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Lexical passives in Modern Greek

Smirniotopoulos, Jane Claire, Ph.D.
The Ohio State University, 1991

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LEXICAL PASSIVES IN MODERN GREEK

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of the Ohio State University

By

Jane C. Smirniotopoulos, B.A., M.A.

* * * * *

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1991

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Copyright by
Jane C. Smirniotopoulos
1991
To

Mary Odden,
Uma Subramanian,
and
Willow Wood
ACKNOWLEDGMENTS

My gratitude to my adviser, Brian Joseph; the members of my committee, David Dowty, Vassilis Lambropoulos, and Arnold Zwicky; my informants, Eva Constantellou and Souli Christofidou; my typist, Willow Wood; and to Uma Subramanian.
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CHAPTER I

INTRODUCTION

The study of passive constructions in various languages, particularly in English, has a long tradition in the linguistic literature. Among the theoretical issues which this literature addresses are:

1. questions involving the definition of passive (universal or language-specific) and diagnostics for recognizing passive;

2. characterization of the class of active verbs (or verb phrases) which have corresponding passives;

3. exceptions to whatever mechanism is used to describe the occurrence of passive forms;

4. the location of the mechanism used to account for passives (syntactic, lexical, or both); and,

5. the function of passives.
These theoretical issues have not been extensively addressed in the literature on Modern Greek. There are several papers and dissertations concerned primarily with the function of Greek passives (Lascaratou, 1980; Lascaratou, 1984; Warburton, 1975). A paper by Joseph (1982) questions the universal definition of passive in Relational Grammar as involving only advancement of direct object to subject. Many traditional grammars (e.g., Householder, Kazazis, and Koutsoudas, 1964; Joseph and Philippaki-Warburton, 1987; Mackridge, 1985; Mirambel, 1959; Triantaphyllides, 1941) and studies of verbal morphology (Daltas, 1979; Koutsoudas, 1962; Warburton, 1970) mention issues one, two, and three; and all, as far as I know, take passive as an inflectional category, and thus as distributed by syntax, in response to issue four.

My primary theoretical concern will be the difference between lexical and syntactic rules with reference to Modern Greek passive forms. One paper directly addresses the question of whether passives in Greek are syntactic or lexical (Lascaratou and Warburton, 1983); this paper will be discussed at some length in Chapters III and V of this work. Another paper (Campos, 1987) gives some consideration to the distinction between lexically and syntactically determined passive
morphology, within the Government and Binding Theory of Chomsky, (1981, 1982). He claims that "true passives" (in his terminology) are those in which passive morphology absorbs the agent thematic role of the subjects of corresponding actives, and the accusative case marking of the direct objects of such actives. As a consequence of this treatment, a number of deponent verbs (verbs with passive morphology but no passive meaning) and passive verbs which are not predictably related to corresponding actives in meaning, fail to occur in the "true passive" construction because the subjects of these passive verbs are not agents, but experiencers. Since Campos's analysis is formulated within a Government and Binding theory of syntax, much of that analysis is not relevant to the present work, cast in General Phrase Structure Grammar (GPSG, henceforth). In particular the notions agent, experiencer, case assignment, and thematic role absorption, are not directly matters of syntax in GPSG. Therefore, only the briefest discussion of Campos's account is given here.

There are a number of problems with Campos's analysis. First, while the subjects of the passive verbs with irregular semantics discussed by him may well be experiencers, the subjects of the corresponding actives may well be agents. For example:
1. Sanízo "lend" Sanízome "borrow"  
2. Sikóno "lift" Sikónome "get up"

Second, in Campos's analysis, semantically reflexive and reciprocal passive forms are treated as the "true" passive, where the regular passive reading is treated as a "false" passive. This view is counter-intuitive since one expects forms with the same morphology and the same semantic structure to be examples of the same rule. It is also problematic because Campos fails to consider a syntactic difference between reflexive/reciprocal and passive interpretations; namely, that passive interpretations can occur with an expressed agent following the preposition ἀπό (the normal means of expressing agents), while reflexive/reciprocal interpretations cannot:

---

1. Transcription of Greek words throughout is in IPA. I use [n - voiced stop] for a number of cases where style, lexical differences, and individual variation may produce, in actual speech, [n - voiceless stop] [antónis] "Antonis", [n - voiced stop] [ándonis], [prenasalized voiced stop] [ándonis]; except initially, where I use the [voiced stop], since only that pronunciation is possible. I use /y/ even though ꝏ --> j before front vowels. Symbols in parentheses are truly optional--pronunciations with or without the parenthesized sound are acceptable.
3. *p Petros ksirízete sto
the Petros is shaved at-the
(passive)
spíti tu.
home his.
"Petros shaves himself at home."

4. p Petros ksirízete ston
the Petros is shaved at-the
(passive)
kuréa.
barbers.
"Petros gets shaved at the barbers."
(Campos, 1987; p. 308; examples 16a, 16b)

but:

5. *p Petros ksirízete apó ton
the Petros is shaved by the
(passive)
kuréa.
barber.
"Petros is shaved by the barber."

6. *p Petros ksirízete apó ton
the Petros is shaved by the
(passive)
eaftó tu.
self his.
*"Petros is shaved by himself."
Verbs which can receive only a passive interpretation also occur with ἀπό:

7. ἀπό to ἄναστιλοικε
that the building be restored
nom nom nom pfve past
neut sg neut sg neut sg 3 sg

ἀπό ἑνα ἀρχαιολόγος ἀπό
from/by a/one archaeologist from
acc masc acc sg
masc sg
to
the
neut acc sg
neut acc sg

"That building was restored by an archaeologist from the university."

The passive reading of verbs which also have reflexive/reciprocal interpretation occurs in the same structure as verbs with only a passive reading, but the reflexive meaning does not occur in that structure.

Only the passive interpretation is possible in sentences with an expressed agent with ἀπό. Thus, the reflexive/reciprocal interpretations of morphologically passive verbs occur in a different syntactic structure than passive interpretations, and therefore cannot be treated as described by the same syntactic rule that describes those passives which have no reflexive/reciprocal interpretation.
However, the basis of his analysis (thematic role absorption and case assignment) are not relevant to the framework employed here (GPSG), in which thematic roles and case assignment are not primarily matters of syntax, but are properties of particular lexical items. This analysis will not, therefore, be further considered here.

Theoretical issue four, involving as it does the nature of lexical rules, is currently of some interest in GPSG. "Classic" GPSG (i.e., Gazdar, Klein, Pullum, and Sag, 1985) took a quite traditional view of the lexicon, treating it as the repository of idiosyncratic information. In some later versions (i.e., Pollard, 1984) the role of the lexicon is much expanded. Many rules, including passive in English, which were metarules (part of the syntax) in earlier treatments (i.e., Gazdar and Sag, 1981), are lexical rules in Pollard's work. Essentially, only listed rules involving concatenation and head-wrapping operations are syntactic in this framework. This treatment allows the elimination of most metarules, but does not explicitly consider what properties lexical rules ought to have, beyond the useful one of simplifying the syntax. On the other hand, Zwicky (1987) argues that Pollard's analysis of passive in

2. The only metarules remaining are those describing long distance dependencies.
English as a lexical rule violates either the principle of morphology-free syntax or the principle of syntax-free morphology, depending on the treatment of the passive feature as derivational or inflectional. Thus, passive in English must be a syntactic rule. It is important to address such issues in a treatment of Greek passives.

I begin this research by examining Greek passive forms, the class initially being defined in traditional morphological terms. That is, I will examine all forms ending in -menos (passive participles, traditionally) and in -me (passive verbs, traditionally). Both sets

---

3. -menos occurs in the citation form for passive participles; it is masculine nominative singular.

4. Similarly, -me occurs in the citation form for passive verbs; it is imperfective, first person, singular, non-past.

5. A sample paradigm of the (very regular) verb ἐράφω "I write" is given below. Chapter II discusses the formation of Greek verbs in greater detail.

<table>
<thead>
<tr>
<th>ACTIVE</th>
<th>PASSIVE</th>
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<tr>
<td><strong>Imperfective</strong></td>
<td><strong>Perfective</strong></td>
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<tr>
<td>NON-PAST:</td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>ἐράφω</td>
</tr>
<tr>
<td>2 sg</td>
<td>ἐράφις</td>
</tr>
<tr>
<td>3 sg</td>
<td>ἐράφι</td>
</tr>
<tr>
<td>1 pl</td>
<td>ἐράφωμε</td>
</tr>
<tr>
<td>2 pl</td>
<td>ἐράφετε</td>
</tr>
</tbody>
</table>
| 3 pl | ἐράφονε | ἐράψονε | ἐραφόμε | ἐραφτύν
of forms are said to have passive morphology in traditional treatments.

Forms in -menos occur in an analytic passive construction (that is, involving more than one word); while forms in -me occur in a synthetic passive (single word):

8.a active puló
   +V, -PAS
   1 sg impf

8.b synthetic passive puliéme
   +V, +PAS
   1 sg, impf non-past

8.c analytic passive íme puliménos "I am sold"
   be sold
   1 sg +ADJ, +PAS
   past masc, nom, sg impfve

Greek also has deponent verbs - verbs with passive morphology but active meaning:

PAST:

<table>
<thead>
<tr>
<th></th>
<th>1 sg</th>
<th>2 sg</th>
<th>3 sg</th>
<th>1 pl</th>
<th>2 pl</th>
<th>3 pl</th>
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<tr>
<td></td>
<td>ýrafa</td>
<td>ýrages</td>
<td>ýrafes</td>
<td>ýrafame</td>
<td>ýrafate</td>
<td>ýrafan</td>
</tr>
<tr>
<td></td>
<td>ýrapsa</td>
<td>ýrapses</td>
<td>ýrapse</td>
<td>ýrapsame</td>
<td>ýrapsate</td>
<td>ýrapsan</td>
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<td></td>
<td>ýrafómuna</td>
<td>ýrafósuna</td>
<td>ýrafótane</td>
<td>ýrafómoste</td>
<td>ýrafósaste</td>
<td>ýrafóndusan</td>
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<td></td>
<td>ýráftika</td>
<td>ýráftikes</td>
<td>ýraftike</td>
<td>ýraftikame</td>
<td>ýraftikate</td>
<td>ýráftikan(e)</td>
</tr>
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</table>
9. *oimáme* "I remember" active, transitive

10. *er-vázome* "I work" active, intransitive

and middle or reflexive/reciprocal verbs, also with passive morphology:

11. *vrískome* "I find myself", *vrísko* "I am located" "I find"

12. *avapiómate* "we love each other", *avapáo* "I love"

Since there is both a synthetic passive (with passive verb) and an analytical passive (with a form of "to be" plus passive participle) in Greek, but only an analytic passive in English, the arguments given for the lexical or syntactic status of English passives will have to be doubled for Greek. Moreover, any consideration of middle and/or deponent verbs will complicate this picture considerably.

Lascaratou and Philippaki-Warburton (1983) argue that, within a transformational framework, passive participles must be lexically derived, and passive verbs must be syntactically (in particular, transformationally) derived. They base their arguments on two of the criteria for lexical rules given by Wasow (1977). For
each of Wasow's criteria I give a name, for ease of reference in following chapters.

A. Lexical rules can change the part of speech of an expression, syntactic rules cannot (category change).

B. Lexical rule outputs can feed other lexical rules, syntactic rule outputs cannot; syntactic rules can apply to the output of other syntactic rules; lexical rules cannot (interaction).

They do not advance any arguments based on Wasow's other criteria:

C. Lexical rules are structure-preserving; syntactic rules need not be (preservation of structure).

D. Lexical rules are local; syntactic rules need not be (localness).

E. Lexical rules might have idiosyncratic exceptions (syntactically and/or semantically); syntactic rules will have few or no exceptions (exceptionality).

At least some of Wasow's criteria are theory-bound. Thus, a theory which does not make distinctions between
components of a grammar (e.g., Arc Pair Grammar) will not be concerned with the difference between lexical and syntactic rules at all. A highly modular theory (Zwicky, 1983; Pullum and Zwicky, 1986) will be likely to treat Criterion B (interaction) as extremely important. Theories like Categorial Grammar (henceforth, CG), in which lexical and phrasal categories are not distinguished, require at least a different statement of Criterion A (category change), since rules of the syntax always change category by building up phrasal categories identical in category to basic (lexical) categories (Dowty, 1979; Bach 1980). Any theory with rule-to-rule semantics (a semantic rule associated with each syntactic rule) will require that syntactic rules produce expressions with predictable semantics (Criterion E, or the semantic part of it), while theories with less careful semantics might not require this.

In fact, Dowty (1979) considers this to be one of two primary distinctions between lexical rules and syntactic rules, with other properties of lexical rules following from the usual, but not necessary, association of morphological (word-forming) operations with lexical

---

6. The other is the existence of exceptions.
rules and syntactic (phrase-forming) operations with syntactic rules.

But Wasow's criteria appear to me to express what most linguists would claim as fundamental differences between lexicon and syntax, for any theories which recognize these as separate components. The lexicon is at least a list of items and their associated idiosyncratic properties: semantic, syntactic (syntactic category and subcategorization, at least), morphological, and phonological. Any rules that are part of this component should be able to refer only to those properties that are associated with lexical items in this list or are supplied by such rules. So, for example, we expect lexical rules to be structure preserving since most lexical items do not have syntactic structure in the usual sense. They can be expected to be local (that is, referring to sisters), since the syntactic information listed in the lexicon is primarily subcategorization information (and so is available for "rearrangement" by lexical rules). Syntactic category is listed in the lexicon, so may be changed by lexical rules; but

7. In this Introduction, I beg the question of whether lexical rules are distinct from rules of derivational morphology or not, and what exactly the formal properties of lexical rules should be. Questions of this sort are addressed in the dissertation itself.
syntactic rules must "insert" lexical items of determined category into syntactic structures. The lexicon is generally claimed to be the repository of idiosyncratic information, so lexical items with idiosyncratic behavior are to be expected; syntax is a collection of regularities of sentence structure, so idiosyncratic behavior is not expected. The particular type of interaction between lexicon and syntax claimed by Wasow in Criterion B (interaction) is possibly the most theory-bound criterion given: Wasow takes the lexicon as preceding syntax (that is, transformational syntax), since lexical insertion takes place at deep structure; but Zwicky (1989) takes it as following syntax (or perhaps operating parallel to syntax), since the feature system of GPSG is rich enough to ensure that lexical items with appropriate features are be associated with appropriate structures. Nevertheless, I believe that this criterion embodies a more general claim about the structure of languages: if the claim that the lexicon and syntax are distinct components of grammar is not to be virtually empty, then the interaction between them should be restricted.

My theoretical starting point on the nature of the rules of the lexicon is that presented in Zwicky (1989). The lexicon, in that view, consists of a number of
subcomponents including a list of lexemes, derivational morphology, and inflectional morphology. Lexemes are associations of semantic, syntactic, morphological, and phonological information. This notion of lexeme is one of several notions of "word" available in the literature (e.g., Matthews, 1972, 1974; Zwicky 1989). A lexeme is to be distinguished from its inflectional forms but includes the specification of such inflectional forms, provided by the rules of the inflectional morphology sub-component. Such rules apply to stems of the lexeme, provided in turn by a class of stem formation rules, which apply to the listed primary stem of the lexeme (root). Stem formation rules are thus a type of redundancy rule, stating generalizations over items (stems) which are listed as a part of the lexeme itself. Derivational rules apply to lexemes, including their lists of inflectional forms and stems, to give new lexemes. This system represents a complicated, but specifiable, interaction between subcomponents of the lexicon. In particular, the lexemes that are the output of derivational rules must be provided with appropriate sets of stems and inflectional forms via stem formation rules and rules of inflection, while the input to derivational rules includes possible reference to such
stems and inflectional forms. Thus this system is cyclic: see Figure 1.

![Cyclic Interaction in the Lexicon Diagram]

Figure 1: CYCLIC INTERACTION IN THE LEXICON

It is worth pointing out here that there is a sense in which both types of Greek passives are clearly lexical (that is, produced by some set of morphological rules) and clearly syntactic as well. Both passive types are morphologically distinguished from the active verbs on which they are based - participles by the addition of the suffix *-menos* (in the nominative, masculine, singular), verbs by the occurrence of a special set of person number
endings in the imperfective (ome - first person singular, non-past; omun - first person singular past) and the presence of -ö rather than -s- in the perfective, among other things. So the issue of concern is more accurately described as a question as to whether this morphology is better described as inflectional or derivational. This is discussed in detail in Chapter VI.

Both passives are clearly syntactic in the sense that both occur in an apparently specifically passive construction--either (a) [passive V...apó - agent NP]; or, (b) [íme passive participle...apó - agent NP] (agentive passives)--as well as in an agentless passive construction, which may not need to be distinguished from IV or íme +ADJ). These constructions are, at the very least, described by ID rules - clearly syntactic objects. So the question being addressed here is not whether some syntactic rule describes the occurrence of passive forms, since some syntactic rule must describe the occurrence of every word, but whether these rules are specifically passive rules - that is, rules requiring a syntactic feature PASSIVE.

A detailed study of Greek passive forms offers the opportunity to closely examine questions involving the

---

8. Either a construction feature in the sense of Zwicky (1987) or an inflectional category feature.
nature of lexical rules, syntactic rules, and the interaction between and within these components. Lascaratou and Philippaki-Warburton (1983), arguing that passive participles are adjectives, give examples showing that these forms can occur in adjectival environments; that passive participles but not passive verbs are input to some apparently lexical rules; that at least one rule (apparently, derivational) picks out active verbs and passive verbs but not passive participles; and that there are passive participles for which no corresponding passive verb exists. Thus they purport to demonstrate: 1) that passive participles are adjectives; 2) that passive participles are not verbs; 3) that passive participles are not derived from passive verbs; and, 4) that passive participles are therefore lexically derived. Each of the their arguments would benefit from further clarification. For example, Lascaratou and Philippaki-Warburton argue that passive participles are adjectives because they can occur in positions typical of adjectives. It would be worthwhile to show that passive participles must be adjectives - that is, that no passive participles can be analyzed as verbs (parallel to the situation in English where some passive participles are adjectives, but some are not). In addition, all of the rules they claim interact with passive participle
formation need to be more closely examined in order to determine exactly what forms can be affected.

Lascaratou and Philippaki-Warburton also argue that passive verbs are syntactically derived, because the subjects of lower clause passive verbs can occur as objects of main clause verbs by the application of raising. In Transformational Grammar, this is a good argument for the syntactic status of a rule. However, in other theories subject-to-object raising is not generally taken as a rule analogous to a transformation, but instead as a construction type, the product of interaction between subcategorization and semantic interpretation. And, in Greek, raising is possibly better treated as a lexical phenomenon, since 1) few verbs allow this construction; 2) speakers generally prefer alternative constructions; and, 3) there is idiosyncratic variation among speakers as to which verbs can occur in the raising construction. Thus the question of whether passive verbs are syntactic, lexical, or both is largely unexplored in non-transformational frameworks. There is at least some indication that some passive verbs should not be syntactically derived (i.e., transitive verbs with no corresponding passive verbs, and passive verbs whose meanings are unpredictable from corresponding actives [Mackridge, 1985; Eleftheriades, 1985]) but more
evidence is clearly required. If raising is not a syntactic rule (or, possibly, not a rule at all), then there is as yet no evidence that a syntactic rule of passive is required for Modern Greek, even in a transformational framework.

This dissertation is primarily descriptive. I examine here a relatively large corpus of Modern Greek active verbs, passive verbs, and passive participles because I believe that such detailed descriptive work is an important - though rarely performed - prerequisite for accurate and realistic analysis of the facts of the language. Such a method also has the potential for revealing unexpected facts which have real consequences for the analysis of particular languages and for linguistic theory. The organization of the dissertation is as follows. Chapter II presents background information on Greek verbal morphology necessary for readers unfamiliar with Greek to understand the discussion in later chapters. Chapter III is a response to Lascaratou and Warburton's discussion of -menos participles as the product of the lexicon, while Chapter IV presents evidence that both -menos participles and passive verbs in -me are lexical phenomena on the basis

9. Sources of the corpus are described in the body of the dissertation.
of syntactic and semantic exceptionality (Criterion E). Chapter V is concerned with demonstrating that the raising argument for the syntactic status of passive verbs (-me) of Lascaratou and Warburton can not be supported for Greek, as well as with considering the interaction of both classes of passive with other syntactic phenomena. Chapter VI examines the interaction of passive marking with inflectional categories, while Chapter VII looks at the interaction of passive and derivation. In Chapter VIII, I conclude that both types of passive are the product of lexical generalizations, despite the implicit assumption of all previous treatments that passive verbs and passive participles (except for Lascaratou and Warburton, 1983) are inflectional categories of verbs and thus of syntactic relevance.
CHAPTER II

VERBAL INFLECTION IN MODERN GREEK

A. Introduction

This chapter is included for those readers not familiar with Modern Greek, and is intended to merely display the relevant conjugational patterns of verbs in Modern Greek, both active and passive, along with the phonological effect of a number of morphophonemic rules. The chapter is not intended as an analysis of any kind; rather it is based on the usual exposition of these matters in textbooks, reference grammars, and dissertations dealing with aspects of Greek verbal morphology other than the one dealt with here. In fact, I will disagree in later chapters with important aspects of the analysis which is implicit in these treatments. The chapter is provided only as a basis for understanding the discussion of passive morphology in later chapters.

B. Greek Morphology

Modern Greek is clearly a morphologically synthetic language. Particular elements of morphological structure
frequently represent the expression of more than one morphological category and particular morphological categories are often expressed by more than one element of morphological structure. Thus, the \( q-z \) in forms like \( \text{yráf-o} \) "I write", indicates that:

- the subject is first person, in contrast to \( \text{yráf-is} \) (second person subject);
- the subject is singular, in contrast to \( \text{yráf-ume} \) (first person plural subject);
- the verb is non-past tense, in contrast to \( \text{ēyráf-a} \) (past tense); and
- the verb is imperfective aspect, in contrast to \( \text{yráp-s-o} \), (the perfective aspect).

The occurrence of the ending \(-o\) also indicates that the form is not both passive and imperfective, in contrast to \( \text{yráfome} \) "I was written about". And the past tense of forms like \( \text{ēyráf-a} \) "I was writing," is indicated by:

- the ending \(-a\), in contrast to \(-o\) of the non-past tense;

---

1. I use the terms **perfective** and **imperfective** throughout to refer to inflectional categories termed, respectively, **stýmēos** "punctual" and **eýarkías** "continuous", literally: "of duration" in Greek grammars.
the prefixed element \textit{e} (the augment); and,

- antepenultimate stress.

Pedagogical treatments of Greek verbal morphology therefore generally present sample paradigms, with lists of exceptions to the rules implicitly displayed in them. This is quite probably the most efficient method of teaching such material, and a similar program is followed here.

2. In general, a vocalic augment occurs in past tense forms only when it must appear in order to bear the antepenultimate stress. Thus, past tense forms in which the stem and other morphological material are three syllables long or longer typically have no augment. For example, \textit{ayáp-i-s-a} "love", is first person singular perfective past; \textit{yráf-ame} is first person plural imperfective past.

In formal or learned styles, some speakers display unstressed augment in such words, and the past tenses of some verbs have "internal" augment (between prefix and verb stem), generally with archaic vowel contraction patterns. This phenomenon is not relevant to the topic of this dissertation and will not be discussed further.

3. A number of verbs violate the antepenultimate stress rule:
   a) imperfective past forms of Class II verbs regularly have penultimate stress:
      \textit{bor-ús-a} "be able", impfve past 1 sg
      \textit{fí-a} "see", pfve past 1 sg
   b) irregular forms: \textit{i-p-a} "say", pfve past 1 sg
       \textit{vr-ík-a}, "find", pfve past 1 sg
   in which singular perfective past forms are a total of two syllables.
C. Morphological Categories

Modern Greek verbs distinguish the following morphological categories:

Aspect: perfective, imperfective (pfve, impfve)
Tense: past, non-past (past, non-past)
Person: first, second, third (1, 2, 3)
Number: singular, plural (sg, pl)
Voice: active, passive (act, pass)
Mood: imperative, indicative (imp, indic)

Citation form for Greek verbs is the first person singular imperfective present; for the exposition of aspect, tense, and voice, the first person singular is also used. Thus, combinations of these features can be exemplified as follows (all in indicative mood):

4. And probably subjunctive as well. Since the category subjunctive does not interact in any interesting way with the category passive, and since its marking is prefixal rather than suffixal, while the imperative is suffixal, I will not discuss it here.
ACTIVE:  

<table>
<thead>
<tr>
<th></th>
<th>Class I</th>
<th>Class II</th>
</tr>
</thead>
<tbody>
<tr>
<td>impfve non-past</td>
<td>γράφο</td>
<td>αγάπαο</td>
</tr>
<tr>
<td>pfve non-past</td>
<td>γράψο</td>
<td>αγάπισο</td>
</tr>
<tr>
<td>impfve past</td>
<td>éγραφα</td>
<td>αγαπύσα</td>
</tr>
<tr>
<td>pfve past</td>
<td>éγραψα</td>
<td>αγάπισα</td>
</tr>
</tbody>
</table>

PASSIVE:  

<table>
<thead>
<tr>
<th></th>
<th>Class I</th>
<th>Class II</th>
</tr>
</thead>
<tbody>
<tr>
<td>impfve non-past</td>
<td>γράφομε</td>
<td>αγάπεμε</td>
</tr>
<tr>
<td>pfve non-past</td>
<td>γράφτο</td>
<td>αγάπηθό</td>
</tr>
<tr>
<td>impfve past</td>
<td>γράφομυν</td>
<td>αγάπηθον</td>
</tr>
<tr>
<td>pfve past</td>
<td>γράφτικα</td>
<td>αγάπηθικα</td>
</tr>
</tbody>
</table>

Additionally, both voices have perfective and imperfective, singular and plural imperatives:

ACTIVE:  

<table>
<thead>
<tr>
<th></th>
<th>Class I</th>
<th>Class II</th>
</tr>
</thead>
<tbody>
<tr>
<td>impfve singular</td>
<td>γράφο</td>
<td>αγάπα</td>
</tr>
<tr>
<td>pfve singular</td>
<td>γράφετε</td>
<td>αγάπατε</td>
</tr>
<tr>
<td>pfve plural</td>
<td>γράψε</td>
<td>αγάπισε</td>
</tr>
<tr>
<td>pfve plural</td>
<td>γράψετε</td>
<td>αγάπίσε</td>
</tr>
</tbody>
</table>

PASSIVE:  

<table>
<thead>
<tr>
<th></th>
<th>Class I</th>
<th>Class II</th>
</tr>
</thead>
<tbody>
<tr>
<td>impfve singular</td>
<td>γράφο</td>
<td>αγάπα</td>
</tr>
<tr>
<td>pfve singular</td>
<td>γράφετε</td>
<td>αγάπετε</td>
</tr>
<tr>
<td>pfve singular</td>
<td>γράψε</td>
<td>αγάπεσε</td>
</tr>
<tr>
<td>pfve plural</td>
<td>γράψετε</td>
<td>αγάπεσετε</td>
</tr>
</tbody>
</table>

Passive and active participles are generally included in sample conjugations. The active participle
is uninflected; the passive is inflected for gender and number:

<table>
<thead>
<tr>
<th>PARTICIPLES:</th>
<th>Class I</th>
<th>Class II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>γράφωντας</td>
<td>αγράφωντας</td>
</tr>
<tr>
<td>Passive (masculine singular)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pfve</td>
<td>γραμένος</td>
<td>αγραμένος</td>
</tr>
<tr>
<td>impfve</td>
<td>γραφόμενος</td>
<td></td>
</tr>
</tbody>
</table>

D. Conjugation Classes and Ending Sets

Most treatments of Greek verbal morphology distinguish two major conjugation classes of verbs. These major classes are defined by the form of person/number endings they take in non-past tense, imperfective aspect, and, essentially active voice, and depend on stress. Stem formation will be discussed in following sections of this chapter.

5. A few verbs show an aspect distinction in passive participles. The general case, however, is for passive participles to be formed from perfective passive stems.

6. In fact, there is a great deal of dialect variation in person/number endings (Newton 1972, 1973). I disregard this variation, since it seems to have no bearing on the issues discussed here, and would considerably complicate the discussion.
D.1 Active Endings

Class I verbs are those with stress on the last syllable of the stem in non-past, imperfective, active forms. Non-past active endings for Class I verbs are from Ending Set IA.

<table>
<thead>
<tr>
<th>ENDING SET IA</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>First person</td>
<td>-o</td>
<td>-ume/ome</td>
</tr>
<tr>
<td>Second person</td>
<td>-is</td>
<td>-ete</td>
</tr>
<tr>
<td>Third person</td>
<td>-i</td>
<td>-un(e)</td>
</tr>
</tbody>
</table>

Class II verbs are those with stress on the ending in non-past, imperfective, active forms. They take endings

7. -ume is generally more colloquial; -ome more formal.

8. -une is more colloquial; the final -e may also serve a prosodic purpose.

9. In fact, a number of subdivisions can be distinguished within Class II verbs on the basis of the following:
   a) whether the -á or -i/u vocalism occurs in the imperfective present active, and in which persons: -á, e.g., "love" with -á vocalism throughout, or, -á and -u on first and third plural,
      ayapó/ayapáo  áyapúme/ayapáme
      ayapás  áyapáte
      ayapá/ayapáis  áyapún(e)/ayapán(e);
    but "be able", only -o/i/u vocalism pattern,
    boró  borúme
    borís  boríte
    borí  boríne.
   b) whether -γ- can occur in the imperfective past active versus, -γγ-: e.g., ayapúsa, ayápaya, but only borúsa in the standard language.
from among the following set:

<table>
<thead>
<tr>
<th>ENDING SET IB</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>First person</td>
<td>-ó, -áø</td>
<td>-úme/áme</td>
</tr>
<tr>
<td>Second person</td>
<td>-ís, ás</td>
<td>-íte, áte</td>
</tr>
<tr>
<td>(áis, rarely)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third person</td>
<td>-í, -ái, -á</td>
<td>-ún(e), -án(e)</td>
</tr>
</tbody>
</table>

Past tense active endings for both classes are from Ending Set II, as follows:

<table>
<thead>
<tr>
<th>ENDING SET II</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>First person</td>
<td>-a</td>
<td>-ame</td>
</tr>
<tr>
<td>Second person</td>
<td>-es</td>
<td>-ate</td>
</tr>
<tr>
<td>Third person</td>
<td>-e</td>
<td>-an(e)</td>
</tr>
</tbody>
</table>

c) which theme vowel occurs in the perfective active before -s-: ayapíso, boreso, pináso.
d) what vowel alternation occurs in the passive imperfective non-past. With singular -e-, plural -o-:

- ayapjéme
- ayapjése
- ayapjéte

versus, with singular -a- (-a- or -u- in first person), plural -u-:
- ίmámé/ίmúme
- ίmáse
- άmáte

These subclasses will not be treated in this chapter, but a partially phonological account is possible involving specific vowel contraction rules for verbs with V final stems. Here Class II will be discussed as involving only ending stress.
Past tense marking in the active voice also involves 1) antepenultimate stress, except as described below, and a few lexical exceptions with monosyllabic stems (e.g., ıp-a); 2) the addition of a vocalic augment e- (in rare cases, i-) when the past form otherwise would have only two syllables; and 3) the addition of -us- to the stem for the imperfective past of Class II verbs (-us- always bears stress; thus these forms are exceptions to the antepenultimate stress rule described above).

