locative PPs (+P, LOCATION in our terms). The locative P may be a sister to a normal DP or "clausal" DP:

\begin{align*}
\text{(63)} & \quad \text{a. Udalaren etorkizuna [pp [DP} \text{finantzaketaren}\[\text{konponketa-a]} -n] \text{datza}\[\text{solving -art-loc lies}] \\
& \text{The future of the local council lies [pp in [DP the solution of the}\[\text{financing issue ]}] \\
\text{b. Udalaren etorkizuna [pp [NP} \text{e finantzaketaren arazoa}\[\text{konpon-tze-a]} -n] \text{datza}\[\text{problem solve-TE -art-loc lies}] \\
& \text{The future of the local council lies [pp in [DP solving the problem of financing ]}] \\
\end{align*}

Extraction of a complement from these clausal PPs is ungrammatical even though the PP itself is a complement to the main verb:

\begin{align*}
\text{(64)} & \quad * \text{Zeri datza udalaren etorkizuna [pp [DP} \text{t}_1 [ID'} \text{[NP e}\[\text{what}] \\
& \text{t}_1 \text{konponentze-a]} -n]\text{?} \\
& \text{What}_1 \text{does the future of the local council lie}
\end{align*}

The ungrammaticality of (64) can be accounted for along the lines of Artiagoitia (1992b). Movement from inside the NP to spec(D) is legitimate: although \( D \), a non-lexical category, fails to L-mark NP, only one blocking category and barrier is

\(\text{The Mirror Principle: Morphological derivations must directly reflect syntactic derivations (and vice versa) (Baker 1988: 13).}\)
crossed (=NP), which is permitted by the Subjacency Condition of Chomsky (1986b) (cf. chapter one: 1.1.4). Artiagoitia (1992b) assumes that the category P does not qualify as “lexical” in Basque, and hence fails to L-mark its DP complement. The latter becomes a blocking category and a barrier, and PP inherits barrierhood from DP. Therefore the sentence is ruled out by the Subjacency Condition: two barriers, DP and PP, are crossed (crucially, the spec(P) position is not a possible escape hatch in Basque). Artiagoitia (1992b) assumes that the category P does not qualify as “lexical” in Basque, and hence fails to L-mark its DP complement. The latter becomes a blocking category and a barrier, and PP inherits barrierhood from DP. Therefore the sentence is ruled out by the Subjacency Condition: two barriers, DP and PP, are crossed (crucially, the spec(P) position is not a possible escape hatch in Basque).14

Extraction from ten participles, on the other hand, is always grammatical (as though extraction were from a “bare VP”):

(65) a. Proiektu honek [finantzaketaran arazoa konpon-tze-n] du project this financing-gen problem solve-TE-loc has This project solves the problem of financing
b. [IP Zeri [r konpon-tze-n dUk [vp proiektu honek [pp t1 t2] tk2 ]]]
c. [IP Zeri [r dUk [vp proiektu honek [pp t1 konpon-tze-n] tk ]]?
What does this problem solve?

In (65b) extraction is hard to test because the participle and auxiliary verb are adjacent to the operator (= the main verb/participle is adjoined to the auxiliary uk in INFL) and it could be a case of pied-piping. But in (65c) only the auxiliary is in INFL, and extraction is grammatical. This provides evidence that the PP structure of the ten participles doesn’t contain any further phrasal structure15 16.

It should be pointed out that even if only a [pp [NP [VP V] N] P] internal phrasal structure were assumed for a PP participle (with no overt DET/DP nodes present), a Baker style analysis would still generate too much structure: granted that the nominal affix te may L-mark VP, NP will not be L-marked by P and will constitute a blocking category and a barrier; PP will also become a barrier, thus predicting that extraction from participles should be ungrammatical. Extraction is also possible from PP participles that are complements to other verbs:

(66) a. Ze egunkarii dabil Ainhoa [pp t1 irakur-tze-n] ? which paper walks read-TE-Ioc Which paper is Ainhoa reading?