D.2 Passive Endings

Passive forms in perfective aspect take endings from Ending Set IB (ending stress) (-o, first person singular; -i, second and third person singular and second person plural; first and third person plural -u vocalism only) regardless of conjugation class in the non-past, and from Ending Set II in the past, with an additional element -ik- occurring before the endings. There are special passive endings for imperfective aspect. Ending Set III occurs in non-past (with different theme vowel alternation as part of person/number marking, depending on conjugation class):
ENDING SET III

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>First person</td>
<td>-me</td>
<td>-maste</td>
</tr>
<tr>
<td>Second person</td>
<td>-se</td>
<td>-ste/saste</td>
</tr>
<tr>
<td>Third person</td>
<td>-te</td>
<td>-nde</td>
</tr>
</tbody>
</table>

Theme vowel alternations (preceding Ending Set III) in Class I verbs are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>First person</td>
<td>-o-</td>
<td>-o-</td>
</tr>
<tr>
<td>Second person</td>
<td>-e-</td>
<td>-e/-o-</td>
</tr>
<tr>
<td>Third person</td>
<td>-e-</td>
<td>-o-</td>
</tr>
</tbody>
</table>

Theme vowel alternations for Class II verbs are more varied and need not concern us here. The most common set of alternations is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>First person</td>
<td>-e-</td>
<td>-o-</td>
</tr>
<tr>
<td>Second person</td>
<td>-e-</td>
<td>-e/-o-</td>
</tr>
<tr>
<td>Third person</td>
<td>-e-</td>
<td>-u-</td>
</tr>
</tbody>
</table>

10. Theme vowel -e- occurs with second plural imperfective non-past forms ending with -ste (vráfeste), theme vowel -o- with ending -saste (vráfósaste).
Ending Set IV occurs in the past (theme vowel -o- non-alternating and for all conjugation classes):

<table>
<thead>
<tr>
<th>ENDING SET IV</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>First person</td>
<td>-mun(e)</td>
<td>-maste/mastan</td>
</tr>
<tr>
<td>Second person</td>
<td>-sun(e)</td>
<td>-saste/sastan</td>
</tr>
<tr>
<td>Third person</td>
<td>-tan(e)</td>
<td>-ndan(e)</td>
</tr>
</tbody>
</table>

The theme vowel preceding this formative is always -o- for all persons, numbers, and both conjugation classes.

E. Stem Formation

Except for the difference in ending classes discussed above, there is virtually no lexically determined irregularity in endings in Greek. There is, however, a great deal of stem irregularity. Much stem irregularity could probably be treated as difference in conjugation class; however, this possibility will not be discussed here at any length. Rather, I present below a statement of the most general case for stem formation and an indication of some of the sorts of irregularity that occur.

11. The forms with final -e in the singular and third plural are more colloquial; -ndan, third plural also has a colloquial variant, -ndusan (and -ondan, third person singular).
E.1 Imperfective Stem

The imperfective stem occurs in imperfective active, past and non-past verb forms, and usually in imperfective passive. This stem occurs in the citation form of verbs; textbooks and grammars generally give rules for deriving other stems (usually the perfective active) from the imperfective stem. There are semi-systematic differences between imperfective stems and perfective stems, and in general this distinction is marked in some way; details are discussed in the next sections.

E.2 Perfective Active Stem

The most general rule adds \(-s-\) to the imperfective stem for Class I verbs, and \(-is-\) for Class II verbs. Any verbs where the perfective stem contains \(-(V)-s-\) are referred to as sigmatic verbs.

A number of morphophonemic rules apply for Class I verbs:

Rule 1. Voicing assimilation:
An obstruent followed by a nasal or another obstruent agrees with it in voicing.
Rule 2. Manner dissimilation:
In a sequence of two obstruents:

a. If the first is a non-strident dental it is realized as /s/, and the second is realized as a stop.
b. If one is /s/, the other is realized as a stop.
c. If neither is dental, the first is realized as a fricative and the second is realized as a stop.

Rule 3. Degemination:
A sequence of two identical consonants is realized as one.

Rule 4. Dental deletion:
Remaining dentals are deleted before -s.

12. These rules are ordered as given. I have no theoretical point to make here. My purpose is again merely to present the simplest exposition of these facts for the convenience of the reader.
The result of this set of rules is to give consonant clusters of the following types in the verb and participle forms of interest here.

**ACTIVE PERFECTIVE forms:**

\[ /\text{Stop - s}/ \]

<table>
<thead>
<tr>
<th>IMPFVE</th>
<th>PFVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>//rav-//</td>
<td>//rav-s//   --&gt; //raps-//</td>
</tr>
<tr>
<td>&quot;sew&quot;</td>
<td>by 1 and 2b</td>
</tr>
<tr>
<td>//vrex-//</td>
<td>//vrex-s//   --&gt; //vrek-s-//</td>
</tr>
<tr>
<td>&quot;rain&quot;</td>
<td>by 1 and 2b</td>
</tr>
</tbody>
</table>

\[ /s/ \]

<table>
<thead>
<tr>
<th>IMPFVE</th>
<th>PFVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>//arxiz-//</td>
<td>//arxiz-s//   --&gt; //arxiz-//</td>
</tr>
<tr>
<td>&quot;begin&quot;</td>
<td>by 1 and 3</td>
</tr>
<tr>
<td>//ale\textsuperscript{0}-//</td>
<td>//ale\textsuperscript{0}-s//   --&gt; //ales-//</td>
</tr>
<tr>
<td>&quot;grind&quot;</td>
<td>by 2a and 3</td>
</tr>
<tr>
<td>//klin-//</td>
<td>//klin-s//   --&gt; //klin-//</td>
</tr>
<tr>
<td>&quot;close&quot;</td>
<td>by 4</td>
</tr>
</tbody>
</table>

**PASSIVE PERFECTIVE forms:**

\[ /\text{fricative-t}/ \text{ (including /s/)}/ \]

<table>
<thead>
<tr>
<th>IMPFVE</th>
<th>PFVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>//rav-//</td>
<td>//rav-\textsuperscript{0}-//   --&gt; //raf-t-//</td>
</tr>
<tr>
<td>&quot;sew&quot;</td>
<td>by 1 and 2c</td>
</tr>
<tr>
<td>//vrex-//</td>
<td>//vrex-\textsuperscript{0}-//   --&gt; //vrex-t-//</td>
</tr>
<tr>
<td>&quot;rain&quot;</td>
<td>by 2c</td>
</tr>
<tr>
<td>//arxiz-//</td>
<td>//arxiz-\textsuperscript{0}-//   --&gt; //arxis-t-//</td>
</tr>
<tr>
<td>&quot;begin&quot;</td>
<td>by 1 and 2b</td>
</tr>
<tr>
<td>//ale\textsuperscript{0}-//</td>
<td>//ale\textsuperscript{0}-\textsuperscript{0}-//   --&gt; //ales-t-//</td>
</tr>
<tr>
<td>&quot;grind&quot;</td>
<td>by 2a and 2b</td>
</tr>
</tbody>
</table>
Exceptions include:

- Verbs with a final dental sibilant in the imperfective stem, but with a velar in the perfective stem:

  \[ \text{alaz- alak-s- "change"} \]
  \[ \text{impfve pfve} \]

- Verbs with perfective without \(-s-\) generally have final l or nasal in the imperfective (asigmatic verbs);

  * for some of these verbs, the perfective stem is identical to the imperfective stem:

    \[ \text{kan- "do, make"} \]

  * for others, the perfective stem involves a vowel change, or a deletion of the final syllable of the imperfective stem:

    \[ \text{paxen- paxin- "fatten"} \]
    \[ \text{impfve pfve} \]
    \[ \text{maøen- maø- "learn"} \]
    \[ \text{impfve pfve} \]
- Addition of sounds:

  ke(y)- kap-s- "burn"
  impfve pfve

  @el- @elis- "want"
  impfve pfve

- Change of stem final consonant:

  vaz- val- "put"
  impfve pfve

- Suppletion:

  le(y)- p- "say"
  impfve pfve

  vlep- b- "see"
  impfve pfve

  tro(y)- fa(y)- "eat"
  impfve pfve

Class II verbs are all sigmatic. Exceptions to the general rule above (addition of -is-) are of two types:

- Verbs whose perfective stem has an -a- or -e- rather than -i- before -s-:

  pin- pinas- "be hungry"
  impfve pfve

  bor- bores- "be able"
  impfve pfve

- Verbs with V + velar before -s-:

  trav- traviks- "pull"
  impfve pfve
E.3 Perfective Passive Stem

In general, perfective passive stems are formed by adding \(-\theta-\) to:

- The imperfective stem for Class I verbs, or;
- The imperfective stem plus the theme vowel (the same vowel that occurs before \(-g-\) in the perfective stem).

Sequences of obstruent \(-\theta-\) are then subject to the dissimilation Rule 2 (II.E.2, above), causing \(-\theta-\) to appear as a voiceless stop (\(-t-\)) preceded by a voiceless fricative:

\[
\begin{array}{ll}
\text{klev-} & \text{klef-t} \\
\text{impfve} & \text{pfve}
\end{array}
\]

"steal"

Irregularities in perfective passive stems are as follows:

- Some verbs have final \(-g-\) before \(-\theta-\) (therefore appearing as \(-t-\)) in the perfective passive stem, as in the perfective active, but not in the imperfective:
Some verbs have a stem vowel different than either the imperfective stem or the perfective active stem:

<table>
<thead>
<tr>
<th>IMPER-</th>
<th>PERFECTIVE</th>
<th>PERFECTIVE</th>
<th>ACTIVE</th>
<th>PASSIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>psin-</td>
<td>psis-</td>
<td>psis-t-</td>
<td>&quot;roast&quot;</td>
<td></td>
</tr>
<tr>
<td>rot-</td>
<td>rotis-</td>
<td>rotis-t-</td>
<td>&quot;ask&quot;</td>
<td></td>
</tr>
</tbody>
</table>

- Some verbs have no _ _ in the perfective passive stem:

<table>
<thead>
<tr>
<th>IMPER-</th>
<th>PERFECTIVE</th>
<th>PERFECTIVE</th>
<th>ACTIVE</th>
<th>PASSIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>afin-</td>
<td>afis-</td>
<td>afe-θ-</td>
<td>&quot;leave&quot;</td>
<td></td>
</tr>
<tr>
<td>steln-</td>
<td>stil-</td>
<td>stal-θ-</td>
<td>&quot;send&quot;</td>
<td></td>
</tr>
</tbody>
</table>

E.4 Passive Participle Stem

Passive participles are formed by the addition of _men- plus endings indicating gender, number, and
case. In general, -men- is added to the perfective passive stem without -e-:

<table>
<thead>
<tr>
<th>PERFECTIVE</th>
<th>PASSIVE</th>
<th>PASSIVE</th>
<th>PARTICIPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ayapi-θ-0</td>
<td>ayapi-ménos</td>
<td>&quot;love&quot;</td>
<td></td>
</tr>
</tbody>
</table>

In verbs with final obstruents, the stem final consonant is realized as a voiced fricative in accord with the voicing assimilation rule in II.E.2:

<table>
<thead>
<tr>
<th>PERFECTIVE</th>
<th>PASSIVE</th>
<th>PASSIVE</th>
<th>PARTICIPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>alax-t</td>
<td>alav-ménos</td>
<td>&quot;change&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Differences from this pattern include:

13. The stem final consonant is realized as a voiced fricative, rather than a voiced stop. This may bear on the question of the status of voiced stops in Greek, a debate beginning in the literature with Householder (1964). The formation of participles might be taken to indicate that voiced stops are not available as the output of morphophonemic rules since stem final alternation for verbs include voiceless stops, and voiced and voiceless fricatives, but not voiced stops. I have nothing further to say on this question.
- Verbs which delete the passive perfective stem final consonant (usually a labial, sometimes, a velar):

<table>
<thead>
<tr>
<th>PERFECTIVE</th>
<th>PASSIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>petax-t</td>
<td>peta(γ)-ménos &quot;throw&quot;</td>
</tr>
</tbody>
</table>

- Verbs with final -n- in the perfective passive stem minus -n-; some delete the -n-, others appear with -z- in its place:

<table>
<thead>
<tr>
<th>PERFECTIVE</th>
<th>PASSIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>apomakrin-</td>
<td>apomakriz-ménos &quot;remove&quot;</td>
</tr>
<tr>
<td>apoγarin-</td>
<td>apoγari-ménos &quot;discourage&quot;</td>
</tr>
</tbody>
</table>

(Mackridge, 1985)

14. This deletion might well be the result of a low level general phonological rule, since it applies optionally in forms other than verbs, especially in casual speech. E.g., /práýma/ or /práma/ "thing"
F. Conclusion

A full discussion of the analysis of stem formation is given in Chapter VI. The differences in ending sets, and in conjugation classes discussed here do not play a large role in the arguments for the status of passives that follow, but are referred to and discussed as necessary. All forms occurring in examples are fully glossed, and segmented as follows, though the segmentation is not intended as a morpheme by morpheme analysis, since the analysis presented in Chapter VI is process-based rather than morpheme-based. Segmentation is presented only to provide some measure of clarity for readers not familiar with Greek.

All verbs are glossed for the following categories:

- Stem/root meaning
- Voice
- Aspect
- Tense
- Person/Number
Verbs are segmented as follows:

1. imperfective stem (with consonant changes required by morphophonemic rules included as part of stem);
2. theme vowel in Class II perfectives, and all passives, grouped together with any consonant other than -s- in active perfectives, other than -θ- (-t-) in passive perfectives;
3. -s- in perfective active;
4. -θ- (-t-) in perfective passive;
5. -us- in Class II imperfective past;
6. -ik- in passive perfective past;
7. endings.

E.g.:

Yráp-s-o
write
act, pfve, non-past, 1 sg

Yráf-t-ik-a
write
pass, pfve, past, 1 sg

Avap-ús-a
love
act, impfve, past, 1 sg
CHAPTER III

PARTICIPIAL PASSIVES AS LEXICAL ADJECTIVES

A. Introduction

Lascaratou and Warburton (1983) have argued that Modern Greek participial passives in -menos must be analyzed as lexically derived within a transformational framework. They also argue that verbal passives are transformationally derived. Since this paper is the only work of which I am aware that directly addresses the central concern of this dissertation, I examine its arguments in some detail. This chapter is concerned with Lascaratou and Warburton's discussion of the participial passive only; their treatment of verbal passives will be treated in Chapter V.

Lascaratou and Warburton's arguments that participial passives are lexically derived are principally based on two of the criteria for distinguishing between lexical and syntactic phenomena discussed in Chapter I:
A. Lexical rules can change the category of an expression; syntactic rules can not (category change).

B. The output of a lexical rule can be the input to another lexical rule; the output of a syntactic rule can not be the input to a lexical rule (interaction).

One class of arguments concerns the category of participial passives (A). Lascaratou and Warburton argue that these forms are adjectives. Thus they must show that \textit{-menos} passives have the distributional characteristics of adjectival forms, and they must show that these distributional patterns are not also displayed by verbs, particularly passive verbs, because passive verbs are an obvious potential source for the passive participles.

The second major class of arguments for the lexical status of \textit{-menos} forms is based on Criterion B. They give a number of cases where it is claimed that passive participles can undergo some apparently lexical process, but passive verbs, or verbs in general, cannot; or where verbs, including passive verbs can undergo some lexical process, but passive participles cannot. Thus, the output of the process which produces passive participles
is the input to a group of lexical processes, which cannot apply to the source of the participles (that is, to verbs).

If the same derivational rules applied to both verbs and passive participles, there would, of course, be no indication of whether the participle formation rule was lexical or syntactic, since the interaction could be interpreted in either of the following ways:

```
lexical listing       verb a
                       ↓
derivational rule x
                       ↓
x + a
                       ↓
Lexicon
                       ↓
Syntax
                       ↓
participle rule
                       ↓
x + a + -menos
```

Figure 2: PARTICIPLE FORMATION INTERACTION 1.
Therefore this group of arguments also appeals to Criterion A to some extent, since a distinction between participial passives and verbs must be demonstrated. A distinction between passive verbs and passive participles must also be demonstrated, since Lascaratou and Warburton wish to claim that passive verbs are the product of syntactic rules. If passive verbs and passive participles showed an identical distribution with respect to derivational rules, that would suggest that passive verbs were the required input to the participle formation rule; and if passive verbs were the input to a lexical process (participle formation), then passive verbs would necessarily also be the product of some lexical process.
So Lascaratou and Warburton's task is to distinguish passive participles from verbs, including passive verbs, and to identify passive participles with adjectives. Accordingly, section III.B deals with arguments referring to Criterion A; section III.C with those referring to Criterion B, with some reference to A; and section III.D with a few arguments that fall into neither category. In all three sections I will point out difficulties with Lascaratou and Warburton's work, and make some additional arguments that were not made.

B. Category-change Arguments (Criterion A)

As discussed in III.A, Lascaratou and Warburton give a number of arguments for treating participial passives in \(-menos\) as adjectives. Those arguments are similar to those given for English passive forms by Wasow (1977). Examples from Lascaratou and Warburton are noted.

1. First, they show that \(-menos\) participles occur in prenominal position, as modifiers of nouns; adjectives occur in this position (examples 1.a, 1.b), verbs do not (1.c).
1. a Passive participle:

Éna aniv-méno/ bukáli.

an open-neut sg/ bottle
neut sg empty-neut sg neut sg

"an open bottle."
empty

(adapted from Lascaratou and Philippaki-Warburton, 1983, example 5, p. 101)

1. b Adjective:

Éna prásino/ bukáli.

ómorfo

a green-neut sg/ bottle
neut sg beautiful-neut sg neut sg

"A green bottle."
"A beautiful bottle."

1. c Verb:

*Éna aníyi bukáli.

a open-impfve bottle
neut sg non-past 3 sg neut sg

2. Participles in -menos occur in the periphrastic comparative and superlative constructions, a context appropriate only to adjectives, and not to verbs:

1. Greek also has morphological comparative and superlative forms:

psilós psilóteros; mikróς mikróteros

tall taller small smaller

-menos participles, along with many other adjectives, have no such forms. In general,
2.a Passive participle:

<table>
<thead>
<tr>
<th>o</th>
<th>jánis</th>
<th>íne</th>
<th>o</th>
</tr>
</thead>
<tbody>
<tr>
<td>the-nom</td>
<td>John-nom</td>
<td>be-3 sg</td>
<td>the-nom</td>
</tr>
<tr>
<td>masc sg</td>
<td>masc sg</td>
<td>non-past</td>
<td>masc sg</td>
</tr>
</tbody>
</table>

pio
pisaresti-ménos apólus.

most/ displeased-masc of all
more nom sg

"John is the most displeased of all."

(Lascaratou and Warburton, example 6b, p.101)

2.b Adjective:

<table>
<thead>
<tr>
<th>o</th>
<th>jánis</th>
<th>íne</th>
<th>o</th>
</tr>
</thead>
<tbody>
<tr>
<td>the-nom</td>
<td>John-nom</td>
<td>be-3 sg</td>
<td>the-nom</td>
</tr>
<tr>
<td>masc sg</td>
<td>masc sg</td>
<td>non-past</td>
<td>masc sg</td>
</tr>
</tbody>
</table>

pio
psilós apólus.

more/ tall-masc of all.
most nom sg

"John is the tallest of all."

adjectives which are longer than two syllables have no morphological comparative or superlative forms.

2. Adverbs in -a from adjective stems also occur in the comparative/superlative, both morphological and periphrastic:

| aryós | aryá | aryótera | pio aryá |
| ADJ | ADV | ADV | |
2.c Passive verbs:

\[
\begin{array}{cccc}
\text{ο} & \text{jánis} & \text{pio} \\
\text{the-nom} & \text{John-nom} & \text{more/}
\text{masc sg} & \text{masc sg} & \text{most}
\end{array}
\]

\text{efxaristótei.}

\text{be fortunate}

\text{pove non-past 3 sg}

3. Passive participles conjoin freely with adjectives; verbs, including passive verbs, do not.

3.a Passive participle:

\[
\begin{array}{cccc}
\text{o} & \text{andréas} & \text{ine} \\
\text{the-masc} & \text{Andreas-masc} & \text{be-3 sg}
\text{nom sg} & \text{nom sg} & \text{non-past}
\end{array}
\]

\text{grostos} & \text{ke} & \text{eknevriz-ménos}

\text{sick-masc} & \text{and} & \text{upset-masc}

\text{nom sg} & \text{nom sg}

(\text{adj}) & \text{(passive participle)}

(\text{Lascaratou and Warburton, example 7a, p.101})
3.b Verb:

*ο τον ἀνδρέας ἔκνευρίζετε/
The the Andreas be-upset-impfve
nom nom non-past 3 sg
masc sg masc sg (passive verb)

τρέξει
run-impfve
non-past 3 sg
(active verb)

κε ἀρόστος.
and sick-nom
masc sg

*"Andreas is upset and nervous."

(author's example)

4. Passive participles occur as the adjective phrase complement to verbs like fenome
"appear"; again, a context in which only
adjectives are permitted.

4.a Passive participle:

ο μικήλις ἐφένετε
the-nom Michael-nom seem-3 sg
masc sg masc sg non-past

ἐν εὐθυμία-μένος.
enthusiastic-masc sg

"Michael seems enthusiastic."
4.b Adjective:

₀ mixális fénête
the-nom Michael-nom seem-3 sg
masc sg masc sg non-past

eikōnia.
smart-masc nom

"Michael seems smart."

(examples 4.a, 4.b adapted from Lascaratou and Warburton, example 8, p. 102)

4.c Verb:

*₀ mixális fénete
the-nom Michael-nom seem-impfve
masc sg masc sg non-past 3 sg

3 (na) euζuzaíasti.
be-enthusiastic
pfve non-past 3 sg
(passive verb)

(author's examples)

All four of these arguments appeal only to Criterion A: that -menos participles are of the category adjective. There are a number of other arguments for the adjectival status of passive participles that might have been given.

3. If na is treated as an affix (as in Joseph, 1988), then fénête na passive V is grammatical.
First, passive participles in -menos are morphologically adjectives. They inflect for number, case, gender, but not person, tense, or aspect; while verbs inflect for person, number, tense, and aspect, but not gender or case (as in Chapter II).

Second, both adjectives and passive participles occur freely in nominal positions with an article, where they mean "(the) adjective/participle thing(s)/one(s)".

Verbs (passive or active) cannot occur in this position.

---

4. A number of adjectives, usually borrowed, are entirely uninflected: ble "blue".

5. -menos participles inflect like adjectives of the declension class with masculine nominative singular in -os, occurring with the following endings:

<table>
<thead>
<tr>
<th>MASC</th>
<th>FEM</th>
<th>NEUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>nom</td>
<td>-os</td>
<td>-i</td>
</tr>
<tr>
<td>gen</td>
<td>-u</td>
<td>-on</td>
</tr>
<tr>
<td>ac</td>
<td>-o</td>
<td>-us</td>
</tr>
</tbody>
</table>

No claim is made here as to the morphemic status of the endings.

6. A few participles do show a distinction in aspect:

<table>
<thead>
<tr>
<th>vyrafómenos</th>
<th>vyraménos</th>
</tr>
</thead>
<tbody>
<tr>
<td>impfve-masc</td>
<td>pfve-masc</td>
</tr>
<tr>
<td>nom sg</td>
<td>nom sg</td>
</tr>
</tbody>
</table>

The distinction is not general.

7. Full clauses can also occur as substantives with the addition of the nominative neuter singular article "to"; however, the comparison here is to verbs, not clauses, so this is not relevant to the argument as given.
5.a Passive participle:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gele</td>
<td>ta</td>
<td>kliména.</td>
</tr>
<tr>
<td>want-1</td>
<td>the</td>
<td>closed</td>
</tr>
<tr>
<td>(pres)</td>
<td>neut pl</td>
<td>neut pl</td>
</tr>
</tbody>
</table>

"I want the closed (ones)."

5.b Adjective:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gele</td>
<td>ta</td>
<td>kókina.</td>
</tr>
<tr>
<td>want-1</td>
<td>the</td>
<td>red</td>
</tr>
<tr>
<td>(pres)</td>
<td>neut pl</td>
<td>neut pl</td>
</tr>
</tbody>
</table>

"I want the red (ones)."

5.c Verb:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>i. *Gele</td>
<td>ta</td>
<td>klistún.</td>
</tr>
<tr>
<td>want</td>
<td>the</td>
<td>be closed-pfve</td>
</tr>
<tr>
<td>impfve</td>
<td>nom/acc</td>
<td>non-past 3 pl</td>
</tr>
<tr>
<td>non-past</td>
<td>neut pl</td>
<td>(passive verb)</td>
</tr>
<tr>
<td>1 sg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ii. *Gele</td>
<td>ta - na -</td>
<td>klistún.</td>
</tr>
<tr>
<td>want</td>
<td>the subj</td>
<td>be closed</td>
</tr>
<tr>
<td>impfve</td>
<td>acc</td>
<td>pfve non-past</td>
</tr>
<tr>
<td>non-past</td>
<td>neut pl</td>
<td>3 pl</td>
</tr>
<tr>
<td>1 sg</td>
<td></td>
<td>(passive verb)</td>
</tr>
</tbody>
</table>

C. Interaction Arguments (Criterion B)

The second class of arguments for the lexical status of passive participles given by Lascaratou and Warburton involve appeals to Criterion B (section III.1), depending on the specific facts of Greek (derivational) morphology.

---

8. This sentence is possible, but not in the intended meaning above. It means "I want (the fact) that they are closed".
Lascaratou and Warburton themselves treat this set of arguments as no different than those referring to Criterion A (section III.B): those that show that -menos participles are distributed like adjectives, but since they involve passive participles as the input to apparently lexical processes, they are better treated as appeals to Criterion B, though of course, such arguments still involve questions about the distributional distinctions between adjectives, passive participles, passive verbs, and active verbs as in section III.A of this chapter.

C.1 "Agent" Compounding

First, Lascaratou and Warburton note (from Tzartzanos, 1946) that a noun they call "agent" can be prefixed—in their terms—to a passive participle, but not to verbal passives, or to active verbs.

9. The first element in these forms is not, strictly speaking, an "agent"; it would be more accurate to call it an instrument, but I will follow Lascaratou and Warburton's terminology throughout.

10. These forms are better treated as compounds. The first element is the compounding form of some independently occurring noun: ἰλιός "sun" -masculine, nominative, singular - is the source of the nominal element in example 6.a.i, below. The compounding form of nouns ends in -ο-, and is uninflected.
6.a Passive participles:

i. *ilio - mavriz-ménos
   sun blackened-part
   nom, masc sg

"suntanned"

ii. astrapo- ka-ménos
    lightning-burnt-part
    masc, nom, sg

"lightning burnt"

Note that this compounding process is not possible with verbs, or with adjectives, even when semantically appropriate:

6.b Verbs:

i. *ilio-mavrízo
   sun burn-1 sg
   impfve, non-past

"I sunburn."

*iilio-mavrízome
sun burn-passive
1 sg, impfve, non-past

"I get sunburned." (passive)
Thus, "agent" compounding provides no argument for the adjectival status of passive participles as Lascaratou and Warburton claim, but only that these forms are input to an apparently lexical process, and hence must be the product of a derivational rule.

Note also that Lascaratou and Warburton describe this process as agent-prefixation, while I have been calling it agent-compounding. Compounding processes, in general, show different properties from prefixation processes. While the head belongs to a particular lexical class, as does the combining element, the combining element is not a fixed form, but can be any semantically appropriate member of the lexical class. Compounding processes are also located "late" in the lexicon - thus, this compounding rule can apply to
passive participles with prefixed forms of passive participles: with prefixes from what Warburton (1970) calls the set of "old prefixes". Such prefixes occur closer to the stem than "new" prefixes, indicating that the rules that account for their appearance apply previously to those for "new" prefixes:

11. "Old" and "new" refer both to order in rule application and to diachronic order.

12. Since these are old prefixes, their meaning is not transparent.

Since compounding is "late" in the lexicon, we must consider whether, in fact, it is a lexical process at all. I believe that it is, but no arguments for the specifically lexical status of this process are given by Lascaratou and Warburton. Agent-compounding, along with a number of similar rules will be more fully treated in Chapter VII, but a sketch of the arguments for treating agent-compounding as lexical can be given here.

First, the syntax is blind to the presence or absence of the nominal element in these compounds---as it
should be--since syntax can make no reference to the internal properties of words in the framework adopted here. So the compounded forms occur freely in all of the adjectival environments discussed for passive participles:

8.a Prenominal:

\[
\begin{array}{lll}
to & ilio-mavriz-méno & korftsi. \\
the-nom & sun & burned-part & girl \\
neut sg & nom & neut sg & neut sg \\
\end{array}
\]

"The sunburned girl."

8.b Comparative/superlative:

\[
\begin{array}{lll}
to & pjo & ilio-mavriz-méno \\
the-nom & most/more & sun & burned-part \\
neut sg & nom & neut sg \\
korf'si & apóla. \\
girl-neut sg & of & all \\
\end{array}
\]

"The most sunburned girl of all."

13. Note that I have not assumed here that the fact that compounds are words requires that the rule combining elements in a compound is lexical. Dowty (1978) allows for the possibility that syntactic rules (exceptionless and semantically transparent) might be represented by morphological (word-forming) operations.
8.c Conjoined with adjective:

```
to       koritsi      ine
the-nom  girl-nom    be-3 sg
neut sg  neut sg     non-past

ilio-mavriz-meno  ke  ksanog.
sun burned-part  and  blond
nom neut sg       nom neut sg
```

"The girl is sunburned and blond."

8.d Complement of fénome "seems":

```
to       koritsi      fénete
the-nom  girl-nom    seem-3 sg
neut sg  neut sg     impfve non-past

ilio-mavriz-meno.
sun burned-part
nom neut sg
```

"The girl seems sunburned."

8.e As noun with definite article:

```
apavorévonde      i
forbidden         the-nom
impfve non-past   masc pl
3 pl

ilio-mavriz-meni     e66.
sun burned-nom     here
masc pl
```

"The sunburned (ones) are forbidden here."
Second, some compounded forms have semantically unpredictable meanings (Criterion E [exceptionality] from Chapter I): 

9. θεο-σκοτόμηνος  "very tired"
   lit. god-killed
   nom masc sg

Third, the form of the nominal element is not necessarily a form that can occur independently. Compounding forms end in -ο, so if the free word is feminine (ending in -ι or -α), masculine nominative (in -ις, -ας), or neuter (in -ι), the compounding form will differ from any case or number forms which occur free. If the free form is feminine (in -ος, -ας-rare), masculine (in -ος), or neuter (in -ο), the compounding form will be identical to the accusative singular free form. However, since the generalization is that compounding forms of nouns end in -ο, it is most straightforward to analyze cases where the compounding form is identical to a form that occurs free as accidental.

14. However, semantic unpredictability is very rare in my corpus. This is the only example.

15. In formal styles, /n/ occurs at the end of accusative singular nouns, another difference in form from compounding forms.
Not only nouns, but verbs and adjectives, at least, have compounding forms which, in all probability, should be either derived by rule in the lexicon or simply listed as a potential stem in the lexicon (stems and their relevance to derivational and inflectional morphology are discussed in greater detail in Chapter VI.) Thus, some lexical element—the compounding form (stem)—is required in this compounding process; and it is an element that does not occur as a free form, and thus is not subject to syntactic distribution.