(14) Note that extraction of nominalized DPs in object position is possible in general, as discussed in chapter two. The qualification of P as “non-lexical” for Basque is amply justified in Artiagoitia (1992b). See also Johnson (1988). My regarding P as non-lexical for the purposes of L-marking does not imply that the category P is functional, but rather that it is quite unlike the major lexical categories (N, A, V). One way-out is to define L-marking as 0-government by a lexical category which is positively specified for some categorial feature, thus excluding P ([-N, -V]) as an L-marker. Another variant of this position is to assume that the negative values of major categorial features are unspecified and simply filled in by default after S-S.

(15) The article, which usually appears in singular locative DPs, is absent in PP (ten) participles. The bare n postposition is traditionally taken to be a remnant of the old indefinite locative (ia-n in modern Basque). However, in formal terms, if only P (without D) is present, it follows that only the true (locative) postpositional element will appear, namely n. See note 17.

(16) The reader should bear in mind that Baker’s theory of government explicitly gives up on the notion that government and subjacency can be treated in a unified manner: “the cost of this simplification... the abandoning of... a definition of barrier which will also be appropriate as a definition of “bounding node” for Subjacency” (Baker 1988: 57). As a result, Baker is forced to adopt Chomsky’s (1977) and Rizzi’s (1982) version of Subjacency, where bounding nodes are stipulated for each language. Under this view of Subjacency, the problem for a Baker-style approach still persists since PP and NP/DP are “bounding nodes” in Basque.
b. Ze egunkari; has-i zara [pp t; irakur-tze-n]?
   start-per are-you
   Which paper have you started reading?

c. Ze egunkari; ikus-i duzu Ainhoa [pp t; irakur-tze-n]?
   see-perf have-you
   Which paper have you seen Ainhoa reading?

d. Ze musika tresna; ikas-i-ko duzu [pp t; jo-tze-n]?
   musical instrument learn-perf-ko have-you play-TE-loc
   Which musical instrument will you learn how to play? ("playing")

Since the PP participles are all complements of a verb, they are all L-marked in
the sense of Chomsky (1986b). The only potential barrier is the main VP, but
adjunction to it voids the barrierhood effect. To sum up, the possibility of extracting
from PP participles supports the analysis given in (61). An analysis which assumes
the existence of a phrasal node for every morpheme present in the participle would
not be able to account for the grammaticality of extraction from ten PP participles.

4.3.1.3. Non-perfect participles and grammaticalpps revisited

The subcategorization frame for auxiliary verbs in (57) obviously predicts that
the only complement to izan/ukan 'be/have' will be the non-perfect PP participle.

The question still remains as to why these PP participles and some locative PPs
can co-occur as complements to the perception/ semiauxiliary/ aspectual/ epistemic
verbs (but not as complements to the auxiliaries izan and ukan). We would like to
predict this from the lexical entries for these four types of verbs. For the non-perfect
participles, we can simply state that these verbs subcategorize like auxiliaries:

(67) a. hasi 'start' V, + V^[completed]
b. ibili 'walk', V, + V^[completed]
c. ikusi, 'see', V, + V^[completed], N
d. ikasi 'learn', V, + V^[completed]

As far as the grammatical locative PPs (where "grammatical" means "not associ­
ated with a purely semantic feature in their lexical entry"; cf. Emonds (1985) and
chapter one) are concerned, we would like to capture the intuition that these PPs are
"grammatical" in the sense that they form a closed class, i.e. that they have some
property or feature in common with the non-perfect participle even though they lack
a true verbal head. The obvious option is to assume that these nouns (and sub­
sequently locative PPs), besides their "regular" entry, are also marked in the lexicon
with some syntactic feature akin to that borne by te, namely [-completed]:

(68) [lan], [jolas], [mus], ..., N, [-completed])

The facts are slightly more complicated, because when functioning as grammat­
ical PPs, each member of this closed class idiosyncratically takes the form of an
indefinite locative PP or a singular locative PP, but not both. In other words, for
each grammatical use of the PP (and ultimately, the noun), we must specify whether the noun is [+definite, +singular] or [-definite]:

(69) 

Thus, (69) accounts for why, in the grammatical use with the locative postposition, we get lane-a-n, dantz-a-n (literally ‘at the work’, ‘at the ball’) but bertso-ta-n (‘at verses’). The ending an is traditionally considered the singular locative and tan the indefinite form\(^{17}\).