Finally, there are cases in which agent first elements occur compounded with passive verbs, contrary to the claim of Lascaratou and Warburton (this process is also discussed in Chapter VII):

10.a  \(\text{xaro} -\text{kevome}\)  \(\text{death} -\text{be burned}\)  "to be stricken by grief"

10.b  \(\text{anemo} -\text{cernome}\)  \(\text{wind} -\text{be beaten}\)  "to be struck by life's hardships"

10.c  \(\text{eti} -\text{arxume}\)  \(\text{cause} -\text{be ruled}\)  "to be ruled by a cause"

10.d  \(\text{papa} -\text{ko-kratume}\)  \(\text{priest} -\text{be governed}\)  "to be ruled by priests"

(examples from Kourmoules, 1967)
So Lascaratou and Warburton have demonstrated that passive participle formation is the input to a lexical rule, but they have not demonstrated that passive participles differ in this respect from passive verbs. Since compounds involving passive verbs are very similar to those involving passive participles (i.e., in regard to the arguments given above for agent participle compounding as a lexical rule), Lascaratou and Warburton have not established that passive participles cannot be derived from passive verbs. Note, for instance, that the fact that *astrapo-kéy-ome* does not exist is not a problem, since lexical rules can be expected to have gaps by Criterion E (exceptionality), Chapter I. Nor have they supported their later claim that passive verbs are syntactic phenomena - the examples above show passive verbs as the input to an apparently lexical rule.

C.2 Para-Prefixation

Lascaratou and Warburton's next argument involves the prefixation of *para-* (in the meaning "over", "excessively"), to verbs. They show that *para-* attaches freely, and very productively to verbs, including passive verbs, and auxiliaries.
This shows that \textit{para-} does indeed attach to verbs, and that both the auxiliary \textit{ēxo} and the main verb perfect

16. These examples (in the passive) are not really passive in meaning, but middle.
formative are verbs. Lascaratou and Warburton's examples can be extended at great length.

They also claim that para- shows a strong preference for Íme AUX "be", rather than the participle, in the passive participle construction.

12.a. para-íse eknevrizméni.
      over-be AUX upset-nom
      2 sg present masc sg

"You are too upset."

(Lascaratou and Warburton, example 15a, p. 104)

but,

12.b. *íse para-eknevrizméni
      be-2 sg over upset-nom
      present masc sg

*"You are too upset."

(Lascaratou and Warburton, example 15b, p. 104)

However, Lascaratou and Warburton give some participles that can occur with para-:

13.a. para-íne fortoménoς.
      over-be AUX loaded-masc
      3 sg present nom sg

"It is overloaded."
and,

13.b. ἰνε paraforoménos.
be-3 sg over-loaded-masc
present nom sg

"It is overloaded."

(Lascaratou and Warburton,
example 17a, p. 104)

This attachment is possible with three of the participles used as examples by Lascaratou and Warburton (also parazalizménos "too dizzy", paravrazménos "too boiled"); it is not possible for four of their examples (also *para-apo yoiteyménos *"over-disappointed", *para-disarestiménos *"over-displeased", *paraen enuziaz-
ménos "over-enthusiastic"). Below is a list of other participles which occur with para- in the meaning discussed here:

14.a paratravíyménos
too stupid (of a joke),
lit., "too much pulled"

14.b parasfiyménos
squeezed too tight

17. These forms were collected from Kourmoules (1967), and checked with an informant for correct meaning of para- "over". I feel sure that more exist, but time constraints prevent my examination of this issue.
14.c *paraxaiρeménos*
   too spoiled (of children), lit., "too caressed"

14.d *parapsiménos*
   over-cooked

14.e *paraγreménos*
   over-fed (fat)

14.f *parapocménos*
   too attached to one's work, lit., "too given"

14.g *paravrazménos*
   overboiled

14.h *parakurazménos*
   too tired

14.i *paragalizménos*
   too dizzy

14.j *parayemizménos*
   too stuffed

14.k *parapioménos*
   too drunk

14.l *parayinómenos*
   over-ripe, lit., "too become"

14.m *paratsiménos*
   too stretched

14.n *paramestoménos*
   too ripe

Additionally, one of the participles that Lascaratou and Warburton judge to be ungrammatical with *para-* is

18. *Paraγinómenos* is imperfective. In participles, aspect is a formal category, rather than a semantic one.
acceptable to one of my informants (para-enθuziazménos "too enthusiastic").

Given this situation—that para- "over" does occur with passive participles, Lascaratou and Warburton cannot justifiably use the facts on the distribution of para- to support any of their claims. First, the distribution of para- does not support their claim that passive participles are necessarily not verbs at the point in the lexicon where para- attachment applies, since para- attaches to both verbs and participles. Second, they cannot claim that passive participles in -menos are clearly adjectives based on these facts, since it is not clear that participles are more like adjectives than verbs with regard to the distribution of para-. In fact, the reverse is true. I know of only one adjective which occurs with para- in this meaning (para-mikrós "very small"), but there are many more passive participles, with para- as demonstrated above. Thus, with the facts on para- distribution advanced by Lascaratou and Warburton, it is not possible to successfully argue that the process for forming passive participles necessarily precedes para- attachment, since there is no clear distinction between (passive) verbs and passive participles on this basis.
There are a number of possible explanations for the distribution of \textit{para-} "over". None is as simple as the one Lascaratou and Warburton had in mind: that passive participle formation, a derivational rule applying to active verbs (see III.E, for an indication that Lascaratou and Warburton believe active, not passive, verbs to be the source of participles) applies before \textit{para-} attachment. Then \textit{para-} attachment, restricted to application to verbs, fails to apply to the passive participles, because they are adjectives. Since, in this analysis, participle formation precedes \textit{para-} attachment, participle formation must be derivational. Since \textit{para-} attachment does apply to passive participles, this analysis is not adequate.

Other possible accounts depend on a number of potentially interesting questions. First, Lascaratou and Warburton give no explicit argumentation that \textit{para-} attachment is, in fact, a lexical (specifically derivational) phenomenon. A number of facts about its distribution make this a difficult question to answer.

As noted by Lascaratou and Warburton, \textit{para-} occurs freely in two positions in the VP: attached to an AUX element and to the main verb. This distribution is freer
than that expected of clear prefixes. Both positions are possible (indeed, frequent) positions for VP adverbs. The meaning of para- is also adverbial. What Lascaratou and Warburton fail to note is that para-, meaning "excessively, very, more", occurs with other adverbs and the adjective mikrós "small":

15.a para-polí
   very, many/much

15.b para-mésa
   further in

15.c para-ekí
   lit., further-there
   ("more that way")

15.d para-páno
   further up

15.e para-káto
   further down

19. Rivero (1990) discusses other adverb "prefixes" that also occur, either before AUX or main verb (ksana- "again", kalo- "good", "well"). This suggests that the bound word, or special adverb analysis of para- (and ksana- and kalo-) ought to be further examined. Time constraints prevent me from carrying out such an examination here.
and possibly,

15.f **para-ôra**
very late ("more hour"?)

15.g **parefôis**
immediately

15.h **paraektôs**
except

In these adverbial forms the status of **para-** as word or prefix is not clear. It cannot occur in isolation, or in other adverb positions (e.g., clause final, or after the verb):

16.a **efiôa (ýríôra) apô**
leave quickly from
1 sg ADV past
to **spîti (ýríôra)**
the house quickly
neut neut ADV sg acc sg acc

"I left the house quickly."

16.b **êknevrizese (pará) xorîs**
get upset without
2 sg pass

lóvo (pará).
reason

*"You get very upset without reason."

but,
However, it can be repeated for additional emphasis in example 17.a, and singly for emphasis, it can bear contrastive stress (example 17.b):

17.a  *para* para polí
    "very very much/many"

17.b  *para* polí
    "very much"

This distribution suggests that *para-* might be best treated as clitic (Zwicky, 1977) or a bound word adverb (Nevis, 1985) with a distribution that is more restricted than that of many adverbs (e.g., *polí*) but that is freer, both in terms of the category of host and position in the VP, than the distribution of prefixes.

If this were the case, the distribution of *para-* would have no relevance at all to the question of whether
passive participles are derivational phenomena or syntactic ones, since \textit{para-} attachment would be either a rule of syntax or the clitic component.

Other possible analyses involve distinguishing a number of \textit{para-} rules. For example, \textit{para-} attachment to verbs (the "floating" \textit{para-} that can attach to AUX, main verb) and adverbs might be a rule of the clitic component, while \textit{para-} attachment to passive participles might be a derivational rule. There is some indication that a derivational rule is required for participles, since some have idiosyncratic meanings: \textit{paratravivménos} "too stupid" (of a joke), \textit{parañoménos} "too attached to one's work", etc. Or there could be more than one derivational \textit{para-} rule accounting by combination for the occurrence of \textit{para-} with verbs, participles, adverbs, etc. There is little clear support for treating \textit{para-} attachment to verbs as derivational, since gaps and idiosyncratic meanings are rare, except in the case where a verb with one of the homophonous prefixes \textit{para-2} "beside-", or \textit{para-3} "mis-" occurs. In that case no \textit{para-1} "over" can occur. Some kind of "stuttering constraint" is required here, which must apply over the VP, since VP's with \textit{para-} attached to AUX and to the main verb (regardless of which \textit{para-} is involved) are also disallowed. The existence of the homophonous prefixes
para-2, para-3 makes the question of whether a derivational rule for para-1 is required especially difficult because of the occurrence of forms with para- in which it is not clear which para- is involved. These might be cases of idiosyncratic meaning for para-1, or for para-2, -3:

18.a angélo
   paraangélo
   "to announce"
   "to order"

18.b alázo
   paralázo
   "to change"
   "to vary"

18.c pliróno
   parapliróno
   "to pay"
   "to supplement"

18.d kaló
   parakaló
   "to ask"
   "to beg",
   also "please"
   (request marker)

There are a number of derived nouns in -ma with para- in the meaning "over"; the question therefore is whether these must be analyzed as derived from verbs with para-, in which case para-1 attachment to verbs would have to be derivational, or from participles, which would allow the clitic solution for para-[1] on verbs.

20. This word is listed in dictionaries, but it is not clear that angélo can be used unprefixed in actual conversation.
This issue is very complicated, and is discussed in greater detail in Chapter VII, where the interaction of passive verbs and participles with derivational rules is treated. For the present, it is sufficient to point out that Lascaratou and Warburton's discussion of para-1 attachment does not argue conclusively that passive participles in -menos are the product of the derivational component, though such an argument can, and later is, made.

This analysis suggests a connection, though not identity, between passive verbs and passive participles, rather than a distinction between them, and thus does not give any particular support to Lascaratou and Warburton's claims that:

a. passive participles are distinct from passive verbs;

b. passive participles are not derived from passive verbs (see III.D, below), and;

c. passive participles behave like adjectives rather than verbs.
C.3 Adverb Formation

Lascaratou and Warburton's final argument of this type, involving appeal to Criterion B, is concerned with the formation of adverbs from adjectives in Modern Greek. This process adds -a to adjective stems, thus giving manner adverbs which are identical in form to neuter plural nominative/accusative adjectives.

20.a Prenominal nominative/accusative neuter plural adjective:

<table>
<thead>
<tr>
<th>kalá</th>
<th>fa'itá</th>
</tr>
</thead>
<tbody>
<tr>
<td>good-neut pl</td>
<td>food-neut pl</td>
</tr>
<tr>
<td>pl nom/acc</td>
<td>nom/acc</td>
</tr>
</tbody>
</table>

"good food"

20.b o jánis é-vras-e
the John boil-3 sg
pfve, past

to rízi kalá.
the-neut rice-neut well-ADV
sg acc sg acc

"John boiled the rice well."

Manner adverbials are freely formed from passive participles, as well as from simple adjectives:
Lascaratou and Warburton take this to argue both that passive participles are adjectives and hence derived by derivational rule, (Criterion A), and that passive participle formation is a lexical rule because participles are the input to a lexical rule of adverb formation (Criterion B). The argument that passive participles are adjectives can't be faulted. However, a further consideration of the nature of the adverb formation rule in relation to the argument by Criterion B is warranted.

Note that adverb formation is close to absolutely productive; it applies to any adjective including those in the morphological comparative or superlative:
Inflection is distributed by and relevant to syntax; thus the comparative construction in Greek involves the occurrence of a nominal element with the preposition -apo "from, by, than", arguing that comparative is an inflectional category in Greek. Thus the fact that passive participles are input to this process does not argue that passive participle formation is a derivational process: after all, comparatives can be input to this process, and they are the result of an inflectional process. So the discussion of adverb formation supports the claim that passive participles are adjectives, and thus the output of a derivational rule (Criterion A: category change), but not that they are the output of a derivational rule because they can be the input to a derivational rule (adverb formation).
D. Passive Participles with No Corresponding Passive Verbs

The last argument from Lascaratou and Warburton that I will consider here does not really involve any of the criteria for *lexical* rules discussed in this chapter or in the Chapter I. Rather, Lascaratou and Warburton are concerned with arguing that passive participles cannot be accounted for by a syntactic rule of passive - in their treatment, a transformational rule that creates passives from active transitive verbs.

Lascaratou and Warburton point out that there are a number of passive participles in Greek for which there are no corresponding verbal passive forms:

<table>
<thead>
<tr>
<th>23. ACTIVE VERB</th>
<th>PASSIVE VERB</th>
<th>PASSIVE PARTICIPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. <em>ān̂ızo</em> bloom</td>
<td><em>ān̂ızome</em></td>
<td><em>ān̂ızménos</em> blooming</td>
</tr>
<tr>
<td>b. jernō grow old</td>
<td><em>jernûme</em></td>
<td>jernzménos aged</td>
</tr>
<tr>
<td>c. <em>āipsó</em> be thirsty</td>
<td><em>āipsjéme</em></td>
<td><em>āipsazménos</em> thirsty</td>
</tr>
<tr>
<td>d. paỵóno freeze</td>
<td><em>paỵónome</em></td>
<td>paỵóménos frozen</td>
</tr>
</tbody>
</table>
Many of these participles are derived from intransitive verbs (ἀποίζω, ἱερνῶ, ἀίρσῳ). Thus they argue, first, that if passive participles were transformationally derived from active verbs, as part of the transformational derivation of passive verbs, some ad hoc device to block the occurrence of the passive verb forms would have to apply to intransitive active verbs; which, of course, it could not do, since an NP object is required for a passive rule in transformational frameworks. So if passive participle formation can not be syntactic (transformational), it must be lexical.

This argument works in transformational grammar, and as long as one accepts Lascaratou and Warburton's later argument that passive verbs are syntactically derived. Since the framework adopted here rejects the later argument it is necessary to consider these facts anew.

First, notice that most of these forms are not passive in meaning. Of the participial forms given by Lascaratou and Warburton, only one—pavomenos—"frozen"—has anything like a passive meaning; that is, the grammatical subject is understood as a thematic patient, and even that is stative. Therefore, it seems that the question addressed by these forms is not whether passive participle formation is a lexical rule, but whether the rule responsible for these forms ought to be
labeled as passive at all. It would appear, given these forms, that what is required is a rule forming adjectives in *-menos* from verb stems. If passive verbs are genuinely syntactic, and consequently not a possible input to a rule or rules of the lexicon producing participles in *-menos*, then a number of analyses are possible. First, it could be claimed that a single rule produces all the participle forms. This rule would apply generally to transitive verbs, but could be extended (would have "leaked") in a few cases to take intransitive actives as input, with a corresponding difference in meaning. Alternatively, there could be two rules, one for passive participles from transitive verbs, the other (less productive) for non-passive participles. Either of these analyses is possible; both are problematic.

First, it is not clear why an essentially passive rule, taking transitive verbs only, and producing adjective participles with passive meaning and syntax (e.g., occurrence with agent phrase) should be generalized to apply to intransitive verbs and to produce adjectives with non-passive meanings. And the second analysis gives no indication (re via extension) of why

21. There are similar examples in English: e.g., "non-descended testicle" from descend, an intransitive verb. (Bresnan, 1982, among others)
-menos, rather than some other morpheme, should occur in both rules.

A further possibility exists, which depends on taking passive verbs as the product of a lexical rule - an assumption that is supported in the rest of this dissertation. In this analysis, the participle formation rule applies generally to passive verbs, lexically derived. This is supported by the observation that virtually all passive verbs have corresponding passive participles, even when the verbs are only morphologically passive deponent verbs (Chapters I, II).

24.a erxóme erxómenos
   I come coming

24.b yínome yínómenos
   I become ripe

24.c oimáme oimúmenos
   I remember remembered

Thus verbs with the morphological feature +PASSIVE, are the general input to the participle rule. The passive semantics of most passive participles are carried over from the passive semantics of most passive verbs, though semantic irregularity does exist, as expected for a lexical rule (see Chapter IV for an extensive discussion of semantically irregular passive verbs and
participles), and participles (e.g., from deponent verbs) without passive semantics or syntax likewise inherit their non-passive semantics from the morphologically passive verb source. Similarly, there are exceptions to the participle rule, as expected for a lexical rule. There are passive verbs with no corresponding passive participle:

25.a \textit{ksana-vrísko} \textit{ksana-vrǐskome}
\begin{tabular}{ll}
find again & meet again \\
active verb & passive verb \\
\end{tabular}
\textit{*ksana-vriskómenos}
passive participle

25.b \textit{psirízo} \textit{psirízome}
\begin{tabular}{ll}
whisper & be rumored \\
active verb & passive verb \\
\end{tabular}
\textit{*psirízménos}
passive participle

And there are passive participles with no passive verb source:

26.a \textit{aviázo} \textit{aviázmenos}
\begin{tabular}{ll}
become a saint & sacred \\
active verb & participle \\
\end{tabular}
\textit{*aviázome}
passive verb
Given the view of lexical rules as templates for word formation and interpretation, this is entirely possible. One class of exceptions of this type (the forms given by Lascaratou and Warburton) can be analyzed as an extension of the participle formation rule, from a rule that takes morphologically passive, mostly intransitive verbs as input, to one allowing some morphologically non-passive intransitive verbs as input. Again, the semantics of the participle (passive or not) are inherited in general from the input verb. This analysis thus requires a more logical and likely extension of the participle rule (to intransitives), accounts for occurrence of -menos (by extension) on both passive and non-passive participles, and gives some explanation of the passive or non-passive semantics of -menos participles in a way that neither of the other analyses does. This analysis is more fully discussed in Chapter VII.
E. Conclusion

Although a number of Lascaratou and Warburton's arguments for the lexical derivation of passive participles are clearly shown here to be inadequate, it is generally possible to extend their arguments and still find support for their claim that passive participles are, in fact, lexically derived. They give no consideration to potential arguments that this is not so; such a potential argument, involving a syntactic distinction between participles in an adjectival use, and participles occurring in an alternate perfect construction, is discussed and discounted in Chapter V.

Thus, we can conclude, having done a little more work, that Lascaratou and Warburton are correct in claiming that passive participles are lexically derived adjectives. Participles clearly and freely occur in all environments appropriate to adjectives, whereas verbs do not. Passive participles can be the input to lexical processes, at least to "agent" compounding, and a para-attachment rule that is distinct from that applying to verbs. They are inflected as adjectives. The beginnings of an analysis of the participle formation rule and its interaction with other lexical processes has been sketched here, and is fleshed out in Chapter VII. The
next chapter considers both passive verbs and participles in regard to semantic unpredictability as a criterion for lexical rules (Criterion E--exceptionality, Chapter I). But the evidence of morphology (Criterion A--category change, Criterion B--interaction, in this chapter), supports the view that passive participles are the product of a lexical, specifically derivational rule.
CHAPTER IV

EXCEPTIONS TO PASSIVE

A. Introduction

In the preceding chapter, I was concerned primarily with showing that passive participles in Modern Greek display properties that could only be produced by a lexical, specifically derivational, rule. In this chapter, I show that both passive verbs and passive participles in Modern Greek have properties that cannot be produced by syntactic rules. Specifically, I will examine passive verbs in Greek with respect to Criterion E (exceptionality) for the distinction between lexical and syntactic rules:

Lexical rules might have idiosyncratic exceptions (syntactically and/or semantically): syntactic rules will have few or no exceptions.
This statement raises several issues which must be considered in any examination of the lexical/syntactic status of particular rules. First, the notion of what counts as an exception to a rule within a particular theory, must be considered. Second, a consideration of what "few or no exceptions" ought to mean is necessary.

A discussion of the treatment of exceptions in two theories, GPSG and CG is presented in section IV.C. A consideration of the essentially quantitative issue is undertaken in section IV.D. With these matters at least provisionally resolved, I turn in IV.E and following sections to an examination of a part of the lexicon of Modern Greek in terms of this question.

B. The Sample

In order to examine the number and nature of exceptions to the passive generalizations in Modern Greek, all active and passive verbs and all passive participles listed in the glossaries of a two-volume introductory textbook series (Bien, Rassias, Yiannakou-Bien, and Alexiou, 1982; Bien, Rassias, Yiannakou-Bien, 1983) were presented to an informant. This source was chosen for the sample since it ought to offer a representative sample of the Greek lexicon, being expected to include most basic vocabulary items, with a
few uncommon items as well. The occurrence of some uncommon lexical items is important since there is a suggestion by Carl Zimmer (1972) that lexicalization in basic vocabulary is more likely than in more unfamiliar items - thus gaps or semantic idiosyncrasies in the passives of rare items will be, to some degree, more compelling evidence of the existence of a lexical passive rule or rules in Modern Greek.

For each morphologically active verb listed in Bien et al., the informant was asked to give,

- the passive verb form (if any);
- its meaning or meanings;
- the passive participle form; and
- its meaning or meanings.

For each morphologically passive verb or participle, the informant was asked to give:

- the associated active verbs form, if any; and,
- its meaning or meanings.

The occurrence or non-occurrence of agent phrases was also examined; this will be discussed in Chapter V.

In addition, several dictionaries (Pring, 1982; Crighton, 1960) were used to investigate semantic idiosyncrasies in passive verbs and participles, and a
number of other speakers of Greek were consulted on the meaning or existence of passive forms for some of the sample. The results from these methods of investigation do not agree in every detail with the results from the extensive interview with a single informant. This suggests idiolectal differences in treatment of passives, which is to be expected if passives are lexical, and less likely if passives are syntactic.

C. The Treatment of Exceptions in GPSG and CG

C.1 Gaps

When the match between active and passive verbs forms is not exact, as in Modern Greek, the ideal solution in any theory of grammar is that independently required portions of the grammar of the language account for apparent exceptions to the putative syntactic rule of passive. This type of solution is pursued for apparent exceptions to passive in English by Bach (1980) where the major argument is that some verbs which occur in the environment __ NP are nevertheless not transitive, and
thus should not be expected to undergo passive, and are not, therefore, exceptions to passive.

Bach presents the notion "transitive verb phrase" (TVP) which is an expression that when combined with an NP will give an "intransitive verb phrase" (IVP—equivalent to VP constituents in phrase structure treatments) and points out that English contains both simple TV's and complex TVP's: syntactically combined expressions which combine with an NP direct object to give IVP's, such as persuade to go, send away, give to him. These transitive expressions are contrasted with simple IV's and complex intransitive expressions: syntactically combined expressions which don't combine with an NP, but are IVP's already, and sometimes contain a nondirect object NP. Some complex IVP's containing NP's are promise John to go, see Mary run, take the train to Park Street. Bach shows that such NP's can't appear as passive subjects (*John was promised to go), that they don't display other characteristics of direct objects, and that the VP's containing them don't display characteristics of TVP's.

---

1. Bach's treatment is within the framework of CG, the same analysis is presented, within GPSG in Gazdar and Sag (1981).
Thus, the NP in complex IVP's does not control predicative verbal complements, but direct objects do:

1.a Transitive: I persuaded John to love himself/ *myself.

1.b Intransitive: I promised John to love *himself/ myself.

He demonstrates also different behavior for complex IVP's with NP and TVP's in terms of a number of other transitivity diagnostics, therefore showing that a large number of apparent exceptions to a passive transformation defined in terms of "NP directly following the verb" are not exceptions when passive is defined as operating on the category TVP, since the expressions are not members of TVP. Thus the independently required category TVP accounts for a large number of apparent exceptions to passive.

A less satisfactory solution is to show that verbs which fail to appear in the passive voice are members of some specifiable syntactic or semantic class. This alternative is less satisfactory than the one discussed above, since it does not in fact show that apparent exceptions are not exceptions; but it will, in essence, reduce the number of exceptions to the number of
syntactic or semantic classes required. Thus, there will be few exceptions to the passive rule, with a larger number of cases of each of those exceptions. Such an account is presented by Gazdar (1982) for cases such as the following in English, where no active input structures are available to the passive metarule.

2.a John was said to be in Rome.
2.b Mary is reputed to be a genius.
2.c John was seen to have left.
2.d Sandy was made to like Kim.
2.e Leslie was rumored to be in Rome.

(examples from Gazdar, 1982, p. 167; Bach 1986, p. 328)

Gazdar proposes a special ID rule to account for these cases:

\[
\begin{array}{c}
\begin{array}{c}
\text{V} \\
\text{\overline{V}} \\
\text{[INF]} \\
\text{[PAS]}
\end{array}
\end{array}
\]

(Gazdar, 1982, p.167)
Thus the passive sentences in example 2. are not the product of the passive metarule, and are positive exceptions to the passive generalization - but together they constitute only one exception: verbs of subcategorization class 40 occur in the passive construction which is not predicted by the metarule, since there are no active sources for these sentences.

The final, and least satisfactory, account of exceptions to a syntactic rule is to simply mark verbs in the lexicon as exceptional. This treatment for GPSG is exemplified in Zwicky (1987). I know of no such treatments in CG. Zwicky's account of the passive in English makes use of features he calls construction features, which label syntactic constructions. The construction feature [+PAS] is a head feature on VP's and thus matches features on V's. This feature is, in general, not specified as [+PAS] or [-PAS], thus most active verbs have corresponding passives. It may,

2. Zwicky (1987) criticizes this treatment of Gazdar because, he claims, it misses the generalization that rumor occurs not only in the passive V plus infinitive construction in example 2., but in passive constructions generally, without a grammatical active source: 

- It was rumored that Leslie was in Rome 
- *They rumored that Leslie was in Rome.

Thus the ID rule given by Gazdar (1982) in combination with the passive metarule is still not complete.

3. Aspects of Zwicky's analysis other than the treatment of exceptions will be discussed in Chapter V.
however, be included in the lexical listing of particular verbs, thus permitting the occurrence of such verbs in only [+PAS] (rumor) or [-PAS] (repute) VP's.

This approach or its equivalent to the treatment of exceptions is, of course, available in any theory of syntax, but substantially weakens claims about the distinction between lexicon and syntax, since construction features are lexically listed features.

Both the second and third type of treatments of exceptions to syntactic rules leave some exception, and therefore ought to require some consideration of how many exceptions to a putative syntactic rule are acceptable. I know of no such discussion in the literature, but I believe that I can demonstrate that the number of exceptions to the passive generalization(s) in Greek is large enough to make it unlikely that anyone would accept passive as syntactic rule in Greek.

All of the discussion here has involved the treatment of syntactic exceptions— that is, gaps in the application of a rule. In both GPSG and CG, syntactic rules are associated with semantic interpretation rules. Therefore, all passive forms produced by a syntactic passive rule must be interpreted by the associated semantic rule. So both theories require that any passive forms with unpredictable meanings not be produced by the
syntactic rule passive. A complete statement of the passive rule thus requires an examination of the nature of the associated semantic rule, provided below.

C.2 Semantic Exceptions and the Passive Rule

In *Word Meaning and Montague Grammar*, Dowty (1979) points out that a serious consideration of the lexicon requires a serious consideration of the semantics associated with lexical rules and suggests that the obvious way to begin to determine the normal semantics of elements produced by a particular rule is informal induction over a suitably large corpus.

In the literature of GPSG, this discovery procedure is rarely, if ever, carried out. I propose here, however, to examine what is a suitably large corpus for just such a purpose.

The corpus consists of forms in Greek which occur with either "passive" verb morphology, or "passive" participle morphology, as described in IV.B.

Forms which are morphologically passive are typically interpreted as passives, reflexives, or reciprocals, with no other change in meaning (e.g., in the meaning of the verb). Thus, *ayapiéme*, the passive verb corresponding to the active *ayapó* "I love", can have any of these interpretations in appropriate
contexts. For singular forms, the passive interpretation is most likely, while plural forms are typically interpreted as reciprocals.

D. Syntactic Exceptionality in Modern Greek Passive

Of 366 transitive verbs in the sample, 120 (32.8%) have no passive verb forms, and 122 (33.3%) have no passive participles, according to the informant. Verbs whose passive verb or participle forms are semantically unpredictable are included as having passive forms, thus are not treated as syntactic gaps here (see section IV.E for a discussion of semantic exceptionality).

The active transitive verbs with no passives can be shown to be, in fact, actually transitive by the following the transitivity test. Agreement with a direct object NP can be marked by an emphatic copy agreement marker, while the marker does not occur with non-direct object NP's (Joseph, 1982).

4.a to xtípísa to iáni
D.O. hit-pfve the John
agreement active acc acc
acc past masc masc
masc sg l sg sg sg

"I hit John."
Thus the most desirable way of accounting for gaps in the output of passive as a putative syntactic rule is not available; it cannot be said that passive fails to apply to VP's containing those verbs because they are not TVP's.

There still exists the possibility that verbs which fail to undergo passive can be semantically or syntactically characterized, thus essentially reducing the number of exceptions. Instead of 120 verbs which are exceptional with regard to the rule producing passive verbs, we could say that verbs with some particular property are an exception to the rule; effectively a single exception, with many representatives.

One possibility in this regard concerns statistical data presented by Lascaratou (1984) in a dissertation on the function of passive in Modern Greek. In a textual study, Lascaratou shows that the subjects of passive
sentences are much more likely to be animate NP's than the objects of the corresponding active sentences, although active sentence subjects are still more likely to be animate than passive subjects.

Since animacy is a semantic and not a morphosyntactic category in Greek, this data suggests that the semantic rule associated with the passive rule must be responsible for the different semantic characteristics of passive subjects and active objects and also suggests that this semantic characteristic of TVP's ([+animate DO]) might serve to distinguish verbs that have passive forms (those that typically occur with animate direct objects), from those that don't. The Transitivity Hypothesis of Hopper and Thompson (1980) might go far in explaining the distribution of passives mentioned here. It seems to be the case that clauses with morphologically passive verbs in Greek differ from high transitivity clauses on those of Hopper and Thompson's parameters involving the nature of the NP participants. Thus, morphologically passive verbs with a passive interpretation occur in clauses in which the agent is low in Volitionality and Agency, while the object (the subject of the passive) is low in Affectedness. Reflexive and reciprocal interpretations of passive verbs differ from high transitivity clauses in
that they involve only one participant, while many deponent verbs are low in one or both of the parameters Volitionality of Agent and Affectedness of Object. (This topic will not be pursued further here, although there is clearly the need for a deeper examination. While I suspect that the Transitivity Hypothesis would account for some of the exceptionality in morphological passives, it will not account for all of it: e.g., árxome "come", and kátheta "sit" seem to be high on Volitionality of Agent.)

For the above semantic tactic to work, it is necessary that for the class of transitive verbs with typically animate direct objects, the passive generalization applies with "few or no exceptions"; and that for transitive verbs with typically inanimate direct objects, the passive generalization rarely or never applies.

This possibility for the explanation of exceptions to the passive generalization is not supported by the data. Of 109 transitive verbs that typically have animate direct objects: 31 (28.4%) lack corresponding passive verbs forms, and 37 (33.1%) have no corresponding passive participle forms. While the percentage of gaps for this class is smaller than for the class of all
transitive verbs in the sample, the passive rule(s) still cannot be claimed to have "few or no exceptions".