We can now propose a subcategorization frame for aspectual/ semiauxiliary/ perception verbs that will predict the cooccurrence of non-perfect participles and locative PPs with grammatical nouns:

(70) a. aspectual/ semiauxiliary /epistemic verbs:

\[ V, + \{V\} \land [-\text{completed}] \land \{N\} \]

b. perception verbs

\[ V, + \{V\} \land [-\text{completed}], N \land \{N\} \]

(70a) will be minimally satisfied by a non-perfect participle as in (61) above, or else by a grammatical PP as in (71); (70b) is satisfied by a regular DP and either (61) or (71):

(61)
Since the grammatical use of these nouns is associated with specific values of number and definiteness (usually taken to be features on DET e.g. in Emonds 1985 and Abney 1987), I assume that an entire DP phrase must be generated. I leave open the question of whether the head nouns are present at D-S or remain empty until PF. In any case, I will assume that when these nouns are present at D-S and S-S, the feature [-completed] is also shared by the DET node, and forces the latter to be empty at S-S and not present until PF. The fact that the DET node is empty has some consequences to which I will return at the end of this section.

The double subcategorization in (70) can perhaps be collapsed if we can make sure that the generation of an empty P in (70) is predictable despite the generation of a full DP, and hence need not be stipulated. This is true for most part: aspectual verbs do not generally assign case to a noun phrase complement, nor do semiauxiliary verbs like *egon ‘stay’* and *ibili ‘walk’*. Perception verbs, on the other hand, can only assign case to a single noun phrase complement. In this scenario, (70) reduces to (72)\(^{18}\):

\[(72)\]
\begin{enumerate}
\item a. aspectual/ semiauxiliary... verbs: \(V, [+\text{-completed}]\)
\item b. perception verbs: \(V, [+\text{-completed}], N\)
\end{enumerate}

\(^{18}\) The only case where the generalization is not possible is that of epistemic verbs or verbs of knowledge. Epistemic verbs are transitive and still take both PP participles and locative PPs on the one hand, as well as regular DP complements on the other:

\begin{enumerate}
\item i. Ainhoa hizkuntzak ikasten ditu
Ainhoa studies languages
\item ii. Ainhoa [bertsotan] / [idazten] ikasten du
Ainhoa learns "at verses" / "writing"
\item (how to improvise verses / how to write)
\end{enumerate}

For epistemic verbs then, the lexical entry \(+[\text{-completed}]\) does not predict that grammatical nouns will end up containing an empty P; we have to stipulate this:

\begin{enumerate}
\item iii. epistemic verbs: \(V, +N\)
\item \(\langle N^{\uparrow} \rangle \ [\text{-completed}] (\wedge P)\)
\end{enumerate}
We have now derived why these verbs can indistinctively have either kind of PP as their complement, whereas izan/ukan can only have PP participles. Using a syntactic feature in the lexicon to represent the closed class of nouns that may form locative PPs that cooccur with participles seems to capture the notion that what is specific to Basque is the existence of a set of grammatical PPs. I have also proposed that the presence of this feature induces late insertion of the determiner and the locative postposition (if not of the entire PP). If this feature (i.e. [-completed]) is truly syntactic, it should have some different reflex for the behavior of lexical PPs and grammatical PPs. Apositive structures with the pronoun bera support this claim. In Basque, every non-null DP can be modified for emphatic purposes by the pronoun bera 'he, she, it' if the latter immediately follows the DP; if the modified DP is embedded in a PP, so must be the pronoun:

(73) a. Ainhoa bera ager-tu da
   she appear is
   Ainhoa herself has appeared
b. Liburua etxean bertan utz-i dut
   book home-loc it-loc leave I-have-it
   I have left the book at home "itself" (= right at home)
c. Ainhoa-k liburua eta ena etxera bertara erama-n du
   book home-adl it-adl bring has-it
   Ainhoa (has) brought the book home "itself" (= right home)

However, the kind of locative PPs studied in this section are incompatible with these apositive structures:

(74) a. *Ainhoa lanean / dantzan bertan has-i da
         work-loc dance-loc it-loc start-perf is
         Ainhoa has started at work / at the dance "itself"
b. * Ainhoak lanean / dantzan bertan ikas-i du
         work-loc dance-loc it-loc study-perf has
         Ainhoa has learned at the work / dance "itself"
c. * Ainhoa lanean / dantzan bertan ikus-i dut
         work-loc dance-loc it-loc see-perf have
         I have seen Ainhoa at the dance / at the work itself

If the well-formedness condition on this appositive structure requires that the modified XP have full lexical content to be a referential expression at D-S and S-S (e.g. because coindexation of the DP and the pronoun is otherwise impossible), the ungrammaticality of (74) follows since the DET node (and the P node too) under these grammatical locative PPs remains empty until PF, due to the presence of the syntactic feature [-completed]. No explanation could be simpler for the absence of appositive PPs with these kind of locative PPs and their lack of referentiality. Having fully elaborated on the issue of how tzen participles result in PPs even

(19) The sentences are grammatical under the lexical PP interpretation: "at the work place, at the ball", but this interpretation doesn't imply that Ainhoa was actually working or dancing.
though their L-head is indeed the verb and they are selected externally as V-projections, I now turn to the analysis of the perfect and future participles.

4.3.2. The perfect participle

Once it has been established that projections headed by the non-perfect participle are indeed projections of lexical heads (a combination of N-P), an immediate question arises: does something similar also hold of the perfect and future participles? I suggest here that such is the case: perfect participles are projections of the category A(djective), and future participles (to be studied in the section 4.3.3) are projections of the category P. Recall how the verb combines with the perfect participle to form the tenses that translate as the present perfect and the simple past in English:

(2) a. Ainhoak egunkaria ekarr-i du
Ainhoa-E paper bring-perf has
Ainhoa has brought the newspaper
b. Ainhoak egunkaria ekarr-i zuen
Ainhoa brought the newspaper

The i ending is one of the variants of the perfect morpheme studied in chapter three. A deep analysis of the perfect morpheme there showed the existence of a fairly abstract paradigm: the perfect morpheme may form derived nominals and derived adjectives when subject to D-S lexical insertion, in which case the morpheme absorbs the DP object of the verb to which is suffixed. The perfect morpheme may be also inserted after S-S; in this case it gives rise to nominalizations of the perfective type with internal "clausal" structure (the verb is the L-head):

(75) D-S
Noun | derived Ns
(absorption) | Nominalized Clauses
Adjective | derived As
(absorption) | perfect morpheme = [+completed]

As pointed out in chapter three, this abstract paradigm has a gap: we expect that there can be a late-insertion option of the perfect morpheme in its adjectival use. In this case, the AP will be selected externally as a V-projection, and the adjectival morpheme will not be present until PF, thus allowing the V to be the L-head of this maximal projection. Furthermore, we predict that the adjective morpheme will be associated with the same feature [+completed] as in nominalized clauses. I assume here that the examples in (2) instantiate the existence of such APs. The auxiliary verbs izan 'be' and ukan 'have' select as in (76), and the internal structure of their complement at D-S and S-S is as in (77):

(76) izan/ukan, V, +V^[+completed]
The existence of adjectival participles is a welcome prediction of the framework assumed here. Additional support for (77) is provided by the fact that in some dialects perfect participles may optionally show number agreement with the object DP when selected by *ukan* (i.e. with transitive verbs) or with the subject DP when they are selected by *izan* (i.e. with unaccusative verbs). This behavior is typical of predicative APs with the copula *izan 'be':

(78) a. Nire lagun-*a(k) jatorr-*a(k) da (dira)  
    my friend-art(pl) cool-art(pl) is (are)  
    My friend(s) is (are) cool (plural)  

b. Nire lagun-*a(k) Baionan ego-*n-*a(k) da (dira)  
    -loc stay-perf-art(pl) is (are)  
    My friend(s) have been (plural) to Bayonne  

c. Ainhoa edalontzia-*(-k) apur-tu-*a(-k) du (ditu)  
    glass(-es) break-perf-art(pl) has  
    Ainhoa has broken (plural) the glass(es)  

(20) I assume that DP* originates adjoined to the lower AP. Cf. note 12.  
(21) This sentence can also be interpreted as meaning "Ainhoa has the glasses broken", with *du/ditu* as main verbs and *apur-tu-*(-k) as secondary predicates. Under this interpretation, Ainhoa has not necessarily broken the glasses herself (the implication is that the glass(es) belong(s) to her). The two readings are disambiguated with a wh-question about the subject:
If (77) is the correct structure, then, the following lexical entries (a simplified version of the ones given in chapter three) predict all the occurrences of the perfect morpheme. Moreover, they also predict the non-existence of a passive in Basque:

\[
(79) \begin{align*}
\text{Basque perfect morpheme } \\
i/nlu], A, +V_+ & \left\{ \left( +N, \text{STATE } V = +\text{ACTIVITY/MOTION} \right) \right\} \\
& \left\{ A = [+\text{completed}] \right\} \\
i/nlu], N, +V_+ & \left\{ \left( +N, \text{STATE } V = +\text{ACTIVITY/MOTION} \right) \right\} \\
& \left\{ N = [+\text{completed}] \right\}
\end{align*}
\]

What is missing in the Basque adjectival value of the perfect morpheme subject to late insertion is the absorption feature that gives rise to verbal passives.

4.3.3. The future participle

Given the analysis of the non-perfect participle in section 4.3.1, the analysis of the future participle as a projection of the category P seems unproblematic. In most dialects, the future participle is formed by attaching the perfect morpheme and the postposition ko to a verb stem:

\[
(4) \begin{align*}
a. \text{Ainhoak egunkaria ekarr-i-ko du} & \quad \text{Ainhoa-E paper bring-perf-KO has} \\
& \quad \text{Ainhoa will bring the newspaper} \\
b. \text{Ainhoak egunkaria ekarr-i-ko zuen} & \quad \text{bring-perf-KO had} \\
& \quad \text{Ainhoa would bring the newspaper (= was to bring the newspaper)}
\end{align*}
\]

Recall from the previous chapter that ko is a grammatical postposition that attaches to postpositional phrases and also attributive bare NPs when they occur DP-internally:

\[
i. \text{Nork apur-tu-a du edalontzia?} \\
& \quad \text{who-erg break-perf-art has glass} \\
& \quad \text{Who has broken the glass? (*Who has the glass broken?)}
\]

The adjectival interpretation of the participle is ruled out because the derived adjective stands between the operator in spec(I) and the verb in INFL. The other interpretation is possible as a subcase of participial adjunction.

(22) The addition of the article to the present perfect seems to imply some difference in meaning according to Lafitte (1962: 384-5) (i.e. "achvement qualitatif", "achvement subjectif"): 

\[
i. \text{Piarres ikus-i duka?} \\
& \quad \text{Have you seen Piarres?} \\
\text{ii. Piarres ikus-i-a duka?} & \quad \text{Have you already seen Piarres?}
\]

Sentence (78b) should be glossed as "... have been to Bayonne once at least" (= so-called experiential perfect). Other examples mentioned by Lafitte don't really involve the absence/presence of the article in the present perfect tense, but rather a contrast between the present perfect and the corresponding derived adjective with the copula izan:

\[
i. (\text{Piarres}) \text{ eror-i da} & \quad \text{fall-perf is} \\
& \quad \text{(The tree) fall-perf is} \\
i. (\text{Piarres}) \text{ ikusi da} & \quad \text{fall-perf is} \\
& \quad \text{(The tree) is fallen ("es par terre")}
\]

The latter example is the equivalent of the Southern Basque eroria/eroria dago (cf. Spanish "está caído/por los suelos" and, especially, chapter three, section 3.3.1). In the case of the simple past, Lafitte suggests that the difference in meaning brought about by the addition of the article (= material achievement) translates best as the French pluperfect.