Further, the existence of sets of synonyms or near synonyms in which behavior with regard to passive is different, demonstrates that no semantic explanation will fully account for the existence of these gaps:

Verbs Pairs:

<table>
<thead>
<tr>
<th>ACTIVE VERB</th>
<th>PASSIVE VERB</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.a simvulévo &quot;advise&quot;</td>
<td>simvulévome &quot;take advice, consult&quot;</td>
</tr>
<tr>
<td>5.b arminévo &quot;advise&quot;</td>
<td>none</td>
</tr>
<tr>
<td>6.a viθízo &quot;sink&quot;</td>
<td>viθízome &quot;be sunk&quot;</td>
</tr>
<tr>
<td>6.b vuljázo &quot;sink&quot;</td>
<td>none</td>
</tr>
<tr>
<td>7.a akýo &quot;hear&quot;</td>
<td>akúyme &quot;be heard, be well-known&quot;</td>
</tr>
<tr>
<td>7.b (a)γrikó &quot;hear&quot;</td>
<td>none</td>
</tr>
<tr>
<td>8.a teljóno &quot;finish&quot;</td>
<td>none</td>
</tr>
<tr>
<td>8.b apoteljóno &quot;finish&quot;, &quot;complete&quot;</td>
<td>apoteljónome &quot;to be completely finished&quot;</td>
</tr>
</tbody>
</table>
Participle pairs:

<table>
<thead>
<tr>
<th>ACTIVE VERB</th>
<th>PARTICIPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>tripó</td>
<td>&quot;pierced&quot;</td>
</tr>
<tr>
<td>tripónó</td>
<td>none</td>
</tr>
<tr>
<td>akúo</td>
<td>&quot;heard&quot;</td>
</tr>
<tr>
<td>(a)Yríko</td>
<td>none</td>
</tr>
</tbody>
</table>

E. Semantic Exceptionality

A list of active-passive pairs from the sample, in which the meaning of the passive form is not as predicted follows. This list in not exhaustive--only the clearest cases are presented here.

Passive verbs with idiosyncratic meanings:

<table>
<thead>
<tr>
<th>ACTIVE</th>
<th>PASSIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>anaválo</td>
<td>anaválome &quot;be canceled&quot;</td>
</tr>
<tr>
<td>&quot;postpone&quot;</td>
<td></td>
</tr>
<tr>
<td>anaféro</td>
<td>anaférome &quot;refer&quot; (to something)</td>
</tr>
<tr>
<td>&quot;report&quot;</td>
<td></td>
</tr>
</tbody>
</table>
ACTIVE | PASSIVE
---|---
11.c | arpázó
"seize" | arpázóme
"quarrel (with someone), get upset"
11.d | afínó
"I allow, leave" | afínóme
"I let myself go"
11.e | ýlikéno
"sweeten" | ýlikénome
"want very much, be in a desirous state"
11.f | ýnorízo
"recognize, know" | ýnorízóme
"make acquaintance (with someone)"
11.g | bialéýo
"choose" | bialéýóme
"be in dialogue with"
11.h | klé(y)ó
"cry, mourn" | kléýóme
"complain"
11.i | lituryó
"function, celebrate mass" | lituryéme
"attend mass"
11.j | simuléýo
"advise" | simuléýóme
"consult"
11.k | tró(y)ó
"eat" | tró(y)óme
"worry a lot"
tró éte (3 sg)
"be edible"
11.l | foráo
"wear" | foriéme
"be fashionable"
### ACTIVE PASSIVE

11.m **xaíbéo**
   "caress, pet"
   **xaíbévome**
   "be/get spoiled (of children), behave very well to get a reward"

11.n **xarízo**
   "give as a gift"
   **xarízome**
   "be generous, do favors"

11.o **psonízo**
   "shop for"
   **psonízome**
   "be a prostitute"

### Passive participles with idiosyncratic meanings:

<table>
<thead>
<tr>
<th>ACTIVE VERB</th>
<th>PASSIVE PARTICIPLE</th>
</tr>
</thead>
</table>
| 12.a **apofasízo**
   "decide" | **apofasízménos**
   "determined" (of a person) |
| 12.b **arpázó**
   "seize" | **arpazménos**
   "stolen" |
| 12.c **vlaftó**
   "I injure" | **vlaménos**
   "crazy" |
| 12.d **fiaúvázo**
   "read" | **fiauvázmenos**
   "well-read" (of a person) |
| 12.e **élo**
   "want" | **éliménos**
   "willed" (by one's own will) |
| 12.f **keróízo**
   "win" | **keróizménos**
   "lucky" |
| 12.g **kimízo**
   "put to sleep" | **kimízménos**
   "slow, stupid" |
| 12.h **meletó**
   "study" | **meletiménos**
   "not spontaneous" |
12.1 Pino
"drink"

12.j prízo
"torture"

12.k spuñazo
"study"

12.l tsimbáo
"pinch"

12.m arosténo
"be sick"

12.n ttáno
"arrive"

There are also cases of passive forms which have both the predicted meaning and an unpredictable meaning, e.g.:

13.a akúo
"hear"

13.b vioθó
"help"

13.c öno
"tie"
<table>
<thead>
<tr>
<th>ACTIVE VERB</th>
<th>PASSIVE MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>kē(γ)o</td>
<td>kēyome</td>
</tr>
<tr>
<td>&quot;burn&quot;</td>
<td>&quot;be in trouble&quot;</td>
</tr>
<tr>
<td></td>
<td>kajménos</td>
</tr>
<tr>
<td></td>
<td>&quot;unfortunate&quot;</td>
</tr>
<tr>
<td>lé(γ)o</td>
<td>léyome</td>
</tr>
<tr>
<td>&quot;say&quot;</td>
<td>&quot;be named&quot;</td>
</tr>
<tr>
<td>ksepernó</td>
<td>ksepernúme,</td>
</tr>
<tr>
<td>&quot;outrun&quot;</td>
<td>ksepernúmenos</td>
</tr>
<tr>
<td></td>
<td>&quot;be out of fashion&quot;</td>
</tr>
<tr>
<td>ksexnó</td>
<td>ksexniéme</td>
</tr>
<tr>
<td>&quot;forget&quot;</td>
<td>&quot;daydream&quot;</td>
</tr>
<tr>
<td>mazévo</td>
<td>mazévome</td>
</tr>
<tr>
<td>&quot;collect,</td>
<td>&quot;stay at home&quot;</td>
</tr>
<tr>
<td>gather&quot;</td>
<td>mazeménos</td>
</tr>
<tr>
<td></td>
<td>&quot;timid&quot;</td>
</tr>
<tr>
<td>proválo</td>
<td>proválome</td>
</tr>
<tr>
<td>&quot;appear,</td>
<td>&quot;show off&quot;</td>
</tr>
<tr>
<td>promote&quot;</td>
<td></td>
</tr>
<tr>
<td>ríxno</td>
<td>ríxnome(se)</td>
</tr>
<tr>
<td>&quot;throw&quot;</td>
<td>&quot;make passes (at)&quot;</td>
</tr>
<tr>
<td></td>
<td>ríyménos(se)</td>
</tr>
</tbody>
</table>
|             | "taking advantage (at)"

There are 105 (28.7%) passive verbs with idiosyncratic meanings in the sample of 366 transitive verbs, and 35 (9.3%) passive participles with idiosyncratic meanings, where idiosyncratic meaning
refers to cases both where the idiosyncratic meaning is the only meaning, and where there is also a predicted meaning; since all passive verbs and participles with unpredictable meanings must be "listed" in the lexicon.

F. Passives with No Active Sources

Bien and Rassias (1982) also list 183 morphologically passive verbs and 129 passive participles in the glossary section. Of these listed items, 51 (28%) passive verbs have no active source according to my informant; e.g.:

```
PASSIVE
VERB (without active source)
14.a katáyome
    be descended from"
14.b katamólínome
    "be very contaminated"
    (cf. molíno "contaminate"
     *katamolíno "contaminate greatly")
14.c planiéme
    "roam, be deluded"
```

Many such passive verbs are deponent (that is, active in meaning) according to traditional grammars; e.g.:
Twenty-four (18.6%) of the listed passive participles have no active source, according to my informant; e.g.:

16.a kaloxtenizménos
"well-combed"

16.b stratevómenos
"conscripted"

16.c misokurazménos
"half-tired"

Of the listed passive verbs which do correspond to active verbs, 48 (26.3%) display an idiosyncratic meaning relationship as either the only meaning, or, in addition to a predictable relationship; e.g.:
There are 16 (12.4%) passive participles which display an idiosyncratic meaning relationship with the corresponding active verb (possibly in addition to the predictable meaning; e.g.:

**PARTICIPLE**                **ACTIVE VERB**

18.a i. varemění  
       (fem sg)  
       "pregnant"  
       varéno  
       "weigh down"

   ii. vareménos  
       "bored"  
18.b yráménos  
       "fated"  
       yráfo  
       "write"

18.c afririménos  
       "abstract"  
       afríro  
       "subtract"

18.d sindelezménos  
       "perfect  
       (in grammar)"  
       sindeló  
       "contribute"
Thus, a total of 54.3% (99/183) of the passive verbs listed in Bien et al. must be lexically listed, and a total of 31% (40/129) of the passive participles must be listed.

F. Conclusion

The total number of exceptions (syntactic and semantic) to the rule producing passive verbs is 57.1%; to the rule producing passive participles is 42.4%. Although the decision to permit "few exceptions" to a syntactic rule, discussed in section IV.C, also permits a lack of agreement on what "few exceptions" means, it seems very unlikely that anyone can treat an exception rate of between 40% and 60% as "few exceptions". Thus, on the basis of the quantitative evidence considered to this point, it appears that both rules—the passive verb rule and the passive participle rule—are lexical; that is, morphological, rules.
CHAPTER V

THE SYNTAX OF PASSIVE FORMS

A. Introduction

In previous chapters, discussion centered around arguments that both participle passive forms and verb passive forms in Greek display various lexical properties (i.e., interaction with lexical rules, and the existence of exceptions). Here I turn to an examination of how both types of passive forms interact with the syntactic component. Since lexical rules can only effect changes involving elements of the lexicon, any cases where a passive rule effects phrasal rather than lexical categories will require that the passive rule be stated as a rule of the syntax. Bach (1980), Keenan (1980; and others) have argued for a syntactic passive rule in English on the basis that complex transitive verb phrases, those that are combined by syntactic rule and are not lexically listed, allow passive.
1. a [ persuade to go] 
TVP
John was persuaded to go.

1. b [promise to go] 
*John was promised to go.

[ promise John to go] 
IVP

This is one type of interaction that apparently requires a syntactic analysis of passive. In addition, Zwicky (1987) has argued that passive in English must be syntactic because a morphologically identical form (past participle) occurs in a non-passive construction (namely the perfect). The passive construction and the perfect construction must be syntactically distinguished, because a distinction in inflectional morphology between past participles and passive participles cannot be justified, and the feature +PAS as a derivational rule feature cannot be available to syntax.

2. a Kelly wants to be/get publicly kissed by a dolphin.

2. b *Terry want to be/get visited Paris in the springtime.

(Zwicky, 1987, ex. 43a, b, p. 655)
The first sort (syntactic interaction) of argument for a syntactic passive has been presented in the literature for Modern Greek. In the same paper that argued for the lexical status of passive participles, Lascaratou and Warburton (1983) argued that passive verbs should be described via a syntactic rule (specifically a passive transformation) because sentences in which subject-to-object raising has applied can be the input to the passive rule:

3.a Active:

ipation 

estimates-I that the works
nom nom

will 

finish-they soon

"I estimate that the work will end soon."

3.b Subject-to-object raising:

ipation 

the-works-
acc acc

will 

finish-they soon

"I estimate the work to end soon."

ipation 

estimates-I that the works
nom nom

will 

finish-they soon

"I estimate that the work will end soon."

ipation 

the-works-
acc acc

will 

finish-they soon

"I estimate the work to end soon."
What must be considered here is whether sentences involving an analysis employing the raising and passive transformations in TG must be analyzed as involving complex (not lexical) transitive verb phrases in the framework employed here. I will argue in section V.B that sentences which show the raising construction in Greek can be, and should be, analyzed as a lexical phenomenon rather than as the product of a syntactic rule in any relevant sense. It is worth noting that the raising argument is the only one advanced by Lascaratou and Warburton for the syntactic status of the passive verb rule, and that no other explicit arguments for a syntactic passive are advanced anywhere in the literature on Modern Greek. (See Chapter I for brief remarks on a paper by Campos [1987] which discusses this issue in terms which cannot be applied here.)
In more recent works in both CG and GPSG, the use of schematization (or generalization) for rules like passive allows the definition of simple and complex TVP's as VP's which contain lexically transitive verbs and possibly other material as well. It is this other material which is schematized, allowing a lexical analysis for apparently complex TVP's.

Dowty (1982) gives a schematized rule for passive where the generalization is over which NP argument of a verb can appear as the subject of the passive. The generalization required here is different; it is necessary to generalize over the arguments (NP or otherwise) which don't appear as the subject of the passive. That is, it doesn't matter what other arguments are present in the active, the direct object NP appears as the subject in corresponding passives. A generalized passive rule for CG appears in example 4. below. Note that this rule applies to lexical transitive verbs--verbs which, regardless of whether they take other arguments or not, require an NP to form a VP (Type (VP/NP)/X, where X... abbreviates all intervening arguments, if any.) The syntactic variable X can be null, giving passives like John was beaten; or it may abbreviate any other verb.

---

1. The possibility of this analysis, and a great deal of help in the details of the analysis, are due to David Dowty (personal communication).
complements, including but not limited to complements of type VP (persuade to go), PP (give to Mary), and so on, thus including all of Bach's complex TVP's as lexical TV's which require other complements. Rule 5. is a GPSG equivalent:

4. Agentless passive in Greek: for lexical TV's

\[(VP/NP)/X \rightarrow VP / X \]  
\[ [+\text{pass}] \]

(where X represents any number of other complements of TV, including zero.)

Translation:

\[ \lambda X_1 \ldots \lambda X_n \lambda P(a'(X_1) \ldots (X_n)(P)(\lambda P(\exists y P(y))) \]

(where X is a semantic variable ranging over semantic types representing any possible complements of V.)

5. \[ [V NP W] \rightarrow [ V W ] \]

Translation: equivalent to rule 4.  
(from Zwicky, 1987)

The schematization of a variety of lexically required complements of transitive verbs allows rule 4. to be a lexical rule, since information about the order of combination of verb complements is encoded in the lexical rule itself. Rule 4. is more complicated than an
unschematized rule (example 6.), but in languages like Greek, where other evidence supports a lexical analysis of passive, such extra complication is warranted.

6. \( V/NP \rightarrow VP \)

Translation:

\[ \lambda P \{ \sigma'(P)(\lambda P[\exists y P\{y\}]) \} \]

Whether a rule like 4. is required for English depends then on facts about exceptionality and interaction, but a lexical rule analysis is possible for English as demonstrated for persuade and give in examples 7. and 8.:

7. persuade:

\[ \text{type}(V/P/NP)V_P, \ X = VP \]

\[ [\inf] \ [\inf] \]

\[ (V/P/NP)/VP \rightarrow VP/VP \]

\[ [\inf] \ [\inf] \]

(persuaded)

Translation:

\[ \lambda R \lambda P \{ \text{persuade}'(R)(P)(\lambda P[\exists y P\{y\}]) \} \]

\( R = X; \) representing VP type meanings

persuaded to go:

\[ \lambda P \{ \text{persuade}'(to go')(P)(\lambda P[\exists y P\{y\}]) \} \]
8. give:

\[ \text{type}(\text{VP/NP})/\text{PP}, \quad X=\text{PP} \]
\[ \quad \text{[to]} \quad \text{[to]} \]

\[ (\text{VP/NP}/\text{PP} \rightarrow \text{VP}/\text{PP}) \]
\[ \quad \text{[to]} \quad \text{[to]} \quad (\text{given}) \]

Translation:

\[ \lambda S \lambda P[\text{give}'(S)(P)(\lambda P[\exists yP\{y\}])] \]

\[ (S = x; \text{representing PP type meanings}) \]

give to Mary: \[ \lambda P[\text{give}'(\text{to Mary'})\{P\}] \]

\[ (\lambda P[\exists yP\{y\}]) \]

The GPSG rule in 5. differs from the CG rule in 4. in that the NP constituent mentioned in the rule is not syntactically defined as direct object, though it is interpreted as one. In the CG rule, that NP is syntactically a direct object, since direct objects are defined as NP complements combined with constituents of type (VP/NP)/X to give VP's.

Bach's analysis examines particularly the possibility of passivization of object-equi verbs in English. Such verbs have not, to my knowledge, been examined in Greek with regard to passivization. Section V.C looks at the passivization possibilities of object-equi verbs in Greek, finding that this class of verb phrases (like simple TVP's) shows exceptions to passive.
A syntactic rule for agentive passives must include, of course, a description of the formation of agent phrases which applies to every verb phrase which is input to the rule. Cases where particular verbs use different means of marking agents cannot therefore be described by a single rule, and must be listed as passive verbs in the lexicon, along with subcategorization features describing their peculiar agent marking (Lightfoot, 1979). Such differences in agent expression, in fact, exist in Greek.

In addition, many—but not all—morphologically passive verbs in Greek occur with subjects which have different semantic properties than the objects of the corresponding actives, while the agents (when expressed) of some passive verbs have different semantic properties than the subjects of corresponding active verbs. Such differences must be accounted for in the rule describing passives, whether lexical or syntactic; again, lexical differences with regard to this property suggest a lexical account. Agent-marking and the semantic features of passive subjects and agents are discussed in section V.D.

Although the second (Zwicky) type of argument for a syntactic passive rule has not been explicitly advanced for Greek, the potential for an argument almost exactly parallel to Zwicky's discussion of the English passive
and perfect exists in Greek. Modern Greek has a perfect construction which is morphologically distinct from both passive forms, involving ἔχω "have" and a specifically perfect formative (here termed perfect participle = pft ppl) of the main verb (derived historically from the old infinitive, which is no longer a grammatical category in Greek). This construction is almost entirely exceptionless in Greek, and exists for both passive (ex. 9.b, below) and active verbs (ex. 9.a). A construction (ex. 9.c) with ἔμε "be" and the passive participle is often presented in teaching grammars, etc., as an alternative to the perfect construction:

| 9.a Active: |  
| --- | --- |
| ἔχω (have) | ἔραψι (write) | to | ἔραμα (letter) |
| pres | pft ppl | nom/acc | nom/acc |
| neut sg | sg |
| "I have written the letter." |

<table>
<thead>
<tr>
<th>9.b To (the)</th>
<th>ἔραμα (letter)</th>
<th>ἔχω (have)</th>
<th>ἔραψι (write)</th>
<th>πραο (be written)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pres</td>
<td>pft ppl</td>
<td>3 sg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;The letter has been written.&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9.c To (the)</th>
<th>ἔραμα (written)</th>
<th>ἔμε (be)</th>
<th>ἔρασι (write)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pass ppl</td>
<td>&quot;The letter is/ was written.&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 9.a Active: |  
| --- | --- |
| ἔχω (have) | ἔραψι (write) | to | ἔραμα (letter) |
| pres | pft ppl | nom/acc | nom/acc |
| neut sg | sg |
| "I have written the letter." |

<table>
<thead>
<tr>
<th>9.b To (the)</th>
<th>ἔραμα (letter)</th>
<th>ἔχω (have)</th>
<th>ἔραψι (write)</th>
<th>πραο (be written)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pres</td>
<td>pft ppl</td>
<td>3 sg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;The letter has been written.&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9.c To (the)</th>
<th>ἔραμα (written)</th>
<th>ἔμε (be)</th>
<th>ἔρασι (write)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pass ppl</td>
<td>&quot;The letter is/ was written.&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The construction in 9.c is formally exactly the same as the passive participle construction discussed in Chapter II, so if it is really "perfect" and syntactically or semantically distinct from "passive", this situation is apparently the basis for a Zwicky-type argument for a syntactic analysis of Greek passive participles. It can be shown, however, that the construction is the same as the passive participle construction discussed in Chapter II, rather than a perfect construction, and that it is not syntactically or semantically distinct in any way (Moser, 1988).

A third construction in Greek is often presented as a perfect, in which éxo "have" combines with passive participles to give sentences synonymous with the productive perfect with éxo + perfect participle (éxo
 ντάντα):

10. éxo yraméno to Yrama.
"I have written the letter."

In this construction the passive participle is not apparently semantically passive at all, and apparently stands in the same relationship to the éme + passive participle construction (which is passive) as the English
passive (with "be" + past participle) bears to the English perfect (with "have" + past participle) (see examples 2.a and 2.b, above). Thus, this relationship, between ἁμε + passive participle and ἐξο + passive participle, apparently should require a syntactic passive participle rule, despite the evidence from Lascaratou and Warburton presented in Chapter III for a lexical analysis of passive participles. These constructions and their analysis are treated in section V.E.

Finally, section V.F provides a summary of the syntactic occurrence of passive forms, and a consideration of the appropriate analysis, lexical or syntactic, to describe the constructions in which passive forms occur.

B.1 The Raising Argument of Lascaratou and Warburton

Lascaratou and Warburton (1983) argue that Greek passive verbs are the product of a syntactic passive transformation. This is the only explicitly stated argument for the syntactic status of passive verbs in Modern Greek. Their argument is based on triplets of sentences like the following (repeated from example 3.):
11.a Active unraised:

\[
\begin{array}{cccc}
\text{ipolojizo} & \text{óti} & i & \text{ervasies} \\
\text{estimate} & \text{comp} & \text{the} & \text{work} \\
\text{active impfve} & \text{nom} & \text{nom} \\
\text{non-past 1 sg} & \text{fem} & \text{fem pl} \\
\end{array}
\]

\(\text{ οα = τελίδυσυν σίνδωμα.} \)

(future) finish soon

active pfve

non-past 3 pl

"I estimate that the works will finish soon."

11.b Active raised:

\[
\begin{array}{cccc}
\text{ipolojizo} & \text{tis} & \text{ervasies} \\
\text{the-acc} & \text{works-nom/acc} \\
\text{fem pl} & \text{masc/fem pl} \\
\end{array}
\]

\(\text{ότι οα-τελίδυσυν σίνδωμα.} \)

comp

"I estimate the works that they will finish soon."

11.c Passive raised:

\[
\begin{array}{cccc}
i & \text{ervasies} & \text{ipolojizonde} \\
\text{the-nom} & \text{works} & \text{estimate-passive} \\
fem & \text{nom} & \text{impfve non-past} \\
pl & \text{fem pl} & \text{3 pl} \\
\end{array}
\]

\(\text{ότι οα-τελίδυσυν σίνδωμα.} \)

"The works are estimated to finish soon."

In example 11.a the main verb is active in form, agrees with a first person singular subject, and governs a clausal complement whose subject is nominative, as is evident from the form of the article (i -nominative, vs.
tis -accusative). In example 11.6 the same NP is accusative, and therefore is a direct object of the first singular active verb, ipoloji'zo (tis -accusative). In example 11.c the same NP, again marked nominative (feminine nominative article i) appears as the subject of the passive verb ipoloji'zonde, which is third person plural in form, indicating agreement with a third plural subject, i ervasies.

This appears to be a perfectly adequate argument for the syntactic status of the passive rule in Greek, since the NP which appears as the subject in the passive construction is apparently not a lexically determined direct object of the active verb, but acquires its direct object status as the result of the operation of a syntactic rule: subject-to-object raising.

If a subject-to-object raising transformation (in Lascaratou and Warburton's treatment) or its GPSG equivalent—a syntactic metarule relating non-raised and raised structures (as in example 12.)—were a syntactic rule in Greek, then Lascaratou and Warburton's argument for a syntactic source for passive verbs in Greek would hold.

12. [V óti/pos S] --> [V NP óti/pos VP]
   VP na   VP    VP na   VP
However, what they fail to consider is whether a syntactic rule, in the sense developed in Chapter I, of subject-to-object raising is appropriate or necessary for Greek. There are, in fact, good reasons to suppose that the subject-to-object raising construction is not the product of a syntactic rule in Greek.

In particular, as is often the case with lexical rules, but not syntactic rules, in the framework adopted here, the raising construction is clearly lexically governed in Greek (as in English). The number of verbs which occur in this construction is small, and there are many verbs that occur in the input construction, but not in the raising construction. (See Table 1.)
**Table 1: THE RAISING CONSTRUCTION**

<table>
<thead>
<tr>
<th>UNRAISED INPUT</th>
<th>RAISING STRUCTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>θέλο na S</td>
<td>θέλο NP na VP</td>
</tr>
<tr>
<td>&quot;want&quot;</td>
<td></td>
</tr>
<tr>
<td>θερό οτι/pos S</td>
<td>θερό οτι/pos VP</td>
</tr>
<tr>
<td>&quot;consider&quot;</td>
<td></td>
</tr>
<tr>
<td>αφίνο na S</td>
<td>αφίνο NP na VP</td>
</tr>
<tr>
<td>&quot;allow&quot;</td>
<td></td>
</tr>
<tr>
<td>περιμένο na S</td>
<td>περιμένο NP na VP</td>
</tr>
<tr>
<td>&quot;expect&quot;</td>
<td></td>
</tr>
<tr>
<td>ελπίζο οτι/pos S</td>
<td>*ελπίζο οτι/pos VP</td>
</tr>
<tr>
<td>&quot;hope&quot;</td>
<td></td>
</tr>
<tr>
<td>πιστένο οτι/pos S</td>
<td>*πιστένο οτι/pos VP</td>
</tr>
<tr>
<td>&quot;believe&quot;</td>
<td></td>
</tr>
<tr>
<td>επιθείμο na S</td>
<td>*επιθείμο NP na VP</td>
</tr>
<tr>
<td>&quot;desire&quot;</td>
<td></td>
</tr>
<tr>
<td>αναμένο οτι/pos S</td>
<td>*αναμένο οτι/pos VP</td>
</tr>
<tr>
<td>&quot;expect&quot;</td>
<td></td>
</tr>
</tbody>
</table>

θερό is commonly cited as a raising verb in the literature. My informant rejects the raised structure. It is worth noting here that the raising structure is, for most verbs, only marginally acceptable, and that variation among speakers as to which verbs occur in the construction is widespread. Examples cited here are commonly given in the literature, and therefore presumably represent the judgments of a number of speakers.
This situation, as well as the variability among speakers mentioned above, would be expected if subject-to-object raising were a lexical phenomenon and not a syntactic one, by Criterion E (exceptionality) of Chapter I: that syntactic rules have few or no exceptions.

B.2 Idioms and Raising

In cases where the embedded clause is a sentential idiom, the raising structure is ungrammatical for my informant, though Joseph (1976, 1978, personal communication) has found different results:

13.a  

<table>
<thead>
<tr>
<th></th>
<th>ftáni</th>
<th>o</th>
<th>kombos</th>
</tr>
</thead>
<tbody>
<tr>
<td>impfve</td>
<td>arrive</td>
<td>the knot</td>
<td></td>
</tr>
<tr>
<td>non-past</td>
<td>masc sg</td>
<td>nom nom</td>
<td></td>
</tr>
<tr>
<td>l sg</td>
<td>xteñi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sto to-the comb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>acc acc</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>neut sg neut sg</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"things are coming to a head"  
lit., "The knot arrives at the comb."

2. There are few sentential idioms in Greek, as in most languages. These three are the only ones I know (Joseph, 1976, 1978; Soames and Perlmutter, 1979). In order to distinguish a raised accusative object NP from an unraised nominative lower clause subject, the NP must be non-neuter, since nominative and accusative case forms are not distinguished for neuter articles, adjectives, or nouns.)
13.b *atéglo  ton  kómbo
    want-impfve the-acc knot-acc
    non-past    masc sg masc sg
l sg

na  ftási  sto  xténi
subj  arrive
pfve
non-past
3 sg

14.a  oen  xálase  o  kózmos
  not  spoil  the  world?
+ indic  pfve  nom  nom
l sg  past  masc sg masc
3 sg  3 sg

"things aren't so bad"
lit., "The world didn't ruin."

14.b  *atéglo  ton  kózmo
    want-impfve the-acc world-nom
    non-past    masc sg masc sg
l sg

na  min  xalási
subj  not  spoil
  -indic  pfve
non-past  3 sg

15.a  xaláí  o  kózmos
    spoil-impfve the-nom world-nom
    non-past  3 sg    masc sg masc sg

"there's a great to-do"
lit., "The world ruins."

15.b  *atéglo  to  kózmo
    want-impfve the-acc world-nom
    non-past    masc sg masc sg
l sg

na  xaláí/  xalási
subj  spoil/  ruin
  impfve  pfve
non-past  non-past
3 sg  3 sg
The raising of idiom chunks was a standard argument in transformational grammar for a transformational treatment of the raising construction; so, on the basis of the gaps discussed in section V.B.1 and the behavior of idioms discussed here, any claim that subject-to-object raising is a transformational rule fails. (In CG at least, and probably GPSG, idiom-chunk arguments are generally not given, since the association of an explicit semantic rule with syntactic rules predicts that raised idiom chunks will receive only a literal interpretation [Bach, 1980]).

These facts strongly suggest that the grammar of Greek does not contain a syntactic rule of subject-to-object raising. Subject-to-object raised sentences are, in fact, generally not treated as the product of a syntactic rule in most current theories of syntax. What seems to be the most accurate representation of the facts about "raising" verbs in Greek--and in English, for that matter--is that such verbs are subcategorized to occur in two different syntactic structures, with parallel semantic interpretations. This is essentially a lexical phenomenon, though it is not a lexical rule in the sense used here, where "lexical rule" is taken to be a rule of derivational morphology.
There are also verbs in Greek which occur in the raising construction, as well as in the \[ \text{V COMP S} \] \[ \text{VP} \] \[ \text{VP} \] structure, which fail to occur in the passive:

16.a \( \text{αέλο} \) "want"
16.b \( \text{αφύνο} \) "allow"
16.c \( \text{kάνο} \) "make"
16.d \( \text{περιμένο} \) "expect"

So the very fact on which Lascaratou and Warburton base their argument - that raising feeds passive - is not exceptionless. This is not surprising, given the numbers of exceptions to passive and to raising.

There are even a few verbs which don't occur in the raising construction but have passives as if they did. In example 17., the subject of \( \text{πιστεύω/αναμένω} \) is interpreted as the subject of the embedded VP.

3. Plus, of course, deponent raising verbs, like \( \text{φανδάσωμε} \) "imagine", which are already morphologically passive, and thus have no passive.
4. \( \text{αφύνο} \) occurs, but only with reflexive meaning, not passive.
Such passives can not be fed by raising, because raising cannot apply. In any framework which takes the distinction between lexical and syntactic phenomena seriously, these facts are most appropriately treated as matters of subcategorization and corresponding interpretation of verbs in different subcategorization frames.

So there are some verbs subcategorized to appear

- only with COMP S (elpízo, "hope"),
  - no raising, no passive;
- some with COMP S or NP (óti/pos/na) VP (θélo, "want"),
  - raising, no passive;
- some with S, NP (óti/pos/na) VP, and in passive (ipolójízo, "estimate"),
  - raising and passive; and
- others with S and in passive (pístévo, "believe"),
  - passive, no raising.
If raising is not a syntactic rule in Greek, then Lascaratou and Warburton's argument fails.

Since the NP direct objects of raising verbs are, in this analysis, lexically determined direct objects, a rule such as passive, that affects them might be either a syntactic rule or a lexical rule.