[152]
(80) a. Ainhoa [etxera-ko autobusa] har-tu du
    home-adl-ko bus take has-it
    Ainhoa has taken [the bus for home]

b. Ainhoa [bihotz one-ko] emakumea da
    heart good-ko woman is
    Ainhoa is a woman of good heart

Crucially, the future marker ko, traditionally referred to as a “locative genitive” (cf. Lafitte 1962), alternates, depending on the dialect, with the other genitive postposition in Basque, namely ren (“possessive genitive”), which can only attach to DPs:

(81) a. Ainhoa egunkaria ekarr-i-ko / ekarr-i-ren du
    Ainhoa will bring the paper

b. Ainhoa etxean ego-n-go / ego-n-en da
    home-Ioc stay is
    Ainhoa will be/stay at home

c. Ainhoa etxean geldi-tu-ko / geldi-tu-ren da • remain
    Ainhoa will remain home

I take this as evidence that the future participle is a PP headed by ren/ko; the alternation between the two Ps shows further that the participle contains a nominal element. I propose that future participles have the structure diagrammed in (83), predicted by the subcategorization properties of the auxiliary verbs and the relevant entries for the genitives in (82):

(82) a. izan/ukan, V, +V^[+future]\(^{23}\)

b. ko/ren, P, +N(____, \{P = [+future]\})
   [where the parenthesized option (...) corresponds to the aspectual use of the postpositions]

(23) The qualification of the feature [+future] as aspectual is far from precise; the feature [-realized] is perhaps more accurate (cf. Eguzkitza 1986). In the Basque verbal paradigm, I take [+future] to indicate that the event denoted by the verb always takes place after the previously introduced point (whether this is in the present or the past). The event itself is unrealized (cf. Goenaga 1980, who equates the future tenses in Basque to the modal auxiliaries). I will assume here that the event designated by a single verb can be perceived as being realized (in which case it can be perfective or non-perfective) or as unrealized. A future perfect (I will have arrived) is basically a future tense, an unrealized event (to have arrived is unrealized).
By Minimal Structure, (83) is licensed over an entire sentence containing a CP, IP and VP nodes for reasons now clear. To satisfy (82a), the future marker cannot directly attach to a verbal stem because the former is obligatorily a suffix on a noun morpheme, at least when bearing the said feature [+future]; rather it requires some nominal element. Since there is no semantic specification of what kind of V izan/ukan may take, the only N morphemes that can be inserted under the N node after S-S, must be semantically vacuous noun affixes, i.e. grammatical nouns in the sense of Emonds (1985) (cf. chapter one); any other nominal affix would impose restrictions on the verbal bases not expressed in (82a), in violation of the Projection Principle. Only nominal te and the nominal value of the perfect morpheme are possible candidates since the two are the only grammatical noun affixes. For unclear reasons, the perfect morpheme is generally inserted, although te can be used in non-standard uses:

(84) a. ? Ainhoa etxera etor-tze-ko da home-adl come-TE-KO is
    b. Ainhoa etxera etorr-i-ko da -perf-ko
Ainhoa will come home
(85) a. ? Baztandarrek M. Izetari gaur omenaldia egi-te-ko diote
    Baztan-people-E -D today homage do-TE-KO have
b. Baztandarrek M. Izetari omenaldia egi-n-go diote
     -perf-KO
People from Baztan will pay a tribute to M. Izeta today

One possible explanation for the use of the perfect morpheme is that it is the
default empty N because it is more “specific”; that is, it has three different variants
depending on the verb stem (i/n for native stems, tu otherwise), whereas te (and its
phonologically conditioned variant tze) is exceptionless.

It should be pointed out that neither (4) nor (84b/85b) have a perfective future
interpretation. This is a consequence of the fact that the features of the structural head
always prevail over the features of the non-head. I elaborate on this notion in section 4.3.4.

4.3.4. Feature percolation: coordinating solutions

We arrive then at the following picture: the auxiliaries izan and ukan select the
three different kind of participles as V heads together with some syntactic (aspectual)
feature. By the Minimal Structure Principle (pace the 0-Criterion), a single
maximal phrase is projected at D-S which contains a verb, the lexical heads that bear
the relevant aspectual feature and, when necessary, some grammatical formatives
which support the insertion of the aspectual features (the perfect nominal morpheme
in the future participle)24.

(86) izan/ukan, V, +V^[αF(aspect)]
    (where [αF(aspect)] = [+/-completed], [+/-realized/ future])

(87) a. Perfect Participle

\[ \text{VP} \]
\[ \text{AP} \]
\[ \text{V} \]
\[ (\text{XP}) \]
\[ \text{A} \]
\[ \text{A'} \]
\[ \text{V} \]
\[ \text{A} \]
\[ [+\text{compl}] \]
\[ \text{lexical} \]
\[ \emptyset \]
\[ \text{izan/ukan} \]
\[ (\rightarrow \text{i/n/tu in PF}) \]

(24) This reduced to +V by the Aspect Condition in Artiagoitia (1992a, ch. five), a universal requirement of V-
occurrences:
   i. Aspect Condition : Every XP whose L-head is a verb must be uniquely specified for aspect features in
      the domain of an extended projection of X.

The notion of "extended projection" was taken from Grimshaw (1992):
   ii. X is the extended head of Y, and Y the extended projection of X, iff:
      a) Y dominates X
      b) Y and X share all categorial features
      c) all nodes intervening between X and Y share all categorial features
b. Non-perfect Participle

\[
\begin{array}{c}
\text{VP} \\
\text{PP} \\
\text{P'} \\
(\text{XP}) \\
\text{P} \\
\text{N} \\
\text{V} \\
\text{[-compl]} \\
\text{lexical} \\
\emptyset \\
\emptyset \\
\text{izan\'ukan} \\
(\rightarrow \text{te-n in PF})
\end{array}
\]

In all the cases, the double insertion level hypothesis predicts that the syntactic heads that realize the features (and the empty noun and P heads associated with them) will not be inserted until after S-S. At both D-S and S-S the verb is the L-head of the maximal phrase, and is able to select its complements and assign accusative case to a DP of which it constitutes a sister if required. The empty heads do not induce any minimality effect by Empty Head Transparency:

\[\text{(88) Empty Head Transparency: Under the same } Y^2, \text{ empty heads induced by subcategorization distinct from the L-head are transparent in the syntax (where transparent = don't govern and don't block government)}\]

This means e.g. that if verbal heads in aspectuals and V* constructions all undergo head-agreement as proposed in Chomsky (1986b), these intervening heads will not block coindexing (cf. also Zagona 1988a):
(89) $[\text{xp} \ldots V_2; \text{[-}[y \emptyset)]; -[x \emptyset]] V_i$  
($V_i = \text{izan and ukaz}; V_2 = \text{main verb}; [y \emptyset], [x \emptyset] = \text{any verbal morpheme that remains null at D-S and S-S}$)

As for the aspectual morphemes in the configurations in (87a, b, c), only their categorial label and their syntactic feature (induced by subcategorization) are present at (D-S and) S-S; at this level, the features of the head percolate to the next node up and, ultimately, to the maximal projection, as proposed in Lieber (1992):

(90) **Head Percolation:** Morphosyntactic features are passed from a head morpheme to the node dominating the head. Head Percolation propagates the categorial signature\(^{25}\) (Lieber 1992: 92)

In the case of the perfect participle (=AP) and the future participle (=PP), this is straightforward. The feature [+completed] of the nominal affix in the future participle cannot percolate because the feature of the head does. In the case of the non-perfect participle (=PP), the empty P node determines the syntactic category of the XP, but since no syntactic feature is associated with the empty P at S-S, the feature [-completed] on the non-head $\nu$ percolates to P, according to the second percolation convention of Lieber (1992):

(91) **Backdrop Percolation:** If the node dominating the head remains unmarked for a given feature after Head Percolation, then a value for that feature is percolated from an immediately non-head branch marked for that feature. (Lieber 1992: 92)

The [-completed] feature of the non-head that has percolated to P will percolate from there to PP by (90). I assume that all XPs containing a verb which is an L-head must be specified for aspect\(^{26}\). Granted that, then the S-S representations of the participles that are input to LF will look as follows:

(92) a. Perfect Participle

\[
\begin{array}{c}
\text{AP} \quad \text{[+completed]} \\
\text{A'} \\
\text{(XP)} \\
\text{A} \\
\text{V} \\
\text{A} \\
\text{[+compl]} \\
\text{lexical} \\
\emptyset \\
\text{(= i/\text{tu} in PF)}
\end{array}
\]

\(^{25}\) By categorial signature, Lieber means the different features associated with the syntactic categories, such as [+Plural] [+/-I] (=first person) for nouns. The last statement in (90) simply means that features cannot percolate across heads of a different category. I assume here that aspect features on grammatical formatives are not part of the categorial signature per se; therefore they are free to percolate across a different category without violating (90).