C. Object-equi Verbs and Passive

Bach's (1980) argument for treating passive as a syntactic rule in English involved the passivizability of object-equi verbs. Since in that analysis (and in a number of CG and GPSG analyses that follow it; e.g., Dowty, 1982, Gazdar, Klein, Pullum, and Sag, 1985) object-equi verbs combine with an infinitival phrase before combining (by right wrap) with a direct object noun phrase, (as in Figure 4, below, from Bach, 1980, p.300), the NP direct object is the object of a syntactically complex TVP, and, hence, passive must be a syntactic rule.
I have already mentioned that the use of a rule schema, in which rules are generalized to apply over a set of different inputs with some feature in common, makes it unnecessary to treat passive as a syntactic rule on this basis. Nonetheless, I here present evidence that some object-equi verbs in Greek are also exceptions to passive, and at about the same numerical level as the entire corpus of transitive verbs. The following table presents the relevant verbs and my informant's judgments on their passives.
Table 2: OBJECT-EQUI VERB EXCEPTIONS

<table>
<thead>
<tr>
<th>ACTIVE</th>
<th>PASSIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>anāngázo NP na VP</td>
<td>OK - anāngázome na VP</td>
</tr>
<tr>
<td>&quot;force&quot;</td>
<td></td>
</tr>
<tr>
<td>pīço NP na VP</td>
<td>OK - pīçome na VP</td>
</tr>
<tr>
<td>&quot;persuade&quot;</td>
<td></td>
</tr>
<tr>
<td>parotríno NP na VP</td>
<td>OK - parotrínome na VP</td>
</tr>
<tr>
<td>&quot;incite, urge&quot;</td>
<td></td>
</tr>
<tr>
<td>parakaló NP na VP</td>
<td>* - parakalúme na VP</td>
</tr>
<tr>
<td>&quot;ask, invite&quot;</td>
<td></td>
</tr>
<tr>
<td>ipoxreóno NP na VP</td>
<td>OK - ipoxreónome na VP</td>
</tr>
<tr>
<td>&quot;force&quot;</td>
<td></td>
</tr>
<tr>
<td>apavorévo NP na VP</td>
<td>OK - apavorévome na VP</td>
</tr>
<tr>
<td>&quot;forbid&quot;</td>
<td></td>
</tr>
<tr>
<td>viázo NP na VP</td>
<td>.* - viázome na VP</td>
</tr>
<tr>
<td>&quot;force&quot;</td>
<td></td>
</tr>
<tr>
<td>cícasko NP na VP</td>
<td>OK - cícaskome na VP</td>
</tr>
<tr>
<td>&quot;teach&quot;</td>
<td></td>
</tr>
</tbody>
</table>

5. For my informant, there is no passive for this structure. She grudgingly admitted, however, that in very high style Greek, passive could occur with a different complementizer:

   parakalúme ja na VP

6. viázome occurs, but not with passive meaning. It means "be in a hurry to", not "be forced to".
Table 2 (continued),

<table>
<thead>
<tr>
<th>ACTIVE</th>
<th>PASSIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ἰθοπιό NP na VP &quot;notify&quot;</td>
<td>OK - ἰθοπιόμε na VP</td>
</tr>
<tr>
<td>έξορχίζο NP na VP &quot;plead with, beg&quot;</td>
<td>? - έξορχίζομε na VP</td>
</tr>
<tr>
<td>καταφέρνο NP na VP &quot;make, manage&quot;</td>
<td>* - καταφέρνομε na VP</td>
</tr>
<tr>
<td>μαθένο NP na VP &quot;teach&quot;</td>
<td>* - μαθένομε na VP</td>
</tr>
<tr>
<td>προτρέπο NP na VP &quot;instigate, urge&quot;</td>
<td>? - προτρέπομε na VP</td>
</tr>
<tr>
<td>σιμβουλέψο NP na VP &quot;advise&quot;</td>
<td>* - σιμβουλέψομε na VP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>passive OK</th>
<th>passive * or ?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total:</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

7. μαθένομε exists in the meaning "be learned", not "be taught to".

8. σιμβουλέψομε exists as a transitive verb meaning "consult" in this structure.
Again, as with raising verbs, the appropriate treatment seems to be to list the verbs that occur in the passive of equi constructions in the lexicon as passives with appropriate subcategorization features, since the passivization of equi-verbs (complex TVP's) shows as much exception as all transitive verbs in the whole corpus.

D. The Expression of Agency in Greek Passives

D.1 Passives and Actives on the Animacy Hierarchy

Warburton (1970, 1975) and Lascaratou (1984) have discussed (Lascaratou at some length) the rarity of expressed agents in Modern Greek "true" passive sentences, and that the occurrence of expressed agents depends on semantic features of the agent: its abstractness, animacy, definiteness, and number. So NP's are ranked as follows, in terms of number of occurrences in texts examined in the works mentioned above:

1. abstract - inanimate NP's - most likely
2. indefinite animate
3. definite animate plural
4. definite animate singular - least likely

---

9. In other words, in sentences where the passive forms are not semantically idiosyncratic in any way; in particular, they do not have reflexive or reciprocal meanings. The term true passive is Lascaratou's, not mine.
The reverse ranking holds for subjects of active sentences.

The objects of active sentences show a ranking similar to that for agents of passive sentences (less animate), while the subjects of passive sentences are similar to those of active subjects (more animate). These facts suggest that the NP's which appear as subjects of passive sentences bear semantic features (animacy, definiteness) typically associated with semantic agents, and that the NP's which appear in agent phrases of passive sentences, when expressed, bear semantic features typically associated with non-agents.

Since passive subjects are, according to these facts, agent-like patients, it appears that even semantically predictable passives are not identical in meaning to their active counterparts, and that any proposed syntactic passive rule, either a transformation or a metarule, can't apply freely to all syntactically specified appropriate inputs. This is particularly problematical for a GPSG metarule analysis; since the metarule applies, not to verb phrases, but to PS rules for VP's. The acceptability of passive sentences depends not only on the subcategorization class of verbs (GPSG rule number), but on semantic characteristics of both internal (object) and external (subject) NP arguments.
So, unless VP rules distinguished not only subcategorization but also selectional restrictions (i.e., some V occurs with an animate direct object), a metarule operating on those VP rules will not be able to refer to such selectional restrictions.

Furthermore, while the animacy and definiteness rankings are tendencies for the grammar as a whole—that is, it is statistically unlikely, but not impossible, that an animate and definite NP will occur in an agent phrase in Greek—, for individual passive verbs the possibility of occurrence of subjects and agents with particular animacy and definiteness characteristics is a matter of grammaticality, as is the ability to occur with an expressed agent at all. So some verbs occur in both active and passive with the same range of semantic features for passive subjects/active objects and passive agents/active subjects (ex. 18.) while others require a different range of features on passive subjects/active objects (ex. 19.) or passive agents/active subjects (ex. 20.); while still other passive verbs cannot occur with an agent phrase with ἀντι at all (ex. 21.).

18. Active requires animate subject, animate or inanimate direct object; passive requires animate agent, animate or inanimate direct object:
18.a o náskalo sgiása
the teacher teaches
to jání ta eliniká/
the John the Greek
10
ta eliniká sto jání
the Greek to-the John

18.b ta eliniká sgiása
de Greek is taught
(neut pl) (3 pl)
o jání sgiása
is taught
(3 sg)
apá to náskalo.
by the teacher

19. Passive subject is only animate;
active object is animate or
inanimate:

19.a éklisa tin pórtá
close the door
ACTIVE acc acc
pfve past fem fem
1 sg sg sg
"I closed the door."

19.b klístika sto somátio
close in-the room
PASSIVE acc acc
pfve past neut neut
1 sg sg
"I was shut in the room."

10. násko "teach" is one of a very few ditransitive
verbs in Greek.

11. Naturally, many passive verbs whose meanings are not
predictable fall into this class, as do many passive
verbs with only reflexive meaning.
19. c *i pórta klístike
   The door close
   nom nom PASSIVE
   fem fem pfve past
   sg sg 3 sg

**"The door was closed."**

20. Active requires animate subject and
direct object; passive requires
animate subject, inanimate and
abstract agent:

20.a me pandrévi o papás
    me marry the priest
    acc ACTIVE nom nom
    sg impfve masc masc
    non past sg sg
    3 sg

"The priest is marrying me."

20.b me pandrévi o patéras mu
    me the father my
    acc nom nom
    sg masc masc
    sg sg

"My father is marrying me (off)."

20.c *me pandrévi o érotas
    the love nom
    masc sg

20.d *pandrévome apó ton papá/
    marry by the priest
    PASSIVE acc acc
    masc sg masc sg
    ton patéra-mu
    the father-my
    acc acc
    masc sg masc sg

**"I am married (off) by the priest."
    my father."
20.e pandrévome apó érota
marry-passive by love
impfve acc
non past 1 sg masc sg

21. No expressed agent:

21.a me katafróni o iánis
me despises the John
neglects nom nom

"John despises me."

21.b katafrónome (*apó to iání
I am despised (*by the John)
acc acc

Since actives and corresponding passives are not, in
general, exactly synonymous, any syntactic rule
describing them must include some semantic component
which describes the "agent-like" interpretation of
passive subjects.

Such a rule might specify that passive subjects are
to some extent volitional in bringing about the action of
the verb: this is suggested by Warburton (1970), and a
similar analysis, involving volition, is suggested by
Nerbonne (1982) for impersonal passives in German.
However, since there is apparently lexically determined
variation as to which passive verbs in Greek require
volitional subjects, and which don't (as in examples
18.-21., above), no productive syntactic rule is
possible. Rather the semantic features required for passive subjects and agents appear to be a lexical matter. In general, the class of passive verbs (or their meanings) requires subjects and agents with semantic features like those discussed in Chapter IV from Hopper and Thompson (1980); but individual lexical items within the class differ in their requirements from this general case.

C.2 Agent Marking

Agent phrases, when they are expressed in Greek, are typically marked with the preposition ἀπό:

22. πλαστικά ἀπό τὸ θεό
create by the God
PASSIVE acc acc
pfv past masc masc
l sg sg sg

"I was created by God."

ἀπό is also used to mark instruments or sources:

23.a. περιτριβίριζομαι ἀπό ἄττιρα
surround by/with building
PASSIVE acc
impfve non past neut pl
l sg

"I am surrounded by buildings."
In many cases, when the passive agent is inanimate or abstract, *apo* can be replaced by *me* ("with", instrumental).

23.b  
**avarástike apo aftó to mayazí**

buy  from that the store
PASSIVE  acc  acc  acc
pfve past  neut  neut  neut
3 sg  sg  sg  sg

"It was bought from that store."

24.a  
**leróθiika apo to láspi**

be dirty by/from the mud
PASSIVE  acc  acc
pfve past  me  fem  fem
1 sg  with  sg  sg

"I got dirty from the mud."

24.b  
**efxarístiθiika apo to nóro-tu**

please by the gift-his
PASSIVE  acc  acc
pfve past  me  neut  neut
1 sg  with  sg  sg

"I was pleased by/with his gift."

(examples 22.a-24.b from Mackridge, 19 , pp.)

**Apó** is also used to express agency/instrument with active verbs:
25.a mávrisa  ἀπό  τόν  ἰλίο
blacken  by  the  sun
ACTIVE  acc  acc
pfive past  masc  masc
l sg  sg  sg

"I was blackened (tanned) by the sun."

(Cf. ὁ ἰλίος  με  mávrisa  "The sun blackened me: with ὁ ἰλίος in the nominative as grammatical subject.)

25.b anisíxó  ἀπό  τίν  ἀποςια-τυ
worry  by  the  absence-his
ACTIVE  acc  acc
impfve past  fem  fem
l sg  sg  sg

"I'm worried by his absence."

(Mackridge, 1985, p. 99)
(cf., ἧ ἀποσια-τυ  με-anisíxí, with ἧ ἀποσια-τυ  in the nominative as grammatical subject.)

Lightfoot (1979) has argued that the lexical passive of Old and Middle English was characterized by a variety of agent-marking mechanisms, but that when the rule became syntactic, only marking with "by" is permitted, since agent-marking is specified by the syntactic rule. Since Greek permits various agent markers (ἀπό, με, agent prefixing, see Chapter VII), their distribution cannot be determined by a single syntactic passive rule unless the choice between agent markers is not lexically determined. However, the choice is lexically determined:
Thus, the distribution of particular types of agent-marking is determined by other and various principles: the prefixing processes within the lexicon; the prepositional phrases by syntactic rules that allow or require PP as the daughter of VP for particular verbs.

The agentive passive (= passive with explicit agent phrase) construction cannot be characterized as requiring a unitary expression of agent and it cannot be claimed that agents marked by *apó are characteristic only of this construction, since actives also occur with *apó + agent. Again, there is no real generalization to be made about the syntax of passive vs. active constructions in Greek.
E. The *éxo* plus Passive Participle Construction

In a 1988 dissertation on perfect constructions, Amalia Moser discusses at some length a construction in which passive participles apparently are synonymous with, and an alternative to (ex. 27.b), the normal perfect construction (ex. 27.a) in Modern Greek. The passive participle is also used in construction with *íme* "be", where its meaning is clearly passive (27.c).

27.a  

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>éxo</td>
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<tr>
<td></td>
<td></td>
<td>yrápsi</td>
<td></td>
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<td></td>
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<td></td>
<td>to</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>yráma</td>
</tr>
</tbody>
</table>

have write the-acc letter
non-past active neut sg acc sg
1 sg pft ppl

"I have written the letter."

12. Moser follows the traditional nomenclature in calling such forms "infinitives"; here I follow Joseph's (1983, chapter 3) analysis, in treating them as members of an inflectional category "perfect participle". This form is very close to completely productive in Modern Greek.

13. All examples are from Moser (1988), except where noted, with the orthography altered to reflect the phonemic transcription of this study, and translations altered slightly to gloss the morphological categories according to the pattern used here.
This situation, in which the same participle is used both in an active perfect construction, and in a passive construction (27.b vs. 27.c) appears to parallel closely the situation in English:

28.a "John has written the letter."
   -active perfect

28.b "The book was written (by John)."
   -passive

Zwicky (1987) points out that a lexical rule treatment of the English passive must assign a derivational rule feature [PAS+], in addition to the inflectional feature [VFORM: PSP = past participle] to
its output in order to account for the different syntactic distribution of passive VP's and active VP's with perfect verb forms:

29.a  Kelly wants to be/get publicly kissed by a dolphin.

29.b  *Terry wants to be/get visited Paris in the springtime.

30.a  Publicly kissed by a dolphin, Kelly was mortified.

30.b  *Visited Paris in the springtime, Terry was exhilarated.

31.a  *Kelly is known to have publicly kissed by a dolphin.

31.b  Terry is known to have visited Paris in the springtime.

(examples from Zwicky, 1987, p. 665)

There is no morphological motivation for an inflectional category \[\text{VFORM:PAS}\] in English, since passive participles are without exception identical in form to past participles, so an analysis with a derivational feature \[+\text{PAS}\], required to distinguish the occurrences of passive VP's vs. active perfect VP's above violates the lexicalist hypothesis (the Principle of Morphology - Free Syntax, in Zwicky's terms):
Syntactic rules cannot make reference to the internal morphological composition of words or to the particular rules involved in their morphological derivation.

(Zwicky, 1987, p. 654)

If the situation in Modern Greek were truly parallel to that in English, the é xo + passive participle construction (é xo vraménos) would provide an argument for a syntactic rule for the description of passive participle distribution, despite the arguments given in Chapter III for their status as lexically derived adjectives.

Moser's dissertation provides a number of arguments which can be used to argue against such an analysis. Moser's study is concerned with the historical development of perfect forms in Greek, and is not directly concerned with the question of lexical vs. syntactic phenomena. As a result, her discussion of the three perfects (examples 27.a-c) is concerned with "the degree of grammaticalization" of each type of perfect, a concept which has no place in GPSG, so this section examines the facts presented by Moser in terms of the criteria for syntactic/inflectional phenomena vs. lexical derivational phenomena of the model employed here, in comparing the apparently parallel uses of Greek and
English participles in active perfect and passive constructions.

E.2 Productivity

The perfect construction (έξο Υράψι) exemplified in example 27.a is very productive in Modern Greek, with the exception of a very few verbs which lack perfective forms altogether (e.g., κσέρο "know"). Formation is as follows:

AUX element any form of éξο "have", including present participle: éxondas "having"
main verb perfective stem, active, or passive, + i =
perfective participle formative:

32.a éξο Υράψι - active
"I have written"
32.b éξο Υράφτι - passive
"I have been written"
32.c éξο σκεφτί - passive only, no active form
"I have thought"

(author's examples).

The éξο- + passive participle construction (έξο γράφει) is restricted to transitive main verbs (those with accusative direct objects as discussed in Chapter
and, in fact, to a small class of transitive verbs, i.e., those whose meaning involves some notion of location, overtly or not.

33.a to éxo klišoméno to γráma sto sirtári.
"I have locked the letter in the drawer."
(éxo + passive participle)

33.b *to éxi kurazméno to jáni.
*He/she/it has tired Yanis.
(éxo + passive participle)

33.c ten éxi kurási to jáni
He/she/it has tired Yanis.
(éxo + perfect participle)

So the perfect construction with éxo + perfect participle (éxo γrápsi) is parallel to the English perfect in terms of productivity (Criterion E); the construction with éxo + passive participle (éxo γraménο) is not, but is limited to a semantically, not syntactically, defined subclass of transitive verbs. The stipulation of transitivity suggests a real connection with "passive", though many verbs which have passive forms fail to occur in this construction (33.b).
E.3 Agreement Patterns

The perfect participle in \textit{éxo} + perfective participle construction (\textit{éxo Yrápsi}) is invariant, the AUX agrees in person and number with the subject (as does \textit{éxo} in the passive participle construction \textit{[éxo Yraméno]}). The passive participle in the \textit{éxo} + passive participle construction (\textit{éxo Yraméno}) agrees with the direct object in gender, number and case, like an adjective modifier of that object:

34.a \textit{éxo Yraméno} to \textit{Yráma}
written acc acc
neut sg neut sg

34.b *\textit{éxo Yraménos} to \textit{Yráma}
written acc
masc sg

34.c *\textit{éxo Yraména} to \textit{Yráma}
written acc neut
pl

34.d *\textit{éxo Yraménu} to \textit{Yráma}
written gen
neut sg

(author's examples)

This agreement pattern is different than that of the main verb which, if it occurred alone, would agree in
person and number with the subject, like the AUX in all three perfect constructions:

35. (to) klifōsa to yráfama
   lock-pfve the-acc letter-acc
   past 1 sg neut sg neut sg
   sto sirtári.
   the- drawer

   "I locked the letter in the drawer."

E.4 Order and Separability

The AUX and the perfect participle (éxo yráfai) are not freely separable by other elements of the sentence, despite the fact that order within phrases is quite free in Modern Greek. Moser mentions the temporal adverb ἓςι, "already as the only temporal adverb that can freely occur between éxo and the perfect participle:

36. to éxo ἓςι αἴ
   it-acc have already see
   neut sg pres pft ppl
   1 sg

   "I have already seen it."

Other adverbs in this position are marginally acceptable (effixós "luckily"; sistixós "unluckily";
and aplós "simply" are mentioned by Moser, p. 157) and parentheticals occur very rarely, and awkwardly:

37. ἔξο κι ἐγώ, as τῆμεν
AUX and I-nom let's say

πτέρνη πτέρνη
s-afté.
teach in-them
pft ppl

"I, too, let's say, have taught in them."

In the ἔξο + passive participle construction, adverbial phrases and direct object NP's can intervene between ἔξο and the participle: that is, constituent phrases of VP may intervene, with no length restrictions;

38. ἔξο μία φωτογραφία - το
have-I one photograph - of him
acc fem sg

κρεμαζόμενο στο ντροφίο
hung in-the office
acc fem sg

"I have a photograph of him hung in the office."

In general, ordering restrictions and separability requirements, for both ἔξο + passive participle and ἵμα + passive participle constructions, do not differ from ordering statements required for the language as a whole;
while ἔχω + perfect participle are minimally separable, and must occur in this order; e.g., the perfect participle can't be separately topicalized, while the passive participle can be:

39.a ἐπὶ ὅτι ἔχω κλιπομένο
said-I that have-I locked
pass ppl
to κράμα στὸ σίρταρι.
the letter in-the drawer
καὶ κλίπομένο τὸ-ξο
and locked it-I-have
pass ppl

"I said that I have the letter locked in the drawer, and locked I have it."

39.b ἐπὶ ὅτι στὸ κράμα ἰνὲ
said-I that the letter is
κλίπομένο στὸ σίρταρι καὶ
locked in-the drawer and
κλίπομένο ἰνὲ
locked it-is
pass ppl

"I said that the letter is locked in the drawer and locked it is."

(author's example)
39.c  *ípa óti éxo kliñosi
said-I that have-I locked
pft ppl

to yráma sto sirtári,
the letter in-the drawer

ke klinósi tó-xo.
and locked it-have-I
pft ppl

"I said that I have locked
the letter in the drawer
and locked it I have."

E.5 Omission and Substitution

The AUX element in the éxo + perfect participle construction (éxo yrápsi) cannot be omitted. The AUX element in the éxo + passive participle construction (éxo yráméno) may be omitted, e.g., in answer to a question:
40.a \( \text{éxo} \text{ mavirépsi} \text{ to faí.} \)
\[ \text{have-I cooked the food pft ppl} \]

"I have cooked the food."

\[ \text{ti to-xis (kání) what} \text{ it-have-you (done-pft ppl)} \]

"What have you (done)?"

*\[ \text{to mavirépsi it cooked-pft ppl} \]

"I *cooked it."

(author's example)

\[ \text{to-xo mavirépsi it-have-I cooked-pft ppl} \]

40.b \[ \text{éxo mavireméno to faí} \]
\[ \text{have I cooked the food pft ppl} \]

"I have cooked the food."

\[ \text{ti to-xis what it-have-you?} \]

"What do you have it?

\[ \text{to faí mavireméno the food cooked} \]
\[ \text{pass ppl} \]

"The food cooked."

(author's examples)

Since \text{éxo} in construction 1 (\text{éxo yrapsi}) has essentially none of the lexical meaning of \text{éxo} "have", no other verbs are substitutable for \text{éxo}. \text{Éxo} in construction 2 (\text{éxo yraméno}) retains much of the
possession or location meaning of éxo "have", and in many cases (those sentences with clearly locative meanings) can be replaced by verbs with similar meanings: e.g., kratão "hold", filáò "keep" may replace éxo in example 41.: 

41. to kratão/filáò klíkoméno
    it hold-I/keep-I locked
    pass ppl

to vrama sto sirtári.
the letter in-the drawer

"I hold/keep the letter locked in the drawer.

In gerundive uses the present participle form of éxo (éxondas "having") can be replaced with me "with" in the éxo vraméno construction:

42.a éxondas klíkoméno to vrama
    having locked the letter
    pass ppl neut neut
    sg sg

sto sirtári, ìme sìyuros
in-the drawer be-I sure

pos òa-to-chvási kaníg.
that will-it-read no-one

"Having locked the letter in the drawer, I am sure no one will read it."
42.b me kliómeno to Yráma
with locked the letter
pass ppl
sto sirtári ...
in-the drawer
"With the letter locked in
the drawer ..."

42.c *me kliósi to Yráma ...
locked
pft ppl

E.6 The Status of éxo + Passive Participle

All of the facts discussed above point to an
analysis in which the NP in éxo- Yrámeno constructions is
the direct object of éxo with its lexical meaning "have,
possess", while the passive participle is an adjective
complement of that NP as in English "I have the letter
written" which implies both possession by the subject and
that the subject carried out the writing vs. English "I
have written the letter" which does not imply possession.

F. Conclusion - The Syntax of Passive Verbs

in Modern Greek

The only syntactic difference between passive
verbs/participles and active verbs in Greek that I have
been able to discover is that morphologically and
semantically passive verbs are far more likely to occur
with an agent-phrase than are morphologically and semantically active verbs. Even this statement has exceptions, as discussed in section V.C.

In particular, there appear to be no restrictions on the occurrence of passive verbs as opposed to active verbs; they are not governed by particular verbs, as passive in English is governed by the auxiliary "be" (see section V.C). So passives with expressed agents can't be described by a single syntactic rule.

There is no compelling indication that passive operates on complex TVP's. The raising argument of Lascaratou and Warburton along these lines (see section V.B) has been shown here to be flawed, and the behavior of object-equi verbs is as unpredictable with regard to passive as that of any other class of transitive verbs.

Therefore, there is no syntactic evidence supporting a syntactic analysis for passive verbs/participles in Modern Greek, and there is some evidence for a lexical analysis of passive verbs and participles (Chapters III and IV).

The following chapters describe the interaction of both passive rules with elements of the lexicon. Chapter VI describes the interaction of passive with the inflectional component; Chapter VII with the derivational component.
CHAPTER VI

PASSIVE AND INFLECTION

A. Introduction

All treatments of Greek verbal morphology and Modern Greek textbooks of which I am aware treat passive as an inflectional category of Greek verbs. This view is, in general, not explicitly stated, but is evident from:

1. The display of verbal paradigms, including passive within the paradigm. (Mackridge, 1985, pp. 364-366)

2. The statement of rules for producing passive verb forms from active ones, or from treatments of inflection that include passive as such a category.

"Active aorist stems ending in -ps- change to -ft-.

(Householder, Koutsoudas, and Kazazis, 1964, p. 120)
3. Descriptions of constituent structure of inflection from:

   a. Koutsoudas (1962, p. 20.):

   **Figure 5: INFLECTIONAL CONSTITUENT STRUCTURE - A**


   **Figure 6: INFLECTIONAL CONSTITUENT STRUCTURE - B**
If, in fact, passive is an inflectional category, then it could be argued that passive verbs are syntactic, since inflectional categories are relevant to or distributed by syntax; this is the defining feature of inflectional morphology as opposed to derivational morphology (Anderson, 1982). Since the usual view of passive in Greek as an inflectional category has never, to my knowledge, been explicitly justified, it is not clear what motivates it. The analysis of passive as inflection may be based on some historical situation in Greek, in which passive was demonstrably an inflectional category. Another possibility is that passive is taken as an inflectional category because voice in analyzed as occurring outside the inflectional category aspect.

This analysis could form the basis for an argument that passive is an inflectional category, and hence distributed by syntax. This is an ordering argument of the following form. If the category aspect can be shown to be inflectional, then any category which is marked further from the root than aspect is also inflectional and not derivational. This argument, of course, involves assumptions about the relevance of linear order of category marking to the order of application of morphological rules, and about the interaction of the
derivational and inflectional components which are possibly suspect. Even if these assumptions are allowed to stand unquestioned, however, it can be shown that analyses which locate aspect closer to the root than voice are not clearly supported for Greek.

The category aspect can be shown to be inflectional on both syntactic and morphological grounds.

Syntactic considerations include:

- Verbs in main clauses that are traditionally called present and indicative occur only in the imperfective aspect (i.e., there is a syntactic context which makes systematic reference to one aspect category as opposed to the other).

1. Õraφo  ēna  yráma
   write  one  letter
   impfve 1 sg  neut sg  neut sg
   non-past  acc  acc

   "I am writing a letter."

2. *yrāpso  ēna  yráma
   write  one  letter
   pfve 1 sg  neut sg  neut sg
   non-past  acc  acc

   *"I write a letter (once)".

- There are verbs, such as arxizo "begin", which require imperfective forms in their complements,
and also verbs which require perfective forms, such as\textit{elpízo} "hope" (Mackridge, 1985). This can be shown to be at least partially syntactic rather than semantic, since, e.g., the verb\textit{arxíno} "begin" does not restrict its complements to imperfective aspect, though it is synonymous with\textit{arxízo}.

- Adverbs: The perfective aspect co-occurs with adverbial expressions denoting point of time, or number of times (e.g., \textit{ánvrio} "tomorrow", \textit{polés forés} "many times"); while the imperfective co-occurs with adverbs which denote frequency or duration (e.g., \textit{kamiá forá} "sometimes", \textit{méra me ti méra} - "as the days go by").

- Perfect forms: The perfect construction in Greek requires a verb (here termed "perfect participle") that is formally perfective following \textit{éxo} "have". Again, this is a syntactic context that makes reference to one aspect.

\begin{tabular}{ll}
3. & \textit{éxo} \\
& have \\
& non-past \\
& 1 sg \\
& write \\
& perfect formative
\end{tabular}
Newton (1979) and Mackridge (1985) give examples in which an imperfective verb form gives a generic reading to its subject or direct object, and a perfective verb form gives a definite interpretation:

5. \( \text{i kópéles prépi} \)
   \( \text{ART-the N-girl V-is necessary} \)
   fem fem non-past
   nom pl nom pl 3 sg
   \( \text{na pandrevónde mikrés.} \)
   SUBJ/V marry ADJ-young
comp pass impfve fem
   non-past 3 pl nom pl

"Girls should marry young."
(girls in general)

6. \( \text{i kópéles prépi} \)
   \( \text{ART-the N-girl V-is necessary} \)
   fem fem non-past
   nom pl nom pl 3 sg
   \( \text{na pandreftún mikrés.} \)
   SUBJ/V marry ADJ-young
comp pass impfve fem
   non-past 3 pl nom pl

"The girls should marry young."
(some particular girls)

(Newton, 1979, pp. 158-9)
Thus, the interpretation of other elements in the sentence is dependent on the category aspect, suggesting that aspect is relevant in syntactic contexts beyond the word form itself.

Morphological considerations:

- There are very few verbs that fail to show aspect distinctions, and generally there is a gap in form only; the formally aspectually non-distinct form can occur in contexts appropriate for both aspects.

  The number of gaps is very small. E.g., ἔχω "have" has no perfective forms though it can occur in all syntactic contexts discussed above except the perfect. άριματιζω "to serve as" occurs only in the perfective past (Mackridge, 1985). A small number of defective paradigms is not unusual for inflection. The Greek situation can be contrasted with Slavic, where aspect is not inflectional: there are many gaps, and aspectual forms with unpredictable meanings exist as well. Such idiosyncratic meanings are nonexistent for aspect in Greek.
There is a considerable amount of suppletion between imperfective and perfective stems:

7. \( \text{vlepo} \) \( \delta-o \) "see"
   see-impfve see-pfve
   non-past non-past
   1 sg 1 sg

Suppletive relations are not problematical for inflectionally related forms since inflectionally related forms must be perceived as the same word. They are at least problematical for derivationally related words, since such words will in all likelihood not be recognized as related at all. There are some cases where the existence of some word (such as potable) is claimed to pre-empt the existence of a regularly derived word (drinkable). This situation might be described as suppletion in derivational morphology. I have grave reservations about this notion, since I suspect that speakers don't perceive these as related morphologically, but only semantically; and that fortuitously in the same way that sofa and couch are related.
I present below the active and passive conjugation of several verbs, with discussion following concerned with the linear order of elements expressing voice and aspect.
Table 3: ACTIVE CONJUGATION - Class I

Class I verb - regular: γράφω "I write"

<table>
<thead>
<tr>
<th>IMPERFECTIVE</th>
<th>PERFECTIVE</th>
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<tbody>
<tr>
<td><strong>Non-past:</strong></td>
<td></td>
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<tr>
<td>sg γράφω</td>
<td>γράψω</td>
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<tr>
<td>γράφεις</td>
<td>γράψεις</td>
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<tr>
<td>γράψει</td>
<td>γράψει</td>
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<tr>
<td>pl γράψεις</td>
<td>γράψεις</td>
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<tr>
<td>γράψει</td>
<td>γράψει</td>
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<td>1</td>
<td></td>
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<tr>
<td>γράψεις(e)</td>
<td>γράψεις</td>
</tr>
</tbody>
</table>

| **Past:**       |            |
| sg ἐγράφα        | ἐγράψα      |
| ἐγράφεσσα       | ἐγράψεσσα   |
| ἐγράφε  | ἐγράψε      |
| pl ἐγράψας      | ἐγράψας     |
| ἐγράψας      | ἐγράψας     |
| (ε) ἐγράψας(e) | (ε) ἐγράψας(e) |

<table>
<thead>
<tr>
<th><strong>Imperative:</strong></th>
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</thead>
<tbody>
<tr>
<td>sg γράφε</td>
</tr>
<tr>
<td>pl γράφεις/γράφτε</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Perfect:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

1. The final ε occurs optionally in third person plural forms of both voices, aspects, and tenses. Its presence clearly contributes to regularity in the plural; with ε on third person plural, all forms end in ε and antepenultimate stress falls on the last syllable of the root in all plural forms in the past. (Joseph, 1982)
Table 4: ACTIVE CONJUGATION - Class II

Class II verb - regular: ayapó "I love"

<table>
<thead>
<tr>
<th>IMPERFECTIVE</th>
<th>PERFECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-past:</strong></td>
<td></td>
</tr>
<tr>
<td>sg ayapó/áo</td>
<td>ayapíso</td>
</tr>
<tr>
<td>ayapás (ayapáis)</td>
<td>ayapísis</td>
</tr>
<tr>
<td>ayapá/ayapái</td>
<td>ayapísi</td>
</tr>
<tr>
<td>pl ayapáme</td>
<td>ayapísume</td>
</tr>
<tr>
<td>ayapáte</td>
<td>ayapísete</td>
</tr>
<tr>
<td>ayapáne</td>
<td>ayapísun(e)</td>
</tr>
<tr>
<td><strong>Past:</strong></td>
<td></td>
</tr>
<tr>
<td>sg ayapúsas</td>
<td>ayápisa</td>
</tr>
<tr>
<td>ayapúses</td>
<td>ayápises</td>
</tr>
<tr>
<td>ayapúse</td>
<td>ayápise</td>
</tr>
<tr>
<td>pl ayapúsame</td>
<td>ayapísame</td>
</tr>
<tr>
<td>ayapúsate</td>
<td>ayapísate</td>
</tr>
<tr>
<td>ayapúsan(e)</td>
<td>ayapísan(e)</td>
</tr>
<tr>
<td><strong>Imperative:</strong></td>
<td></td>
</tr>
<tr>
<td>sg ayápá</td>
<td>ayápise</td>
</tr>
<tr>
<td>pl ayapáte</td>
<td>ayápíste</td>
</tr>
<tr>
<td><strong>Perfect:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>éxo ayapísi</td>
</tr>
</tbody>
</table>

2. Second singular -aí̯s is much rarer than first singular ao or third singular ai.
Table 6: PASSIVE CONJUGATION - Class IIa

Class IIa verb - regular: aγαπώ "I love"

<table>
<thead>
<tr>
<th>IMPERFECTIVE</th>
<th>PERFECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-past:</strong></td>
<td></td>
</tr>
<tr>
<td>sg</td>
<td></td>
</tr>
<tr>
<td>aγαπήμεν</td>
<td>aγαπήν</td>
</tr>
<tr>
<td>aγαπήση</td>
<td>aγαπήση</td>
</tr>
<tr>
<td>aγαπήτε</td>
<td>aγαπήτε</td>
</tr>
<tr>
<td>pl</td>
<td></td>
</tr>
<tr>
<td>aγαπήσαστε</td>
<td>aγαπήσαστε</td>
</tr>
<tr>
<td>aγαπήσαστε</td>
<td>aγαπήσαστε</td>
</tr>
<tr>
<td>aγαπήσανε</td>
<td>aγαπήσανε</td>
</tr>
<tr>
<td>Past:</td>
<td></td>
</tr>
<tr>
<td>sg</td>
<td></td>
</tr>
<tr>
<td>aγαπήσαστε</td>
<td>aγαπήσαστε</td>
</tr>
<tr>
<td>aγαπήσαστε</td>
<td>aγαπήσαστε</td>
</tr>
<tr>
<td>aγαπήσανε</td>
<td>aγαπήσανε</td>
</tr>
<tr>
<td>pl</td>
<td></td>
</tr>
<tr>
<td>aγαπήσαστε</td>
<td>aγαπήσαστε</td>
</tr>
<tr>
<td>aγαπήσαστε</td>
<td>aγαπήσαστε</td>
</tr>
<tr>
<td>aγαπήσανε</td>
<td>aγαπήσανε</td>
</tr>
<tr>
<td>Imperative:</td>
<td></td>
</tr>
<tr>
<td>sg</td>
<td></td>
</tr>
<tr>
<td>aγαπά</td>
<td>aγαπά</td>
</tr>
<tr>
<td>aγαπέστε</td>
<td>aγαπέστε</td>
</tr>
<tr>
<td>Perfect:</td>
<td></td>
</tr>
<tr>
<td>éxο aγαπίση</td>
<td></td>
</tr>
</tbody>
</table>

B. Warburton's Analysis

An analysis in which aspect is taken as occurring closer to the root than voice is evident in Warburton (1970), presented here as an example of this type of analysis. She gives the following phrase-structure rules for the inflectional categories of Modern Greek verbs.
Table 5: PASSIVE CONJUGATION - Class I

Class I verb - regular: ὑράφωμε "I am written (about)"

IMPERFECTIVE           PERFECTIVE

Non-past:

<table>
<thead>
<tr>
<th>sg</th>
<th>ὑράφωμε</th>
<th>ὑραφτό</th>
</tr>
</thead>
<tbody>
<tr>
<td>ὑράφεσε</td>
<td>ὑραφτίς</td>
<td></td>
</tr>
<tr>
<td>ὑράφετε</td>
<td>ὑραφτή</td>
<td></td>
</tr>
<tr>
<td>pl</td>
<td>ὑράφομαστε</td>
<td>ὑραφτήμε</td>
</tr>
<tr>
<td>ὑράφεστε</td>
<td>ὑραφτήτε</td>
<td></td>
</tr>
<tr>
<td>ὑράφονδε</td>
<td>ὑραφτόν</td>
<td></td>
</tr>
</tbody>
</table>

Past:

<table>
<thead>
<tr>
<th>sg</th>
<th>ὑραφόμυν(a)</th>
<th>ὑραφτίκα</th>
</tr>
</thead>
<tbody>
<tr>
<td>ὑραφόσυν(a)</td>
<td>ὑραφτίκες</td>
<td></td>
</tr>
<tr>
<td>ὑραφόταν(e)</td>
<td>ὑραφτίκε</td>
<td></td>
</tr>
<tr>
<td>pl</td>
<td>ὑραφόμαστε/ ὑραφόσαστε</td>
<td>ὑραφτίκατε</td>
</tr>
<tr>
<td>ὑραφόμαστε/ ὑραφόσαστε</td>
<td>ὑραφτίκατε</td>
<td></td>
</tr>
<tr>
<td>ὑραφόνδαν(e)/ ὑραφόνδαν(e)/ ὑραφόνταν(e)/ ὑραφόνταν(e)</td>
<td>ὑραφτίκατε</td>
<td></td>
</tr>
</tbody>
</table>

Imperative:

<table>
<thead>
<tr>
<th>sg</th>
<th>ὑράφυ</th>
<th>ὑράψυ</th>
</tr>
</thead>
<tbody>
<tr>
<td>pl</td>
<td>ὑράφεστε</td>
<td>ὑραφτίτε</td>
</tr>
</tbody>
</table>

Perfect:

| ὑραφτέ | ὑραφτέ |

3. Again, the final vowels occur optionally.

4. Forms given in parentheses as alternates are less common in standard Modern Greek. Where an alternate is given without parentheses, I do not know which form is more commonly used.

5. Imperfective passive imperatives are extremely rare but theoretically possible. (Joseph and Philippaki-Warburton, 1987, p. 193)
Verb -> Stem + Thematic Vowel + Ending
Stem -> Base + Aspect
Base -> Root + Verbalizer
Ending -> Person + Q
Q -> Voice + Tense + Number

(Warburton, 1966, p. 138)

This structure is represented in a tree diagram below for clarity:

![Tree Diagram]

Figure 7: Warburton's Inflectional Phrase Structure Rules

Note that aspect is analyzed as part of the stem, immediately following the base (root), while voice is analyzed as part of the ending.

Warburton's treatment is couched within a modified generativist "Word and Paradigm" model of inflectional
morphology. She takes aspect and person as morphemes with prescribed order and phonological content, although they are modified by voice, tense, and number. Voice, tense, and number (Q) are claimed to be "features" rather than morphemes: that is, they appear as contexts for rules defining the expression of thematic vowel and person. Voice, tense, and number (Q) are unordered with respect to one another in Warburton's treatment, but note that they are ordered after the morpheme aspect.

She gives the morpheme for aspect (perfective only) as ə in the active, ə in the passive. Person markers are m - first person, s - second person, ə - third person. Morphophonemic rules determine:

- the thematic vowel based on person and number;

- alterations of the thematic vowel based on person, number, tense, voice, and aspect;

- alterations of the person marker based on number, tense, voice and aspect.

6. Warburton's treatment is, in the tradition of Generative Phonology, very abstract. I will not examine the details of her analysis, since my concern here is only with the ordering of the feature aspect closer to the stem than voice.
So, in essence, all the inflectional categories are relevant as context in determining the expression of all categories except aspect; voice is relevant as context in determining aspect marking. This sort of extensive interaction between inflectional categories is clearly required in any analysis of Greek verbal morphology, and I believe Warburton's analysis of the expression of person, number, and tense by means of the theme vowel and margin (Q) is substantially correct. I will maintain, however, that the location of voice in the margin (Q), following aspect, is unjustified.

An examination of which elements function as exponents of aspect and of voice demonstrates that Warburton's location of voice separate from , and particularly, after aspect, fails to recognize the complexity of the exponence of these categories in Greek verbs. Table 7 presents the exponents of aspect, noting what other categories are also expressed by each marker. Table 8 presents the exponents of voice.
Table 7: EXPONENCE OF ASPECT

<table>
<thead>
<tr>
<th>IMPERFECTIVE</th>
<th>PERFECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> -( n ) in a small class of verbs:</td>
<td>No -( s ), vowel change; often different vowels in active and passive:</td>
</tr>
<tr>
<td>( \text{šerno} ) &quot;I beat&quot;,</td>
<td>( \text{šir} ) - active,</td>
</tr>
<tr>
<td>( \text{ifénö} ) &quot;I weave&quot;.</td>
<td>( \text{šar} ) - passive,</td>
</tr>
<tr>
<td>-( n ) encodes aspect only.</td>
<td>but:</td>
</tr>
<tr>
<td>( \text{šan} ) - active,</td>
<td>( \text{ifa(n)} ) - passive.</td>
</tr>
<tr>
<td>( \text{šan} ) - active,</td>
<td>( \text{ifa(n)} ) - passive.</td>
</tr>
</tbody>
</table>

2. Non-contract verbs: 

\( \text{yrafo} \) "I write" 
\( \text{yrafome} \) - passive 
\( \text{yrafome} \) - passive 
\(-\( s \), -\( θ \): \( \text{yrap-s-γ-} \) - active \( \gamma\text{raf-t} \) - passive 
\(-\( s \), -\( θ \) encode both aspect and voice. 

3. Contract verbs (a): 
\( \text{ayapó} \) "I love" 
(and final stress, with endings as discussed in Chapter II). 
\( i-\( g \): \( \text{ayapi-s-θ-} \) - active; \( i-\): \( \text{ayapi-θ-} \) - passive. 
\(-\( is\) and -\( i-\( θ \) encode both aspect and voice. 

7. Recall the discussion of obstruent dissimilation in Chapter II.
Table 7 (Continued).

4. Contract verbs (b):
   yeló  "I laugh"
   (and final stress, per Chapter II);
   travó "I pull".

   a-s: velás-  - active;
   as-t: Yelas-t-  - passive.
   ik-s: travik-s-  - active;
   ix-t: travix-t-  - passive.

   V(C)-s- and Vs/C-t- encode both aspect and voice.

5. -us- in past active of contract verbs:
   ayan-ūsa, bor-ūsa.

   -us encodes aspect, voice, and tense.

6. -o- as vowel extension in past of passive verbs:
   yrafōmūn, aYapiōmūn.

   -o- encodes aspect, voice, and tense.

7. In active: Ending Sets I (o, is, etc...) and II (a, es, etc...).

   Active and passive endings: Set I, II (aspect and tense).

   In passive: Ending Sets III (ome, ese, etc...) and IV.

   Endings sets encode aspect, voice, tense, person, and number.

8. In general, if the vowel appearing after the root in perfective is not i and/or there is a consonant in the perfective other than , or in addition to, g, contract verbs follow this pattern.)
Table 8: EXPONENCE OF VOICE

**ACTIVE:**

1. \( s^- \) in perfective.  
   \( s^- \) encodes aspect and voice.

2. Endings Sets I, II in both aspects.

**PASSIVE:**

3. \( \theta^- \) in perfective.
   \( \theta^- \) encodes aspect and voice.

Ending Sets I, II in perfective;
Ending Sets III, IV in imperfective.
Ending sets encode aspect, voice, tense, person, and number.

- **us** after root in imperfective past.
  \( us^- \) encodes aspect, voice, and tense.

- **-ik** after perfective
  \( \theta^- \) in past.

  \( ik^- \) encodes aspect, voice, and tense.

Notice that neither the exponence of aspect nor that of voice can be completely expressed without reference to the other category. Thus the expression of perfective aspect is \( s^- \) in the active voice, but \( \theta^- \) in the passive voice, while the expression of passive voice involves \( \theta^- \) in the perfective aspect, but special sets of person/number endings (Sets III and IV) in the imperfective aspect. Given this situation, it is not
clear that aspect is marked closer to the stem than voice. Indeed, in a highly synthetic morphological system like that of Greek verbs, every category is cumulatively expressed, and it is therefore difficult, if not impossible, to assign a linear order to the categories expressed. This suggests not only that a process-based analysis of Greek verbal morphology is required, but also that any statement that the expression of aspect is linearly ordered before the expression of voice cannot be maintained.

One could still maintain that every element that occurs directly after the verb root is one of the exponents of aspect, though not necessarily of voice, as displayed below:
Table 9: MORPHOLOGICAL ELEMENTS DIRECTLY AFTER ROOT

<table>
<thead>
<tr>
<th>MARKER</th>
<th>CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. -n-</td>
<td>Imperfective aspect: ( \text{\textit{\textit{5er-n-o} - &quot;beat&quot;}} )</td>
</tr>
<tr>
<td></td>
<td>Aspect only.</td>
</tr>
<tr>
<td>2. -s-</td>
<td>Perfective active: ( \text{\textit{yrápso}} )</td>
</tr>
<tr>
<td></td>
<td>Perfective passive: ( \text{\textit{yraftó}} )</td>
</tr>
<tr>
<td>-(\theta)-</td>
<td>Aspect and voice.</td>
</tr>
<tr>
<td>3.a -i- in Class II verbs.</td>
<td>Perfective: ( \text{\textit{ayapi-s-o}} ) ( \text{\textit{ayapi-(\theta)-ó}} )</td>
</tr>
<tr>
<td>3.b -as-</td>
<td>Perfective: ( \text{\textit{velás-o}} ) ( \text{\textit{velas-t-ó}} )</td>
</tr>
<tr>
<td></td>
<td>( \text{\textit{travík-s-o}} ) ( \text{\textit{travíx-tó}} )</td>
</tr>
<tr>
<td></td>
<td>Aspect only.</td>
</tr>
</tbody>
</table>

9. I have grouped 3.a and 3.b together, because both involve some addition to the root in perfective forms, which is then followed by \( /s/ \). This implies an analysis in which \( i \) is the regular stem extension; -\( as \)-, -\( es \)-, -\( ik \)-, etc., are irregular and lexically specific. When \( s \)/ is added, a sequence \( s-s \) (in the active perfective; e.g., \( \text{\textit{velás-s-o}} \)) will degenerate via a phonological rule independently required (see Chapter II), while \( s-(velas-t-ó), velar -s-(travík-s-ó), velar -\(\theta\)-(travíx-t-ó) \) will appear as they do via the independently required obstruent dissimilation rule of Chapter II.
4. Alternating vowels in Ending Set III: Imperfective passive non-past:

- 1 sg -ome/-eme/-ume
- 2 sg -ese/-ese/-ase

etc...

1 sg yráfome
2 sg yráfese.

Aspect, voice, tense, 10
person, and number.

5. -o- in Ending Set IV: Imperfective passive past:

- -omun, -osun,
- etc...

yrafómun.

Aspect, voice and tense.

6. -us- in Class II verbs. Imperfective active past:

ayapúsa
bordúsa.

Aspect, voice and tense.

---

10. Vowel quality contributes to person and number marking in these forms:

<table>
<thead>
<tr>
<th>Class I</th>
<th>Class IIa</th>
<th>Class IIb</th>
</tr>
</thead>
<tbody>
<tr>
<td>(yráfome)</td>
<td>(aγapjéme)</td>
<td>(θiamáme)</td>
</tr>
<tr>
<td>sg pl</td>
<td>sg pl</td>
<td>sg pl</td>
</tr>
<tr>
<td>o- o-</td>
<td>e- e-</td>
<td>a-/u- u-</td>
</tr>
<tr>
<td>e- e-</td>
<td>e- e-</td>
<td>a- o-</td>
</tr>
<tr>
<td>e- o-</td>
<td>e- o-</td>
<td>a- u-</td>
</tr>
</tbody>
</table>

(Mackridge, 1985, p. 177-179)
The -n- marking imperfective in a small class of verbs (example 1., Table 9 above) and the -i-, -as-, -ik- extensions of contrast verbs in the perfective (examples 3.a and 3.b, Table 9) are not dependent on voice. On this basis, one might want to claim that aspect marking precedes voice marking. I suspect that some implicit analysis like this is the basis for the view generally displayed in teaching and reference grammars of Greek, which generally include rules for the formation of passive perfective forms based on active perfective forms, as exemplified in example 2. in Section VI.A of this Chapter.

Essentially, one's first impression on examining Greek verb paradigms is that passive forms are based on the corresponding active forms; this view can be maintained in view of the discussion of exponence above. In addition, a number of verbs with irregular active

11. Neither of these exponents of aspect are taken as marking aspect in Warburton, but as irregularities. The -n- (example 1., Table 9) is treated merely as part of the root, with the differences in perfective forms as irregular. The i vowel extension in the perfective aspect of contract verbs is determined via a phonological rule, while other extensions are treated as irregularities. Warburton, in fact, treats the $s/o$ marker of perfective as the only marker of aspect, which makes her contention that aspect precedes voice somewhat mysterious.
perfective forms display the same, or similar, irregularities in passive perfective forms:

Table 10: VERE PARADIGM/IRREGULARITIES

<table>
<thead>
<tr>
<th></th>
<th>IMPERFECTIVE ACTIVE</th>
<th>PERFECTIVE ACTIVE</th>
<th>PERFECTIVE PASSIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;madden&quot;</td>
<td>trelen-</td>
<td>trela-s</td>
<td>trela-</td>
</tr>
<tr>
<td>&quot;resurrect&quot;</td>
<td>anasten-</td>
<td>anasti-s</td>
<td>anasti-</td>
</tr>
<tr>
<td>&quot;pull&quot;</td>
<td>sern-</td>
<td>sir-</td>
<td>sir-</td>
</tr>
<tr>
<td>&quot;take&quot;</td>
<td>pern-</td>
<td>par-</td>
<td>par-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pir (past)</td>
<td></td>
</tr>
<tr>
<td>&quot;hit&quot;</td>
<td>val-</td>
<td>val-</td>
<td>vli-</td>
</tr>
<tr>
<td>&quot;see&quot;</td>
<td>vlep-</td>
<td>-</td>
<td>o-</td>
</tr>
<tr>
<td>&quot;eat&quot;</td>
<td>tro(γ)-</td>
<td>fay-</td>
<td>fay-o</td>
</tr>
</tbody>
</table>

These irregularities are stem irregularities, and they are in every case one of the exponents of perfective aspect for these verbs, and in some the only exponent of perfective aspect. Because aspect is an inflectional category, it again appears that voice must be as well, since the irregular active perfective form appears to be the basis for the also irregular passive perfective form:
irregularities
Imperfective -------------> Perfective
active stem (A) active stem

no irregularities

irregularities
Imperfective -------------> Perfective
passive stem (B) passive stem

Irregularities at B repeat irregularities at A.

Figure 8: RELATIONSHIP BETWEEN STEM IRREGULARITIES IN GREEK

The notion "stem" is a crucial one for the discussion which follows. Cross-linguistically, a common view takes stem to mean: root plus any material which can be followed by more than one affix (Matthews, 1974, pp. 73-75). Thus, the bare root is a stem:

8.a γράφ-ο "I write"
 active, impfve, non-past, 1 sg

8.b γράφ-is "write"
 active, impfve, non-past, 2 sg

The active perfective (root plus perfective marker) is a stem:
9.a \( \gamma\text{ráps-o} \) "write"
active, pfve, non-past, 1 sg

9.b. \( \gamma\text{ráps-is} \) write
active, pfve, non-past, 2 sg

9.c \( \alpha\text{yap-is-o} \) "love"
active, pfve, non-past, 1 sg

9.d \( \alpha\text{yap-is-is} \) "love"
active, pfve, non-past, 2 sg

Various theme V's plus root are stems:

10.a \( \alpha\text{yapjó-mun} \) "love"
passive, impfve, past, 1 sg

10.b \( \alpha\text{yapjó-sun} \) "love"
passive, impfve, past, 2 sg

10.c \( \gamma\text{rafó-mun} \) "write"
passive, impfve, past, 1 sg

10.d \( \gamma\text{rafó-sun} \) "write"
passive, impfve, past, 2 sg

The passive perfective is a stem:

11.a \( \gamma\text{raf-t-ó} \) "write"
passive, pfve, non-past, 1 sg

11.b \( \gamma\text{raf-t-fs} \) "write"
passive, pfve, non-past, 2 sg

So is the past passive perfective:
12.a ϝράφ-τ-ικ-α "be written"  
     passive, pfve, past, 1 sg

12.b ϝράφ-τ-ικ-ες "be written"  
     passive, pfve, past, 2 sg

The general notion in studies of Greek verbal morphology and in traditional grammars seems to be that a stem is the root plus any elements that occur up to and including the aspect markers -s- and -θ- (that is, excluding -ικ- and endings) (Mackridge, 1985; Householder, Koutsoudas, and Kazazis, 1964):

Table 11: TRADITIONAL STEMS

Class I verbs:
 ϝράφ- ϝράψ- ϝραφ- "write"

Class II verbs:
 ϊάπ- ϊάπις- ϊαπιθ- "love"
 ϊιπ- ϊιπις- ϊιπιθ- "lose, miss"

Irregular verbs:
 ϋιλ- ϋιλις- ϋιλιθ- "hit"
 ϋερν- ϋερ- ϋεριθ- "beat"
I would like here to suggest a differently defined notion of stem that will distinguish sets of forms similar to those picked out by the traditional system and that bears on the question of the ordering of the categories aspect and voice. This notion is based on the distinction between regular and irregular expression of morphological categories.

As pointed out above, there are many lexical irregularities in Greek verb forms. However, there are some elements in the structure of verbs that show almost no irregularities. Ending Sets I, II, III, IV (as in this Chapter and Chapter II) which are primarily exponents of person, number, and tense, but which also contribute to the expression of voice and aspect, are of this type. Thus every active verb form has endings from Ending Sets I and II (depending on conjugation class), including irregular active perfective forms. And every passive imperfective verb form has endings from Sets III (depending on conjugation class) and IV, while every passive perfective form has endings from Set I (conjugation Class IIb) and II. There are no irregularities in these ending sets. The -ik- of passive perfective past forms is also unexceptional, as

12. There are a very few cases like sinévika, sinévi, both passive perfective past, first singular, where sinévi represents a Katharevousa variant.
is the -us- of active imperfective past forms for contract verbs.

This suggests a principled distinction between the class of forms designated as stems in traditional treatments and other forms like passive past perfective forms including the element -ik-, which can be followed by all members of Ending Set II but which show no lexical idiosyncrasies.

The forms counted as stems by this criterion are listed below, along with the traditional name, a brief description of occurrence in the verbal system of Greek and a new name (and number) based primarily on the only common verb (maγένο "I learn") I know of which formally distinguishes four stems. The order in which these stems are presented, and the numbers assigned to them, follows traditional usage. I in no way intend to imply that this order is the order of derivation, or even that there is an order of derivations.

Stem 0 (maγ-):

Traditionally termed bare root (maγ).  

Stem 1 (maγέν-):

Traditionally termed the imperfective stem, active imperfective stem, or the present stem. This form occurs in both passive and active imperfective forms. In many verbs
Stem 1 is equivalent to a bare root; in others—of which *maθéno* is one—Stem 1 is the bare root plus a verb-forming suffix: *en-*, *ev-*, *iz-*, etc.

Stem 2 (* maθ- *):

Close to what is traditionally called the perfective stem, the active perfective stem, or the aorist stem. It occurs in all active perfective forms of verbs, and in the perfective imperative of passive verbs.

In regular verbs of Class I (stem stress) Stem 2 is Stem 1 plus *-s*-. In regular verbs of Class II (ending stress) Stem 2 equals Stem 1 plus *-i-*. In traditional terminology (e.g., in Sotiropoulos, 1972) the perfective/aorist stem is this form minus the perfective *s*. Thus, what is traditionally called the aorist stem is not precisely equivalent to my notion here, which is simply whatever form appears in active perfective verbs, preceding Ending Sets I and II. So some Stem 2 forms include the perfective *s* (so-called sigmatic perfectives); others don't (so called asigmatic perfectives). Stem 3 (below) will include a number of forms that are equivalent to some traditional perfective/aorist stems—in those cases where Stem 2 minus *s* is equivalent to that form occurring in passive
perfectives preceding-0: Irregularities abound in the relationship between Stem 1 and Stem 2: ranging from internal vowel changes (Stem 1, ërern-; Stem 2, ërir- "beat"); final consonant changes (Stem 1 vaz-; Stem 2, val- "put"); Stem 2 extensions of Class II Stem 1 that are not -i-, (Stem 1 bor-; Stem 2 bor-es- "be able"; Stem 1 trav-; Stem 2 trav-iks- "pull"); to suppletion (Stem 1 tro(y)-; Stem 2 fay- "eat").

13 Stem 3 (maθeB-):

Primarily equivalent to the passive perfective stem in traditional terminology and partly equivalent to the aorist stem, as discussed above. This stem is whatever occurs before the -0- (in present tense, -0-ik- in past tense) and Ending Sets I and II of passive perfective verb forms. In regular verbs of Class I, Stem 3 is identical to Stem 1. In regular verbs of Class II, Stem 3 equals Stem 1 plus i. Again, irregularities are common, including internal vowel changes (Stem 1 ërern-; Stem 2

13. I write B here to indicate an underspecified labial consonant (in current terminology), whose voicing, manner of articulation, etc., are determined by the morphophonemic rules discussed in Chapter II.
air-; Stem 3 nar- "beat") vowel extensions not present in Stem 2 (Stem 1 troγ-) ; Stem 2 fay-; Stem 3 fayo- "eat"), other (Stem 1 val- ; Stem 2 val-; Stem 3 vli- "hit"). Suppletion does not occur.

14

Stem 3a (ma@eB-) :

This stem has no traditional name. It occurs before the -ik- plus Ending Set II in passive perfective past forms, and before ending Set Ib (end stress) of the passive perfective non-past. Stem 3a is equivalent to Stem 3 plus -a-, when -a- occurs in these forms, or to Stem 3 when -a- does not occur. Thus in kâ-ik-a "I got burnt", pniy-ik-a "I got drowned", Stem 3a is equivalent to Stem 3.

Stem 3a is given as a subtype of Stem 3 here due to the fact that the perfective passive -a- rarely if ever occurs in derived forms (see section VI.C). The occurrence of these stems, in particular Stem 2 and Stem 3, in derived words will be discussed in the next section. Stem 3a is included here because in a few verbs

14. As above, B indicates some underspecified labial consonant.
-Ø- is exceptionally absent, thus this stem type must be included by the defining feature presented above. Note, however, that the nature of irregularity in this stem type is very limited, restricted to absence of -Ø- only, while irregularity in Stems 2 and 3 is far more varied. For Stem 2 irregularity includes suppletion, internal V change, final C change (discussed above), as well as conjugation class switches (e.g., ophage "want": Stem 1 = Øel- [Class I], Stem 2 = Øelis- [Class II]). Stem 3 displays irregular V changes, changes in syllabicity (Stem 2 val-; Stem 3 vli- "hit") and conjugation class switches (Stem 2 val-[Class I], Stem 3 vli- [Class II] "hit").

Stem 4 (maØi-):

In traditional terminology, the passive or past participle stem. This stem occurs in the passive participle forms of verbs, before -menos, when such forms exist (see Chapters III, IV). In most verbs Stem 4 is equivalent to Stem 3, subject to morphophonemic rules; in a few Stem 4 differs from Stem 3, generally in terms of 15 different final elements.

15. It might be claimed that maØi- in maØimenos -"learned" is not a stem, but that i-menos is an
C. Verb Stems in Derived Words

Stems 0, 2, 3, 4 occur as the base to which derivational suffixes are attached. Since cases where these stems are not identical are common in Greek, it is possible (for some verbs) to determine which stem is the base for some derived words. I have found no cases of derivation from Stem 1 where this differs from Stem 0, that is, where Stem 1 = Stem 0 plus verbalizing suffix, or in which Stem 3a (with -∅-) appears in a derived word. Neither have I found clear instances of derivation in which Stem 2 of a verb with the 5ern-6ir-5ar alternation is the base for derivation.

There are a number of difficulties in some cases in the analysis of Greek derivational morphology. For many derivational suffixes, there appears to be no rule of the allomorph of -menos. However, similar allomorphy would be required for other derivational affixes: e.g., -ma -ima, -tis -itis in e.g., má6ima "lesson" or má6itis "student", so this solution strikes me as synchronically impractical.

16. sta0-mós, "station, stop", appears to come from stéko/stékome "stand". Stem 0 = 1 = stek; Stem 3 = sta; Stem 3a = sta0. (No formally active perfective forms.) This is the only word I know of that might be analyzed as based on Stem 3a; however, Brian Joseph [personal communication] has suggested that -mós is the suffix here.

17. Kourmoules (1967) lists spírama which appears to come from Stem 2 (spir-) of spérho "I sow". However, I have been unable to discover the meaning of spírama.
form: "attach suffix S to Stem Y"; rather, for some verbs, the pattern is for one (or two) stems to appear in derived words, while the others don't appear at all:

13. maθéno "learn"
   Stem 0 = maθ-   Stem 3 = maθeB-
   Stem 1 = maθen- Stem 3a = maθeB-θ-
   Stem 2 = maθ-   Stem 4 = maθi-

Derivatives are all of the form Stem 4 plus affix:

14.a maθi-ma "lesson"
14.b maθi-tis "student"
14.c maθi-sis "learning"

15. andikatasténo "substitute, restore"
   Stem 0 = andikatast-
   Stem 1 = andikatasten-
   Stem 2 = andikatastis-
   Stem 3 = andikatasta-
   Stem 3a = andikatasta-θ-
   Stem 4 = andikatasta-

Derivatives are all from Stem 3 or 4:

18. andikatast- is the base root in terms of the derivation of verb forms, and in terms of being the smallest root available. Note that it does not occur as the stem in any verb forms.
Another difficulty in analysis is that suffixes similar or identical in form or in meaning can apparently be attached to stems of different word classes. Thus, Sotiropoulos (1972) gives a suffix -i1a that attaches to nouns to give nouns meaning "smell of N" (suffix 145.3, p. 100): e.g., trávos "goat, tráv-i1a "smell of goats", but also a suffix -i1a that attaches to adjectives to give nouns meaning "smell of ADJ": e.g., ksinds "sour", ksiníla "smell of sourness" (suffix 192, p. 111), and a suffix -i1a that attaches to verbs to give nouns meaning "result of action" according to Sotiropoulos, but kaíla (from Stem 3 of kéo "I burn"), meaning "feel or smell of burning". He gives the suffix -istria as attaching to nouns to give nouns meaning "female agent" (suffix 143.2, p. 98): e.g., ánöropos "man, human", ánöropístria "female humanist", and the suffix -tria which he claims attaches to verbs (Stem 2) to give female agents: e.g., trávupó "I sing", trávupístria "female singer" (from Stem 2, but also
travúōjī "song"), spuo̱azo "I study", spuo̱ástria "female student" (from Stem 2), but also spuo̱jī "study".