\(^{26}\) In Artiagoitia (1992a), this was derived from the Aspect Condition. See note 24.
b. Non-perfect Participle

\[ PP [-\text{completed}] \]

\[ \rightarrow \]

\[ \left( \text{XP} \right) \]

\[ P' \]

\[ \rightarrow \]

\[ P \]

\[ \rightarrow \]

\[ N \]

\[ \rightarrow \]

\[ P \]

\[ \leftarrow \]

\[ V \]

\[ \text{lexical} \]

\[ \emptyset \]

\[ \emptyset \] (\( = \text{te-n} \) in PF)

c. Future Participle

\[ PP [+\text{future}] \]

\[ \rightarrow \]

\[ \left( \text{XP} \right) \]

\[ P' \]

\[ \rightarrow \]

\[ P \]

\[ \rightarrow \]

\[ N \]

\[ \rightarrow \]

\[ P \]

\[ \leftarrow \]

\[ V \]

\[ \text{lexical} \]

\[ \emptyset \]

\[ \emptyset \] (\( i/n/i-tu-ko \) in PF)

In view of (92a,b,c), the coordination facts described in section 4.2 now follow automatically. The different participles cannot be coordinated because they are dominated by different categorial nodes, AP and PP. And even though the non-perfect and the future participles are both dominated by a PP node (a necessary but not sufficient condition for coordination), they crucially differ in their aspectual feature; the impossibility of coordinating them can be attributed to this feature mismatch. No such explanation is available under Lakàs Aspect Phrase hypothesis since no claim is made as to what specific features are ever associated with the different Aspect heads. The fact that locative grammatical PPs and the non-perfect participle can coordinate also follow from the analysis developed here: the feature [-completed] on (N and) DET is shared by spec(D) by spec-head agreement as in Chomsky (1986b). As demonstrated in Grimshaw (1991), a syntactic feature on DP (e.g. [+wh]) can be passed on to a PP in which the DP is embedded (as it is the case in pied-piping). Therefore, analyzing aspectual heads as grammatical formatives of category A, N, and P solves the deficiencies of the AspP hypothesis. The analysis put
forward in this section for Basque participles is based on the independently justified theoretical tools utilized throughout this article and elsewhere: Emonds' *Minimal Structure Principle*, reduction of syntactic subcategorization to selection of heads, *Empty Head Transparency*, and late insertion of grammatical formatives. It allows for a more restrictive view of the syntactic representation of "aspect-related" maximal phrases with various affixal heads than is widely assumed: no hypergeneration of XPs occurs with the subsequent subjacency-related problems, no reduplication of morphological and syntactic selections is needed, and finally the postulation of a functional category Aspect is rendered unnecessary. Moreover, it proves that projecting the occurrence of *te* and the perfect morpheme as aspect markers reduces to, and is predictable from the lexical representations proposed in chapters two and three, thus avoiding the need to postulate that the same morphemes belong to different categories. The Aspect Phrase hypothesis is forced to duplicate the categorial status for *te* and the perfect morpheme (e.g. *te* is of category N, *te* is of category INFL, *te* is of category Asp) without capturing what is common to all the occurrences of the morpheme.

The picture emerging from chapters two and three and the analysis developed in this chapter is one where parametric variation across languages depends heavily on the lexical properties of grammatical formatives; as just seen, these don't necessarily correlate with the notion functional category. The morphemes *te*, *i/n/tu* and *ko*, the alleged "aspect" heads in Laka's analysis, are actually morphemes of the lexical categories Noun, Adjective and Postposition, lexically specified as having aspectual features.
Glossary

A absolutive           E ergative
abl ablative           inst instrumental
adl adlative           loc locative
aff affirmative marker mot motative
aux auxiliary          neg negation, negative marker
ben benefactive         OP null operator
com comitative         part partitive
comp complementizer    pl plural
des destinative        prt particle
D dative

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