I later suggest that cases like this are an indication that stems rather than words are the basis for much derivation in Greek, as well as what I call root based derivation (i.e., produce words like spuo̱jī -N "study", from a root which also is the input to a suffixation rule that gives the verb spuo̱azo -V "study"). This type of analysis resolves the difficulty presented by cases, like those above, in which the same suffix (in both form and meaning) apparently applies to words of different part-of-speech classes.

A further problem involves the boundary between stem and affix. This difficulty is also not appropriately addressed in Sotiropoulos. Since Stem 2 frequently ends in -s-, and a number of suffixes might be analyzed as beginning with s, great care is needed to determine where the s belongs. Sotiropoulos's strategy seems to be to take whichever verb stem most resembles in spelling the form in the noun as the base, regardless of the application of morphophonemic rules, in particular, the obstruent dissimilation rule and degemination of /ss/. Thus he treats the suffix -simo as attaching to Stem 2 on the basis of such forms as:
16. **tréxo** "I run"
   Stem 0,1 = trex-
   Stem 2 = trek-s-
   Stem 3 = ttrex-
   Stem 3a = ttrex-0-

   **tréksimo** "running"

   even though for this verb, any stem would give **tréksimo**
   after application of obstruent dissimilation and/or s
degemination. He fails to examine forms like the
following, where Stems 0/1, 2, and 3/4 are distinguished,
and which indicate that Stem 3/4 is the appropriate basis
for attachment of -simo [more discussion later in
Chapter VI]:

17.a **déerno** "I beat"
   Stem 0/1 = ðern-
   Stem 2 = ðir-
   Stem 3/4 = ðar-

   **vársimo** "beating"

17.b **spéerno** "I sow"
   Stem 1 = spern-
   Stem 2 = spir-
   Stem 3/4 = spar-

   **spár-simo** "sowing"

My strategy will be to treat suffixes as beginning
with s when s occurs in every derived noun, even those
whose Stem 2 is asigmatic, and to examine particularly
those verbs whose stems differ formally in ways in addition to or instead of the final -s- of regular Stem 2.

I will not attempt an extensive analysis of these facts. My point is simply that at least Stems 0, 2, and 3 must be available in the lexicon for the application of derivational processes, as indicated by derived forms based on verbs whose different stems are distinguishable. Consequently, even if aspect is taken as preceding expression of voice in verbs, the appearance that passive perfective forms are based on active perfective forms will not constitute an acceptable argument for passive as an inflectional category, since Stem 2 (active perfective stem) is available in the lexicon — for derivational processes or for the formation of passive perfective forms. Thus, the indications discussed in preceding chapters that passive is not a syntactic phenomenon are not contradicted by patterns of verb inflection in Greek. In the following lists I present derived words from verbs where Stem 2 and Stem 3 are distinct.

My claim is that these stems are in the lexicon unparsed. Stems are unspecified as to e.g., aspect, so that Stem 2 is used for the perfective active of verbs, but it is not itself [+pfve]. They are also quite possibly unspecified as to part of speech, so that fav-
"food" is based on Stem 2 fay- of the verb trō(γ)-ō "I eat", but it is not necessary in the view being developed here to take fay- as derived from the verb "eat". Instead, I suggest that stems are associated in the lexicon with underspecified lexical items (roots) and are available in many cases to derivational processes, inflectional processes, and to another class of word formation processes which form basic lexemes (those not derived from other words, but from roots).

ROOTS
↓
Stem formation
↓
ROOTS + STEMS
↓
LEXEMES

Figure 9: DERIVATIONAL PROCESSES
List 1: STEM 2 IN DERIVED WORDS

a. tró(γ)o "I eat"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>tró(γ)-</td>
<td>fay-</td>
<td>fayo-</td>
</tr>
<tr>
<td>féfaya</td>
<td>fayo-0-ika</td>
<td></td>
</tr>
<tr>
<td>active</td>
<td>passive</td>
<td></td>
</tr>
<tr>
<td>pfve past</td>
<td>pfve past</td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
<td></td>
</tr>
</tbody>
</table>

fay-úra - N "itchiness"
fay-ás - N "glutton"
fay-í - N "food"

b. kéo "I burn"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>ke(γ)-</td>
<td>kap-s-</td>
<td>ka-</td>
</tr>
<tr>
<td>écapsa</td>
<td>ká-ik-a</td>
<td></td>
</tr>
<tr>
<td>active</td>
<td>passive</td>
<td></td>
</tr>
<tr>
<td>pfve past</td>
<td>pfve past</td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
<td></td>
</tr>
</tbody>
</table>

kaps-fla - N "burning"
káps-simo - N "burning"
List 1 (continued),

c. **ekplistó**  "I surprise"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ekplis</strong>-</td>
<td><strong>ekplik-s</strong>-</td>
<td><strong>ekpla-</strong></td>
</tr>
<tr>
<td><strong>ekplik-s-a</strong></td>
<td><strong>ekseplá-θ-ika</strong></td>
<td></td>
</tr>
<tr>
<td>active</td>
<td>passive</td>
<td></td>
</tr>
<tr>
<td>pfve past</td>
<td>pfve past</td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
<td></td>
</tr>
</tbody>
</table>

**ekplik-s-sis** - N "surprise"

**ekplik-s-tikós** - N "surprising"

d. **paθéno**  "I suffer"

<table>
<thead>
<tr>
<th>Stem 0</th>
<th>Stem 1</th>
<th>Stem 2</th>
<th>Stem 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>paθ-</strong></td>
<td><strong>paθen-</strong></td>
<td><strong>paθ-</strong></td>
<td><strong>paθi-</strong></td>
</tr>
<tr>
<td><strong>épaθ-a</strong></td>
<td><strong>paθi-méno</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>active</td>
<td>passive ppl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pfve past</td>
<td>nom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>masc sg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**paθ-os** - N "illness, passion"

19. The prefix appears as **eks-** due to the presence of internal augment **e-**.


21. It is not clear what Stem 3 of this irregular verb should be, since there are no passive verb forms.
List 1 (continued),

e. **provlépo**  "I foresee"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>pro-vlep-</td>
<td>pro-vlep-s-</td>
<td>provlef-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>próvlepsa</td>
<td>pro-léta</td>
<td>provléftika</td>
</tr>
<tr>
<td></td>
<td>active</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pfve past</td>
<td>l sg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| pro-lé-o-pi-ó  - V  | "I notify in advance"  
| foresee do |              |                   |
| (compound verb) |              |                   |

f. **févyo**  "I leave, depart"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>fevy-</td>
<td>fiy-</td>
<td>------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>éfiyá</td>
<td>active</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pfve past</td>
<td>l sg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fiy-í</td>
<td>- N</td>
<td>&quot;flight&quot;</td>
</tr>
<tr>
<td>fiy-ás</td>
<td>- N</td>
<td>&quot;fugitive&quot;</td>
</tr>
<tr>
<td>fiy-ó-maxos</td>
<td>- ADJ</td>
<td>&quot;unwilling to fight&quot;</td>
</tr>
<tr>
<td>cf. máxi</td>
<td>-</td>
<td>&quot;battle&quot;</td>
</tr>
<tr>
<td>fiy-ó-ponos</td>
<td>- ADJ</td>
<td>&quot;unwilling to work&quot;</td>
</tr>
<tr>
<td>cf. pónos</td>
<td>-</td>
<td>&quot;pain&quot;</td>
</tr>
<tr>
<td>fiy-ó-stratos</td>
<td>- ADJ</td>
<td>&quot;shirking military service&quot;</td>
</tr>
<tr>
<td>cf. stratós</td>
<td>-</td>
<td>&quot;army&quot;</td>
</tr>
</tbody>
</table>

---

22. Again, since there are no passive verb or participle forms, and since févyo is irregular, it is not clear what is expected as Stem 3 or 4.
List 2: STEM 3 IN DERIVED WORDS

a. **bérho** "I beat"

<table>
<thead>
<tr>
<th>Stem 0</th>
<th>Stem 1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23/4</td>
</tr>
<tr>
<td>ber-</td>
<td>bern-</td>
<td>bir-</td>
<td>bar-</td>
</tr>
<tr>
<td>épíra</td>
<td>bár-θ-ika</td>
<td></td>
<td></td>
</tr>
<tr>
<td>active</td>
<td>passive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pív past</td>
<td>pív past</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **bár-simo** - N "beating"
- **bár-tfs** - N "beater, churn"
- **bár-mós** - N "beating"

b. **válo** "I hit, fire on"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>val-</td>
<td>val-</td>
<td>vli-</td>
</tr>
<tr>
<td>épíala</td>
<td>vlí-θ-ika</td>
<td></td>
</tr>
<tr>
<td>active</td>
<td>passive</td>
<td></td>
</tr>
<tr>
<td>pív past</td>
<td>pív past</td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
<td></td>
</tr>
</tbody>
</table>

- **vlí-ma** - N "missile"
- **vli-tiki** - N "ballistics"

23. I take the n of Stem 1 to be an imperfective marker, hence not part of Stem 0 (bare root).
List 2 (continued),

c. vrísko "I find"
efe-vrísko "I invent"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>-vrisk-</td>
<td>-vr-</td>
<td>-vre-</td>
</tr>
<tr>
<td>vrík-a</td>
<td>vré-θ-ik-a</td>
<td></td>
</tr>
<tr>
<td>active</td>
<td>passive</td>
<td></td>
</tr>
<tr>
<td>pfve past</td>
<td>pfve past</td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
<td></td>
</tr>
</tbody>
</table>

vré-simo - N "thing found"

vre-síoi - N "thing found"

vre-tikía - N "reward for finding"

efe-vre-sís - N "invention"

efe-vre-tikós - ADJ "inventive"

d. stél-no "I send"

<table>
<thead>
<tr>
<th>Stem 0</th>
<th>Stem 1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>stel-</td>
<td>stein-</td>
<td>stil-</td>
<td>stal-</td>
</tr>
<tr>
<td>éstila</td>
<td>stál-θ-ika</td>
<td></td>
<td></td>
</tr>
<tr>
<td>active</td>
<td>passive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pfve past</td>
<td>pfve past</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
<td></td>
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</tr>
</tbody>
</table>

stál-simo - N "sending, message"

24. vrísko undergoes a conjugation class switch from active in imperfective forms to passive in perfective forms (see section VI.D).

25. The θ in this form is mysterious. Sotiropoulos gives this as -jäi, though he gives no evidence that θ is not part of the suffix. I can find no cases which determine whether θ is part of the suffix or not.
List 2 (continued),

e. **spérno**  "I sow"

<table>
<thead>
<tr>
<th>Stem 0</th>
<th>Stem 1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>sper-</td>
<td>spern-</td>
<td>spir-</td>
<td>spar-</td>
</tr>
</tbody>
</table>

|  | active | passive |
|  | pfve past | pfve past |
|  | l sg | l sg |

**spar-tós** - ADJ "sown"

**spár-simo** - N "sowing"

f. **ké(y)o**  "I burn"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>ke(y)-</td>
<td>kap-s-</td>
<td>ka-</td>
</tr>
</tbody>
</table>

|  | active | passive |
|  | pfve past | pfve past |
|  | l sg | l sg |

**ká-i-la** - N "smell or feeling of burning"

**ka-úra** - N "burning sensation"
List 2 (continued),

g.  (andi)-katasténo  "I substitute"
     (apo)-katasténo  "I restore"

<table>
<thead>
<tr>
<th>Stem 0</th>
<th>Stem 1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>-katast-</td>
<td>-katasten-</td>
<td>-katastis-</td>
<td>-katasta-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>active</th>
<th>passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>pfve past</td>
<td>pfve past</td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
</tr>
</tbody>
</table>

antikatástisa - N  "substitute"
antikatastá-sis - N  "replacement"
apokatastá-sis - N  "restoration"
antikatasta-tos - ADJ  "replaceable"

h.  lavéno  "I receive"
     epana-lavéno  "I resume, repeat"

<table>
<thead>
<tr>
<th>Stem 0</th>
<th>Stem 1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
</table>
| -lav- | -laven- | -lav- | -liB-

<table>
<thead>
<tr>
<th>active</th>
<th>passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>pfve past</td>
<td>pfve past</td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
</tr>
</tbody>
</table>

epanaltp-sis - N  "repetition"
List 2 (continued),

i. katanémo  "I distribute"

   Stem 0/1  Stem 2  Stem 3/4
   katanem-  katanim-  katanemi-

   katénima  katanem'-θ-ik-a
   active  passive
   pfve past  pfve past
   1 sg  1 sg

   katanem-tís - N "distributor"

j. tíno  "I stretch, lead"

   Stem 0  Stem 2  Stem 3/4
   tin-  tin-  ta-

   étina  tá-θ-ik-a
   active  passive
   pfve past  pfve past
   1 sg  1 sg

   tá-sis - N "stretching, tendency"

k. tro(γ)-o  "I eat"

   Stem 0/1  Stem 2  Stem 3/4
   tro(γ)-  fa(γ)-  favo-

   éfava  favó-θ-ika
   active  passive
   pfve past  pfve past
   1 sg  1 sg

   favó-simos - ADJ "eatable"

   favo-ma  - N "corrosion, wrangling"

---

26. The appearance of /e/ rather than /a/ represents what is generally termed "internal augment" and which occurs in learned items as one of the markers of past tense.
List 2 (continued),

1. **f(θ)íro**  "I damage, spoil"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
<th>Stem 3/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>fοίρ-</td>
<td>fοίρ-</td>
<td>fοιρ-</td>
</tr>
<tr>
<td>έφοίρα</td>
<td>έφοιρα</td>
<td>fοιρ-ίκα</td>
</tr>
</tbody>
</table>

**fοιρ-tός** - ADJ  "perishable"

m. **kaló**  "I call, summon"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
<th>Stem 3</th>
<th>Stem 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>kal-</td>
<td>kales-</td>
<td>kli-</td>
<td>kales-kekliś</td>
</tr>
<tr>
<td>Κάλεσα</td>
<td>klí-θ-ικα</td>
<td>keklis-méνος</td>
<td></td>
</tr>
<tr>
<td>active</td>
<td>passive</td>
<td>passive ppl</td>
<td></td>
</tr>
<tr>
<td>pφve</td>
<td>pφve</td>
<td>nom</td>
<td></td>
</tr>
<tr>
<td>past</td>
<td>past</td>
<td>masc sg</td>
<td></td>
</tr>
<tr>
<td>l sg</td>
<td>l sg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**klí-sis** - N  "summons, call"

**klí-tikí** - ADJ  "vocative (gram.)"

**klí-tiras** - N  "bailiff, usher"

---

27. Reduplicated participles like this are retentions of Ancient Greek perfect participles.
List 3: DERIVATIVES WITH STEM 4

(Few cases exist, many where the participle is the only morphologically passive form.)

a. ḳáno "do, make"

Stem 0/1/2 Stem 3 Stem 4
kan-/kam- ---- kamo-

kamoménos
passive ppl
masc nom sg

kámo-ma - N "ripening"

b. katevénο "go down"

Stem 0 Stem 1
katev- kateven-

28 29

Stem 2 Stem 3 Stem 4
katev- ---- katevas-

katév-ik-a katevaz-ménos
active pfve
past 1 sg

katévasma - N "descent"

katevas-iá - N "flood"

28. This verb, and others, are split in conjugation between active and passive: generally active in one aspect and passive in the other. Katevénο is active in the imperfective and passive in the perfective (katév-ık-a, perfective, past, first singular; katev-ó, perfective, non-past, first singular--note stress as in passive). This phenomenon will be discussed further below.

29. There is also a verb katevázo "put down". Given some regularity in the semantic relationship between -vazo and -veno verbs, it is difficult to be sure that katevázo is not the source of these N's, in which case all stems are identical, and these are not examples of derived nouns with Stem 4.
c. **maθéno** "learn"

<table>
<thead>
<tr>
<th>Stem 0/2</th>
<th>Stem 1</th>
<th>Stem 3</th>
<th>Stem 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>maθ-</td>
<td>maθen</td>
<td>maθεθ-</td>
<td>maθi-</td>
</tr>
<tr>
<td>émaθa</td>
<td>maθεθ-t-ik-a</td>
<td>maθi-ménos</td>
<td></td>
</tr>
</tbody>
</table>

- Active pfve
- Passive pfve
- Passive ppl
- Past 1 sg
- Past 1 sg
- Masculine nominative singular

- **maθi-tís** - N "male student"
- **maθi-ma** - N "lesson"
- **maθi-sis** - N "learning"
- **maθi-tikós** - ADJ "studious"

d. **paθéno** "suffer"

<table>
<thead>
<tr>
<th>Stem 0/2</th>
<th>Stem 1</th>
<th>Stem 3</th>
<th>Stem 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>paθ-</td>
<td>paθéθ-</td>
<td>----</td>
<td>paθi-</td>
</tr>
<tr>
<td>paθiménos</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **paθi-ma** - N "misfortune"
- **paθi-sis** - N "malady"
- **paθi-tikós** - ADJ "passive (gram.), passionate"

---

30. See footnote 15. on ancient regular patterns for participles of verbs of this type. Nonetheless, the point that formally different stems appear in derived words stands.
Since passive participles can be argued to be themselves derived adjectives (Lascaratou and Warburton, 1983, and Chapter III) it is perhaps somewhat surprising that passive participles stems (Stem 4) appear in such derivatives as those with -tis, -sis, -tikos, which are suffixes attached by deverbal rules, as in previous examples, but the participle stem is an adjective stem:

18.a ekpliktikós "surprising"
    ékpliksis "surprise"
    from: Stem 2 where Stem 3/4
    ekplik-s ekpla-

18.b tá-sis "stretching"
    from: Stem 3/4 where Stem 1/2
    tin-

However, the derivatives from Stem 4 (maθi-) of maθéno "learn" are the only cases I can discover where Stem 4 is clearly different than both Stem 2 (maθ-) and Stem 3 (maθeB-). In other cases, it is not possible to determine Stem 3 (the active verb has no passive), or Stem 4 is the same, subject to morphophonemic rules, as either Stem 2:
19. kaló "I call"

Stem 2 = kales-(kálesa)
Stem 3 = kli-/kales-
(klí-θ-ik-a, kalés-t-ik-a)
Stem 4 = kekliz-/kalez-

derivative kálezma "invited person"

or Stem 3:

20. ñérno-o - "I beat"

Stem 1 = ñer-n-
Stem 2 = ñir-
Stem 3 = ñar-
Stem 4 = ñar-

In the cases I have found where Stem 4 is the base for derived words, and where no Stem 3 exists, the form of Stem 4 appears often to be the expected Stem 2 (as opposed to the actually occurring Stem 2). E.g., katéveno "descend", could well have ketevas- as Stem 2 (according to one frequent pattern for verbs in en-; different than maθéno, paθéno); instead katev- occurs, but katevaz- occurs as Stem 4. Note that there are few cases where Stem 3 does not equal Stem 4, so that the obvious analysis is that adjectives in -menos are

31. This might also represent interference from -vazo verbs, see footnote 29, page 211. Other patterns are perfective with is- or as-.
generally derived from Stem 3, possibly occasionally from Stem 2, and occasionally are synchronically irregular.

D. Patterns of Derivation

My claim here is that Stems 0, 2, and 3 are available in the lexicon. This implies that stem formation rules are rules of the lexicon applying to roots. Such rules are not specifically derivational or inflectional, since their output will be used both as the input to derivational processes (e.g., N formation), and to inflectional processes (e.g., the expression of aspect).

```
ROOTS
  ↓
Stem formation rules
  ↓
ROOTS + STEMS
  ↓
Inflection  Derivation
```

Figure 10: THE POSITION OF STEM FORMATION RULES IN THE LEXICON

32. Recall the discussion of participles form active verbs in Chapter III, where it is suggested that such participles occur when the subject of the active verb is a thematic patient (as in Bresnan, 1982).
A rough sketch of stem formation and its interaction with derivational and inflectional rules follows.

**Stem formation rules - regular verbs:**

Class I verbs (stem stress, consonant final):

* e.g., *yráfo* "I write"

<table>
<thead>
<tr>
<th>Stem 0=</th>
<th>bare root</th>
<th><em>yraf-</em> &quot;write&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem 1=</td>
<td>Stem 0 + (verbalizer suffix)</td>
<td>-en- an</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-ev-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-iz-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-jaz-</td>
</tr>
<tr>
<td>Stem 3=</td>
<td>Stem 1</td>
<td><em>yraf-</em></td>
</tr>
<tr>
<td>Stem 2=</td>
<td>Stem 3 + s</td>
<td><em>yrap-s-</em></td>
</tr>
</tbody>
</table>
Class II verbs (ending stress, V final):

\[ \text{e.g., ayapó "I love"} \]

<table>
<thead>
<tr>
<th>Stem 0</th>
<th>Bare root</th>
<th>ayap- &quot;love&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem 1</td>
<td>Stem 0</td>
<td></td>
</tr>
<tr>
<td>[Stem 1a= ayapi- (e.g. ayapjéme)]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stem 3</td>
<td>Stem 1 + i</td>
<td>ayapi-</td>
</tr>
<tr>
<td>Stem 2</td>
<td>Stem 3 + s</td>
<td>ayapi-s-</td>
</tr>
</tbody>
</table>

Exceptions and conjugation classes:

1. Verbs with Stem 1 in -en have Stem 3 in -i-, or -a- and Stem 2 in -is- or -as-.

One possible analysis for these verbs is that they display a conjugation class switch, from Class I in the stems used for imperfective aspect, to Class II in stems used for perfective aspect:

<table>
<thead>
<tr>
<th>21. Stem 1</th>
<th>Stem 3</th>
<th>Stem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>arost-en</td>
<td>arosti-</td>
<td>arosti-s-</td>
</tr>
<tr>
<td>(aróstena)</td>
<td>(aróst0-ik-a)</td>
<td>(aróst-isa)</td>
</tr>
<tr>
<td>active</td>
<td>passive pfve</td>
<td>active pfve</td>
</tr>
<tr>
<td>impfve</td>
<td>past 1 sg</td>
<td>past 1 sg</td>
</tr>
<tr>
<td>past 1 sg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

33. This stem occurs in the passive imperfective of Class IIa verbs only (see Chapter II), and is treated as an allostem in e.g. Daltas (1979).
Irregular verbs with en- seem to display other conjugation class switches. paθéno "I suffer" has Stem 1 with a verbalizer suffix, but Stem 2 equivalent to Stem 0 (bare root). If verbs with suffix, and verbs without are different classes, as seems sensible, then this too is a class switch. paθéno has no passive, but the passive participle is paθi-ménos, suggesting a class switch again to Class II (like ayap-ó, ayap-i-ménos). Maθéno "I learn" has Stem 2 = Stem 0 (bare root) like paθéno, but Stem 3 = maθeB- as if Stem 1 had the verbalizing suffix ev-, and passive participle maθiménos, like paθéno, a class switch to Class II.

2. Many Class II verbs have a vowel other than i in Stems 2 and 3.

In that case they generally have a consonant as well (s or velar), and this consonant appears in both Stems 2 and 3 for these verbs. (E.g., traváo/travó "I pull"; veláo/veló "I laugh"); only the rule for Stem 3 differs. Call this Class II-2. Which V and C appear in Stem 3 can be lexically specified, or a further Class II-2 classification of verbs could be given. Such classes include:
22. Stem 3 = Stem 0 + es (ponão/ponó
"I am in pain",
Stem 3 = pones-);

23. Stem 3 = Stem 0 + as (yelo "I laugh",
Stem 3 = el-as);

24. Stem 3 = Stem 0 + ik (travão "I pull",
Stem 3 = trav-ik);

3. Class I verbs which have a vowel alternation
as the mark of Stems 2 and 3.

Such verbs have Stem 0 with a final liquid, and
imperfective n in Stem 1:

25.a mér-n-o "I beat"
   Stem 2   Stem 3
   mir-     nar-

25.b stél-n-o "I send"
   Stem 2   Stem 3
   stil-    stal-

Some verbs display only part of this pattern:

26. feíro "I corrupt"
   Stem 2   Stem 3
   fēir-    fēar-
fótro thus apparently lacks (formally, though not functionally) imperfective aspect.

4. There are also a few verbs where the relation between Stem 0/1 and Stem 2 is suppletive.

27.a tró(γ)o "I eat"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>tro(γ)-</td>
<td>fαY-</td>
</tr>
</tbody>
</table>

(étrøyα) (éfaya)
active impfve active pfve
past 1 sg past 1 sg

27.b vlépo "I see"

<table>
<thead>
<tr>
<th>Stem 0/1</th>
<th>Stem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>vlep-</td>
<td>-o-</td>
</tr>
</tbody>
</table>

(évlepa) (ίνα)
active impfve active pfve
past 1 sg past 1 sg

(vlépo) (o-o)
active impfve active pfve
non-past 1 sg non-past 1 sg

In no case is the relationship between Stem 2 and Stem 3 suppletive, though it may be irregular.
28.a τρώγω  Stem 3 = fayo-  
(fayo-θ-ik-a)  
passive pfve  
past 1 sg

28.b τρέπο  Stem 3 = ἰδο-  
(ἰδο-θ-ικ-α)  
passive pfve  
past 1 sg

I find this suggestive, since only inflectional categories are suppletively marked. If suppletion exists for a category it must be inflectional. While is does not hold that a category which is never suppletively marked must not be inflectional, it is at least possible to maintain that passive in Greek is not inflectional; as it would not be if suppletive passives existed.

5. A number of verbs are formally active in one aspect, and and formally passive in the other aspect.

<table>
<thead>
<tr>
<th>IMPERFECTIVE</th>
<th>PERFECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. &quot;become&quot;:</td>
<td></td>
</tr>
<tr>
<td>NON-PAST</td>
<td>γίνο-όμε</td>
</tr>
<tr>
<td>PAST</td>
<td>γίνο-μον</td>
</tr>
<tr>
<td>Passive form</td>
<td>Active form</td>
</tr>
</tbody>
</table>
30. "go in":

**IMPERFECTIVE**

**PERFECTIVE**

**NON-PAST**  

b-éno  

b-o

**PAST**  

b-ík-a  

Active form  

Passive form

31. "go out":

**IMPERFECTIVE**

**PERFECTIVE**

**NON-PAST**  

vY-éno  

vY-o

**PAST**  

vY-ík-a  

Active form  

Passive form

---

**E. Conjugation Class Switch**

If passive is viewed as a conjugation class (or a set of conjugation classes, based on stress and final segment, as in active classes), then the full range of possibilities for conjugation class switch can be presented, including those in 5. of the previous section.

Thus verbs may have some forms which pattern like Class I and other like Class II:

**IMPERFECTIVE**

**PERFECTIVE**

**ACTIVE**

**VERBS**

32. "want"

<table>
<thead>
<tr>
<th>Class I</th>
<th>Class II</th>
</tr>
</thead>
<tbody>
<tr>
<td>gél-o</td>
<td>gél-is-a</td>
</tr>
</tbody>
</table>

33. "be sick"

<table>
<thead>
<tr>
<th>Class I</th>
<th>Class II</th>
</tr>
</thead>
<tbody>
<tr>
<td>arost-én-o</td>
<td>aróstisa</td>
</tr>
</tbody>
</table>
PASSIVE VERBS

34. "I pray"

\[
\begin{array}{ll}
\text{éfx-ome} & \text{éfx-í-θ-ik-a} \\
\text{Class I} & \text{Class II}
\end{array}
\]

Verbs may switch from one verbalizing suffix in some forms to another or none in other forms.

35. "learn"

\[
\begin{array}{llll}
\text{máθ-en-o} & \text{máθ-o} & \text{máθeB-0-o} \\
\text{suffix-en-} & \text{no suffix} & \text{suffix-ev-}
\end{array}
\]

I will return to this notion of passive as a conjugation class in section VI. of this chapter.

F. Two Derivational Rules

F.1 Derivational Rule 1: \textit{-simo}.

The nominalizing suffix \textit{-simo} forms neuter result nouns from verbs. Sotiropoulos (1972, suffix 166, p. 103), treats this suffix as taking active perfective verbs stems as its input (Stem 2, in this analysis). A more careful analysis will show that \textit{-simo} is attached to Stem 3. Sotiropoulos's confusion on this point is understandable because the suffix in question begins with \(\theta\), hence inducing, via morphophonemic rules, the
appearance of the same stem final consonant as appears before the -s- of the active perfective in many verbs. Thus, final velars appear as k both before -simo and perfective -s-, labials appear as p, dentals in general are deleted except liquids, which are unaffected (see Chapter II). In the examples which follow, non-past first singular forms are given for comparison.

Table 12: STEM 3 + -simo

<table>
<thead>
<tr>
<th>STEM 1</th>
<th>STEM 2</th>
<th>STEM 3</th>
<th>DERIVED NOUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>Active</td>
<td>Passive</td>
<td></td>
</tr>
<tr>
<td>Impfve</td>
<td>Pfve</td>
<td>Pfve</td>
<td></td>
</tr>
<tr>
<td>Non-past</td>
<td>Non-past</td>
<td>Non-past</td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
<td>1 sg</td>
<td></td>
</tr>
</tbody>
</table>

"search" (velar)  
(psáx-no) | (psák-s-o) | (psax-t-ó) | (psáksimo)

"boil" (z)  
(vráz-o) | (vrás-s-o) | (vras-t-ó) | (vrásimo)

"grab" (n)  
(pjáno) | (pjáso) | (pjastó) | (pjásimo)

"shape" ( )  
(pláso) | (pláso) | (plastó) | (plásimo)

"carry" (r)  
(fér(n)o) | (féro) | (feró) | (férsimo)

"put" (l)  
(vázo, válo) | (válo) | (való) | (válsmo)

"steal" (labial)  
(klévo) | (klépso) | (kleftó) | (klépsimo)
One might suggest that the $s$ in these derived forms is not part of the suffix (thus giving $imo$) but part of the stem (Stem 2). However, forms like férismo and válsimo argue against such an analysis, since Stem 2 for these verbs (the active perfective stem) lacks an $s$. The expected derived nouns then should be *fér-imo and *vál-imo, which do not occur. Thus, the suffix really is -simo.

All of Sotiropoulos's examples involve verbs for which Stem 2 and Stem 3 are identical except for the presence of $s$ in Stem 2. Since sequences of $s$ are degeminated in Greek, it is not possible to determine whether Stem 2 or Stem 3 is the base for derived nouns in -simo. However, there are a few verbs in Greek in which Stem 2 and Stem 3 have differences in addition to, or other than -s- in Stem 2. A few of these appear as derived nouns in -simo:
Table 13: DERIVED NOUNS IN -simo

<table>
<thead>
<tr>
<th>STEM 1</th>
<th>STEM 2</th>
<th>STEM 3</th>
<th>DERIVED NOUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>Active</td>
<td>Passive</td>
<td></td>
</tr>
<tr>
<td>Impfve</td>
<td>Pfve</td>
<td>Pfve</td>
<td></td>
</tr>
<tr>
<td>Non-past</td>
<td>Non-past</td>
<td>Non-past</td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
<td>1 sg</td>
<td></td>
</tr>
</tbody>
</table>

"beat"  | ñe-r-n-o  | ñe-ro    | ñe-ar-θ-ó  | ñe-ar-simo  | "beating" |
"find"   | ñe-rísk-o | ñe-r-o   | ñe-vr-θ-ó  | ñe-vr-simo  | "thing found" |
"send"   | ñe-stél-n-o | ñe-stíl-o | ñe-stal-θ-ó | ñe-stál-simo | "sending" |
"sow"    | ñe-spérno | ñe-spír-o | ñe-spar-θ-ó | ñe-spar-simo | "sowing" |

I can find only one derived noun in -simo which violates this pattern - that is, which is not derived from an irregular Stem 3, but apparently from an irregular Stem 2:
Table 14: IRREGULAR STEM 2 NOUN IN -simo

<table>
<thead>
<tr>
<th>STEM 1</th>
<th>STEM 2</th>
<th>STEM 3</th>
<th>DERIVED NOUN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active</td>
<td>Passive</td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>Active</td>
<td>Passive</td>
<td></td>
</tr>
<tr>
<td>Impfve</td>
<td>Pfve</td>
<td>Pfve</td>
<td></td>
</tr>
<tr>
<td>Non-past</td>
<td>Non-past</td>
<td>PAST</td>
<td></td>
</tr>
<tr>
<td>1 sg</td>
<td>1 sg</td>
<td>1 sg</td>
<td></td>
</tr>
</tbody>
</table>

"burn"  kē(γ)o  káp-s-o  ká-o  káp-simo  "burning"

All other nouns in -simo allow an analysis in which the stem is Stem 2, rather than Stem 2.

In other derivatives from this verb, a final labial appears when the general pattern is for derivation from Stem 3 (passive perfective), though there is no final labial consonant in the perfective past passive of this verb:

36.a kaftós  ADJ  "burning, hot"
36.b káv-ma  N  "burn"

(Compare spar-tós - ADJ  "sowed" with Stem 3: fáγo-ma, with Stem 3)
There are two derivatives which take Stem 3 as their base:

37.a  ká-ila  "smell (or feeling) of burning"

37.b  ka-ménos  - passive participle "burned"

(37.c  also  kaiménos  "burned, or unfortunate", where the i is unexpected; perhaps from the i of the passive perfective past)

Therefore the best analysis is one in which -simo forms result nouns from Stem 3 of verbs. There is one noun in -simo, kápsimo, which is derived from Stem 2, though this verb appears to display a number of stem anomalies in other derivatives as well.

-simo Rule: Stem 3 + simo = N, exceptions: kéo.

F.2 Derivational Rule 2: -ia-.

Sotirpoulos discussed this noun-forming suffix as sia-, apparently because s occurs in all his examples. This suffix, as he claims, only occurs with prefixed stems, and gives abstract N's. I show here that the suffix is properly -ia, and that it attaches to Stem 2, which accounts for the frequency of s in these derived words.
First, nouns of the form prefix + stem + -ia formed from verbs where Stem 2 has no s show that s is not part of the suffix:

38. tix-én-o "happen to meet"
   STEM 0/2 STEM 3
   tix- ----
   a-tix-ía "ill fortune
   epi-tix-ía "success"
   sin-tix-ía meaning not found
   kako-tix-ía "bad fortune"
   apo-tix-ía "failure"
   is-tix-ía "misfortune"
   ef-tix-ía "good fortune"

39. tró(γ)-o "eat"
   STEM 2 STEM 3
   fa- fa-o-
   a-fay-ía meaning not found
   apo-fay-ía meaning not found
   afoo-fay-ía meaning not found
   alilo-fay-ía meaning not found
   kako-fay-ía meaning not found
   kreo-fay-ía meaning not found

34. For all of these examples, Stem 0 = Stem 2, but since ia N's commonly come from Stem 2 with s, I analyze these cases as involving Stem 2 as well.
Some derived nouns in -ia have an 5 where Stem 2 of the unprefixed verb does not have 5; however, in these cases, Stem 2 with 5 is an available form for prefixed verbs with the same root:

40. vlépo- "see"

Eleftheriades (1985, p. 414) gives vlep-s- for vlépo with prefixes apo-, epi-, para-, pro-, and nouns in -ia occur with stem vlep-s- rather than 5-:

41.a a-vlep-s-ia "oversight"
41.b a-pro-vleps-ia "something not foreseen"

Similarly, for léy-o "I say", Stem 2 in unprefixed verbs is p-; but for prefixed or compounded forms Eleftheriades (1985, p. 419) gives Stem 2 = lek-s, and -ia nouns have lek-s as stem rather than -p:

42.a kino-leks-ia no meaning found
42.b óis-leks-ia "dyslexia"
I can find only one case where such nouns cannot be analyzed as prefix + Stem 2 + ia. This involves the verb *laveno/lamvano* "I receive", where stems are as follows:

43. STEM 1  STEM 0/2  STEM 3
    laven-   lav-   lib-
    lamvan-

There are compounded nouns in -ia from Stem 2:

44.a  *ery-o-lav-ia* no meaning found
     (also *eryo-lip-s-ia*) contract

44.b  *oiko-lav-ia* no meaning found

but also prefixed or compounded nouns based on Stem 3 + s (given the rules in section VI, a more regular, but non-occurring Stem 2):

45.a  *kata-lip-s-ia* "catalepsy"

45.b  *epi-lip-s-ia* "epilepsy"

45.c  *deo-lip-s-ia*
      god-
      no meaning found

45.d  *emo-lip-s-ia*
      blood-
      no meaning found

In both this case, and those of *vlepo* and *lek-s*, the stems that appear in these derivatives (and for *vlépo*
and λέγω, in prefixed verbs) are regularized to some extent. vlep-s, lék-s as Stem 2 is entirely regular by the stem formation rules given for Class I verbs (Stem 0 = Stem 1 = Stem 3; Stem 2 = Stem 3 + s). lip-s is not regularly related to Stem 0 (lav) or Stem 1 (laven) but it is regularly related to Stem 3 (lif- and lip-), an Ancient Greek variant for Stem 2.

**ia Rule:** Prefix + Stem 2 + ia = abstract N, exceptions: lavéno.

G. Interaction with Inflection

The notions of stems and conjugation classes I have presented here suggest an analysis of inflection in Greek as sketched below:

**Items:**

**ROOTS**

Stems 0, 1, 2, 3

(produced by stem formation rules as in section VI.D, with irregularities as noted.)
Conjugation classes

Active (plus variations based on phonological form.)

Passive (plus variations based on phonological form.)

Ending sets

A:  1, 2  (equivalent to ending sets I and II of Chapter II.)
-0, -a

B:  3, 4  (equivalent to ending sets III and IV of Chapter II.)
-ome, -omun
Inflectional Rules for Aspect:

Imperfective-->

Stem 1 + ending set A/[active]
ending set B/[passive]

Perfective-->

Stem 2 + ending set A/[active]
Stem 3 + ending set A/[passive]

Non-past--> ending set 1 (of A or B)

Past--> ending set 2 (of A or B)

(person and number not analyzed).

H. Conclusion

I began this chapter by pointing out that the category passive has always been treated as an inflectional category in treatments of Modern Greek. In fact, on first glance, passive looks like an inflectional category since clearly passive forms are recognized on the basis of morphological elements which are clearly inflectional. For example, imperfective passive forms have different endings than active forms - these endings express the inflectional categories person, number and tense. Perfective passive forms are recognized as passive primarily on the basis of the perfective marker
-\( \theta \) (vs. -s- in the active), but also -ik- in the perfective past (vs. 0 in the active), and stressed endings in the perfective non-past (vs. stem stress in the active). All of these elements mark the inflectional categories aspect and tense.

However, this impression does not correspond to the conclusions of Chapters IV and V where it was shown that passive in Greek does not have the semantic and syntactic characteristics of an inflectional category (many gaps, many semantic idiosyncrasies, no syntactic relevance). This difficulty is resolved by the notions of passive and active as verb classes and of different verb stems, required independently to account for the derivational possibilities of Greek.

Thus I claim here that passive is a conjugation (super) class in Greek; and so, while passive is not an inflectional category, it is inflectionally expressed, as above. This is possible because passive and active are classes of verbs in which expression of the demonstrably inflectional categories aspect, tense, person, and number differs. This is what conjugation classes are for. The notion that lexical entries for roots contain, among other things, a list of stems allows the formation of both active and passive verbs, "in the lexicon", without claiming that one is derived from the other, or that,
e.g., certain basic lexical items are derived from other equally basic items. Morphologically active verbs are generally, but not always, semantically and syntactically active; morphologically passive verbs are generally, but not always, semantically and syntactically passive.
A. Introduction

Although Chapter VI was concerned with the occurrence of the same lexical formatives in both passive verbs and derived nouns, I argued there that the derivational processes involved did not operate on specifically passive or active stems. Instead, I claimed that these lexically available stems are input to both the inflectional and derivational components. The inflectional rules for verbs of the passive conjugational class require Stem 3 in perfective indicative forms, as does the derivational rule of -simo attachment. Thus, there is no sense in which passivization feeds the derivational rule: both inflectional and derivational rules are fed by the same set of stem-forming rules and lexically listed stems, and none of the stem forming rules are specifically "passivization". There can therefore be no argument from Criterion B (interaction) for the lexical status of passive verbs in Greek based on that set of rules.
In this chapter, I examine a set of lexical rules which will allow such an argument. I show that active verbs, passive verbs, and passive participles are input to different sets of derivational rules and that, consequently, these classes must be distinguished within the lexicon.

The rules that I examine here are all prefix rules; that is, the morphological material which is added occurs at the beginnings of stems. There are also, as is clear from the discussion in Chapter VI, rules of derivation that are suffixing rules. Some such rules derive noun stems and adjective stems from verb stems. Others derive verb stems from roots. Stem rules of the first type will not reveal distinctions in the applicability of derivational rules to the classes of interest here—passive verbs, passive participles, and active verbs—since they fail to mark any distinguishing features of those classes; they have nominal or adjectival inflection in place of verb inflection. Suffixing rules of the second type clearly precede passivization, since

1. Such rules are generally called de-verbal, de-nominal or de-adjectival rules. Such rules in Greek, with its rich inflectional morphology, do not really derive verbs, nouns, and adjectives but stems which, on the addition of appropriate inflection, become verbs. I have used this rather over-precise terminology here to reflect my general concern with precise description of what various lexical processes actually do in Greek.
verbalizing suffixes occur inside the inflectional material that distinguishes passive verbs from active verbs, and inside the participial suffix -menos:

Active verb:
-- mavr-[iz]-o 
blacken, be black

Passive verb:
-- mavr-[iz]-ome
be blackened

Passive participle:
-- mavr-[iz]-menos
blackened

In the preceding example, the root mavr- plus the verbalizing suffix -iz is apparently the input to whatever processes produce all three categories: active verbs, passive verbs, and passive participles. Consequently, the interaction of prefixing processes with the classes passive verbs, active verbs, and passive participles is the focus of the chapter.

B. Order and Interaction

My concern here is to show that the distinction between active verbs, passive verbs, and passive participles exists in the lexicon, before the application of any syntactic rules. This requires a demonstration of
precedence in the order of application of rules forming passives and other rules of the lexicon. This demonstration would be straightforward if Greek possessed a passive morpheme, a separable unit of form corresponding to the feature passive. If such a morpheme existed, this demonstration of rule order would be simple. If the passive morpheme occurred closer to the stem than some clearly derivational morpheme, then it would be relatively uncontroversial that the rule which attached the passive morpheme was ordered before the rule attaching the other derivational morpheme. However, there is no passive morpheme in Greek; passive (on verbs) is marked by the occurrence of a different set of inflectional markers than occur with active verbs. In such a case, the demonstration of order involves showing that the feature marking passive must be present before the application of some rule of derivation. That is, if some rules of derivation distinguish, in terms of applicability, between the classes active and passive, then these features must be available before the application of these rules.

2. This claim about order would not be entirely uncontroversial, since the appearance of clearly inflectional morphology inside clearly derivational morphology is well documented (Sherwood, 1983; Zwicky, 1989). Nonetheless, such a situation would no doubt be simple to analyze.
I will discuss below a number of rules which make this distinction. In combination, these rules demonstrate that active verbs, passive verbs, and passive participles are distinct in the lexicon, before the application of syntactic rules: and, by Criterion B (interaction), are lexical rather than syntactic phenomena. The lexical items discussed in this chapter were collected from three dictionaries: Crighton (1960), Pring (1982), and Kourmoules (1967).

C. Compounding and Prefixing in Greek

Greek is a morphologically rich language, in derivational morphology as well as in inflectional morphology (Chapters II and VI). I am concerned here with morphological rules which attach meaningful morphological material to the beginning (to the left) of verb and participle stems. In contrast to the synthetic character of morphological processes (particularly inflectional ones) at the ends of words, the attachment of material to the left of stems is more agglutinative. That is, the form of the attached material is easily determinable, subject only to a small set of morphophonemic rules. Such elements additionally contribute meaning changes to stems that, while not entirely predictable, frequently are at least partially
specifiable. Thus these processes as a group can be termed combining processes, in a very general sense, since they involve combining a predictable form and partially predictable meaning with a stem. Some of these processes are traditionally termed prefixing, and the combining element is termed a prefix when the compounding element does not correspond to a free word; and has fixed form, rather than merely belonging to a specifiable word class. Others are termed compounding processes when the combining element corresponds to a free word and belongs to some open word class, therefore having no fixed form. In addition, combining elements in compounding in Greek consist of stem + a compounding vowel _o, while the final segment of prefixes is more variable.

I have divided the processes discussed in this chapter into prefixation and compounding processes; this distinction does not correspond to the distinction such rules make between active verbs, passive verbs, and passive participles.

In fact, the distinction between compounding and prefixation is not at all clear. I have treated as prefixation some morphemes which do correspond to free words, but also occur so frequently in derived words that the "fixed form" criterion is met (ksana- "again"). A number of the "old prefixes" as well as "new prefixes"
discussed below in section VII.E occur in elevated styles as prepositions with similar meanings, though like ksana-, they do not have the compounding vowel o-, thus meeting the "free word" criterion; while alilo- and afto- do not correspond exactly to free words and have fixed form, but do display the compounding vowel o-. Both prefixal and compound elements are limited to co-occur with no more than two other prefixal elements—that is, a maximum of three morphemes can precede a stem.

D. Lexical Distinctions in Rule Applicability

In the following sections, I present distinctions in rule applicability between active verbs (henceforth AV), passive verbs (PV) and passive participles (PP):

<table>
<thead>
<tr>
<th>Type</th>
<th>AV</th>
<th>PV</th>
<th>PP</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>&quot;old prefixes&quot;, &quot;new prefixes&quot;, - VII.E</td>
</tr>
<tr>
<td>Type 2</td>
<td>x</td>
<td>x</td>
<td></td>
<td>para-, - VII.F</td>
</tr>
<tr>
<td>Type 3</td>
<td>x</td>
<td>x</td>
<td></td>
<td>agent compounding, - VII.J</td>
</tr>
<tr>
<td>Type 4</td>
<td></td>
<td>x</td>
<td></td>
<td>alilo-, afto-, - VII.H</td>
</tr>
<tr>
<td>Type 5</td>
<td>x</td>
<td></td>
<td>x</td>
<td>material compounding, - VII.J; ksana-, - VII.G</td>
</tr>
<tr>
<td>Type 6</td>
<td>x</td>
<td></td>
<td></td>
<td>object-compounding, - VI.J</td>
</tr>
</tbody>
</table>
Note that the pattern of applicability differs for each class, demonstrating that these class distinctions are lexical distinctions.

E. "Old" and "New" Prefixes

A large number of words in Modern Greek, of all syntactic classes, occur with a class of prefixes (the "old" prefixes - Warburton, 1970) which are of Katharevousa, and ultimately classical, origin. Forms with these prefixes do not now represent the output of productive derivational processes. The prefixes and stems to which they are attached are recognized by speakers, and speakers can assign appropriate phonological forms and some semantic features (Warburton, 1970), though many words with old prefixes are semantically non-compositional:

2. \textit{en- nia -féro}
\begin{center}
in- through- bring
\end{center}
"I interest."

(Warburton, 1970, p. 57)
The old prefixes display morphophonemic properties different from new prefixes and compound elements, including special rules for the contraction or loss of vowels in sequences of vowels, the appearance of stops as fricatives before some stems, and the treatment of the augment in past tenses.

The old prefixes of Greek are of Type 1. That is, they do not distinguish between active verbs, passive verbs, and passive participles.

Not all the prefixes in Greek, however, are borrowed from Katharevousa. The class of new prefixes is smaller than that of old prefixes, and the processes which attach them to stems are more productive. Their morphophonemic properties are different from those of the old prefixes, and they are semantically more transparent. A number of new prefixes are homophonous with old prefixes, and must be distinguished from the old prefixes on the basis of morphophonemics, semantics or both - sometimes the distinction is difficult or impossible.

Most of the new prefixes do not distinguish between the classes of interest here; however, para- "excessively, too", occurs with active and passive verbs, but with passive participles only rarely (see Chapter III). Therefore the rule for para- prefixation appears to be of Type 2. Ksana- "again", occurs productively
with active verbs and passive participles, but rarely with passive verbs, and then with a semantically restricted class. It thus appears to be a rule of Type 5. These rules will be discussed in detail in section VII.F and VII.G of this chapter. A reflexive prefix afto- and a reciprocal prefix alilo- occurs productively with passive verbs, and only rarely with active verbs or passive participles. These rules are of Type 4, and are discussed in section VII.H of this chapter.

Greek also has a number of productive compounding processes. Compounding is characterized by the presence of a compounding final V, _o, in the first element of the compound attached to its stem: Stem 1-o-Stem 2.

Compounds typically take word-class from the second element of the compound.

F. Para- Prefixation

Lascaratou and Warburton (1983) argue that para- prefixation fails to occur with passive participles. While not strictly true, as they recognize, and as discussed in Chapter III, the occurrence of para- "too", is restricted enough to count as a prefixation rule that is restricted to occur with verbs, with some leak to other parts of speech. This leak is most frequent for passive participles, possibly as a result of deriving
participles from verbs prefixed with \textit{para-}, in violation of the apparent normal order of participle formation followed by \textit{para-} prefixation. The leak is much rarer for other adjectives, and for adverbs, which are not derived from verbs, and which, therefore, cannot be derived from verbs which have already undergone \textit{para-} prefixation.

\textit{Para-} prefixation thus appears to be a derivational rule of Type 2, applying to verbs (active and passive) but not to participles. Since passive participles fail to occur with a prefix that occurs with active and passive verbs, the existence of \textit{para-} prefixation supports the claim that passive participles are a lexical phenomenon.

Rule: \textit{para-} + V \rightarrow V

G. \textit{Ksana-} Prefixation

\textit{Ksana-}, meaning "again", is one of the "new prefixes" discussed by Warburton (1970). It attaches productively to active verbs and passive participles but occurs rarely with morphologically passive verbs, and specifically, only with deponent verbs:
3. a  ksana-καθάμε
    again-sleep
3. b  ksana-θημάμε
    -remember
3. c  ksana-κάθομε
    -sit
3. d  ksana-θένομε
    -seem
3. e  ksana-μακάνομε
    -become
3. f  ksana-σκέφτομε
    -think
3. g  ksana-ερωτεύομε
    -fall in love
3. h  ksana-ἀρχόμε
    -begin
3. i  ksana-ιπόσχομε
    -promise
3. j  ksana-ἐρχόμε
    -come

This suggests that ksana- prefixation is a
derivational process of Type 5, applying only to active
verbs and passive participles, but not passive verbs, and
supports my claim that passive verbs are lexical.

H. Reflexive and Reciprocal Prefixation

Greek has a quite productive process which prefixes
a reflexive element (afto-) or a reciprocal element
(alilo-) specifically to passive verbs. There are a number of reasons for treating these processes as derivational and lexical rather than syntactic.

First, both prefixes differ in form from semantically equivalent free expressions. The free form corresponding to afto- is eaftó which occurs in a syntactic reflexive construction in combination with an article and a possessive pronoun which agrees in gender and number with the subject:

4. **avapai**
   love-impfve
   **ton**
   the-acc
   **eaftó**
   self-poss pro
   non-past
   masc
   acc
   masc
   3 sg
   1 sg
   masc sg
   3 sg

"He loves himself."

A syntactic reciprocal exists as well; it has no formal correspondence to the reciprocal prefix alilo-. The syntactic reciprocal uses the accusative of the definite masculine article and the numeral énas "one" plus the masculine accusative singular of the definite article and the noun állos "other":

3. When the subject is third plural, the possessive pronoun may be singular or plural.
Clearly then, **afto-/alilo-prefixation** is the result of a morphological **operation**; that is, it forms words rather than phrases. It could nevertheless be the output of a syntactic **rule** if it were entirely productive and transparent in meaning: this is not the case, as I demonstrate in following paragraphs.

Second, the reflexive and reciprocal prefixes (and nominal elements in compounds), though first in a series of prefixes, seem to never occur with more than two other prefixes - thus they obey the slot limit for prefixes discussed in section VII.C.

I have found only one example of **alilo-** followed by two prefixes, many where **afto-** or **alilo-** is followed by one prefix, and none where they can be followed by three or more:
6. With two prefixes:

\[ \text{aliilo-eks-ip-iretúme} \]
"be of service to each other"

7. With one prefix:

\[ \text{afto-apo-kaláme} \]
(no meaning found)

\[ \text{aliilo-sim-plirónome} \]
"supplement each other"

Third, some passive verbs with \text{afto-} or \text{aliilo-} have idiosyncratic meanings:

8. \[ \text{aliilo-tróyome} \]
\[ \text{-eat} \] - passive
"squabbling with each other"

Thus, these processes are derivational and lexical rather than syntactic. \text{aliilo-} and \text{afto-} prefixation are distinguished from the noun compounding processes discussed in section VII.I in that they do not exactly correspond to free words, and \text{aliilo-} and \text{afto-} occur as constant prefix forms, whereas particular nouns are not specified for the compounding processes. However, it is

4. It is not clear that \text{eks-} "out" and \text{ipo-} "under" are semantically transparent synchronically, or that \text{iretúme} is available as a root elsewhere in the language.
clear that some nouns are particularly common in N+V/PPL compounds (e.g., ánemo "wind" and Ἁεο "God"). Thus alilo-/afto-prefixation is very similar to N compounding (note that the compounding vowel -o- is present), and perhaps should not be distinguished from it. I will return briefly to this point later.

A search of Kourmoules (1967), Pring (1982), and Crighton (1960) produced 43 passive verbs with afto-, and 105 passive verbs with alilo-. The same sources gave only eight active verbs with afto- and three with alilo-; I found seven passive participles with afto- and none with alilo-:

Active verbs with afto- or alilo-:

9.a alilo- vronọo- kopó  "to box with recip- a fist strike one another"
9.b alilo- vrafọ  recip- write  "to correspond"
9.c alilo- maxọ  recip- battle  "to fight one another"
9.d alilo- ixọ  "to be coherent"
9.e afto- cukọ  be just  "to take the law into one's own hands"
9.f afto- ktonọ  kill  "to commit suicide"
9.g afto- molo' "to desert to the enemy"
9.h afto- sxeviázo "to improvise"
9.i afto- tioú "to autotype"
9.j afto- iryó "to perpetrate"
9.k afto- pígarxó "to be obedient to oneself"
9.l afto- kirjarxó "prevail over oneself"

Participles with afto-:
10.a afto- loyiménos self- considered
10.b afto- viniuróiménos self- created
10.c afto- kirjarximénos self- prevailed
10.d afto- stevazménos self- roofed
10.e afto- sxeiriazménos self- planned
10.f afto- oezménos self- tied
10.g afto- aijikumenos self- administered

These processes cannot be analyzed as semantically restricted to passive verbs for two reasons. First,
since object/patient compounding is available as a compounding process for active verbs, and since reflexive and reciprocal elements can serve as direct objects in the reflexive/reciprocal syntactic constructions, there seems to be no semantic reason for the rarity of reflexive/reciprocal prefixes with active verbs. Note also that in several of the reflexive/reciprocal active verbs given above, the reflexive or reciprocal element represents a non-direct object:

11. alilo-yrafó "write to each other"
    o énas yráfi ston áló
    compare:
    o jánis yráfi stin éléni

12. alilo-maxó "fight with one another"

13. afto-sikó "take law into one's own hands"
    (genitive inside IO).

Only in afto-ktonó does the reflexive prefix clearly represent an active verb patient, and note that -ktono does not occur as a verb by itself, nor do any of the others with the exception of sxeòiózo "I plan".
Rivero (unpublished MS) argues that afto-/alilo-prefixation, as well ADV-compounding and object-compounding is the result of a syntactic incorporation process. She claims that the incorporation of direct objects requires the presence of passive morphology as an absorber of case marking except in cases like alilo-Yrafó, where some other NP remains as direct object. The data presented in this chapter on object compounding with active verbs (VII.J) contradicts this argument; since object compounding is quite common for active, not passive, verbs.

Second, passive participles in general are semantically identical to passive verbs in terms of their grammatical relations. Since agent-compounding, of which reflexive/reciprocal prefixation seems to be a special case, is available to both passive verbs and participles, there can be no semantic account of the lack of passive participles with reflexive and reciprocal prefixes. That reflexive/reciprocal prefixation differs in this regard from agent-compounding is the reason, alluded to earlier, for treating these processes as distinct. Agent compounding applies to both passive verbs and participles - to items with the feature [+PAS] - while afto-/alilo-prefixation applies to items with both [+V] and [+PAS].
Since *aflo-/alilo*-prefixation applies only to passive verbs, passive verbs must represent some lexical phenomenon by Criteria B (interaction) from Chapter I.

\[ V \quad aflo- \quad + \quad [+\; PAS] \quad --> \quad [+\; PAS] \quad alilo- \]

I. Compounding Processes

V-V compounds occur, but not frequently (see Chapter 5 VI for some examples). Compounds with ADV as first element are very common for active and passive verbs and passive participles, and thus do not distinguish among the classes under discussion; they are processes of Type 1:

---

5. These are ADV-V compounds rather than ADJ-V compounds on the basis of meaning rather than form, since the compounding vowel replaces what would, in free words, distinguish between parts of speech.
Passive Participle:

14.a plusi- ο- pandreménos
rich- married-pp
nom masc sg

"richly married"

14.b ār- ο- kamoménos
generous- made-pp
nom masc sg

"generously made"

Active Verb:

15.a plusi- ο- zó
rich- live

"live richly"

15.b sixn- ο- para-kaló
often- beg

"ask often"

15.c pikr- ο- xam-o-veló
bitter- low laugh
smile

"smile bitterly"
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V, passive participle). However, in this group of compounding processes, there is a clear distinction between the three classes on the basis of the thematic role/grammatical relation of the nominal element in the compound. Briefly, the distinctions are as follows:

Table 15: CLASS DISTINCTION IN COMPOUNDING PROCESSES

<table>
<thead>
<tr>
<th>ROLE OF NOMINAL ELEMENT</th>
<th>ACTIVE VERB</th>
<th>PASSIVE VERB</th>
<th>PASSIVE PARTICIPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject of IV</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Object of TV</td>
<td>32 [36%]</td>
<td>0(+2) [7%]</td>
<td>33 [16%]</td>
</tr>
<tr>
<td>Subject of TV (agent)</td>
<td>5(+3) [9%]</td>
<td>19/ [66%]</td>
<td>63 [31%] (or 64)</td>
</tr>
<tr>
<td>Instrument</td>
<td>5(+1)</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Material</td>
<td>22 [24%]</td>
<td>0 [0%]</td>
<td>84 [42%]</td>
</tr>
<tr>
<td>Other (recipients,</td>
<td>20<a href="+2">22%</a></td>
<td>8 [27%]</td>
<td>13 [7%] (+1)</td>
</tr>
<tr>
<td>locations, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
<td>91</td>
<td>30</td>
<td>202</td>
</tr>
</tbody>
</table>
Given that we can expect lexical processes of all types to "leak"--that is, to show positive exceptions when the rule is applied to input forms beyond its normal input class--this pattern suggests that agent incorporation is primarily applicable to passive verbs and passive participles (Type 3), object compounding is primarily applied to active verbs (Type 6), and "material" incorporation applies to active verbs and passive participles but not to passive verbs (Type 5). More importantly, the overwhelming majority of N-passive verb and N-passive participle compounds have no active verb source: only five of the N-passive V compounds, nine of passive participle compounds, plus 16 of the material compounds (passive participle compounds), have active verb sources. This demonstrates that these compounding processes do not apply to active verbs, which then undergo passivization, an order that would allow passive (of either type) to be a syntactic rule.

Thus, this set of compounding processes will distinguish between all three classes of interest, further supporting the claim that both types of passive are lexical categories, since they are distinguished from

8. Then possibly material compounding precedes participle formation in the lexicon.
active verbs in the lexical processes to which they serve as input. These processes are discussed below.

J.1 Noun Plus Active Verb Compounds

Compounds of this type are syntactically verbs. Most commonly, the noun is related to the verb as direct object (36% of these compounds).

17.a psomo- trëyo bread-CV eat-impfve non-past 1 sg
"I am poor"

17.b em-o- ftin-o blood-CV spit-impfve non-past 1 sg
"spit blood"

17.c vol-o- bërn-o clod-CV beat-impfve non-past 1 sg
"break the soil"

17.d loy-o- krën-o speech-CV judge-impfve non-past 1 sg
"censor"

There are some N–AV compounds where the relation of the N to the verbs is problematical:
In example 18.a, Greek would allow ἄνδρο- "tree" as the direct object of φίτευ- "plant" in a full sentence, with location as a prepositional object:
An available alternative is for ɓendro to appear as a prepositional object, and the location NP as direct object, as in English:

"I planted the garden with trees yesterday."
In such examples, it is not clear to me which of the NP's that appear as DO in full sentences is the thematic patient. These problematical compounds are similar to those involving a noun denoting a material, but in them the noun cannot occur as object of the verb, discussed below (section VII.J.2).

In example 18.b, skil-o-vrizo "revile grossly", the meaning of the compound transitive verb is not entirely transparent: it means "to abuse someone like a dog" rather than "to abuse a dog." Thus it does not represent
object incorporation directly (as *psomo-trévo* "bread-eat"), but rather an object of comparison.

Example 18.c, *panik-o-válo* "panic-throw" could mean "throw panic" (where "panic" is DO), "throw someone into a panic" (where "panic" is oblique), or even "be panic stricken" (where "panic" is an agent [cf. *panikovlitós* "panic stricken" from Stem 3 *vli-*, as in passive perfectives]). Again, these informal translations do not represent different real world situations.

For *anemo-áéerno-o* I have found two translations in dictionaries, as noted in example 18.d. In Crighton, (1960) *ánemo* "wind" seems to be a prepositional object of *áéerno* "beat" (against the wind); or a direct object, since "fight the wind" *áéerno* to *ánemo* is equally possible. In Pring's translation (1982) *ánemo-* seems to be an agent and the morphologically active verb is passive in its argument structure. Note that these different translations do not describe different situations: an individual being storm tossed is fighting the wind, and vice versa. I have counted this particular compound as involving an agent (subject of TV) noun since that weakens my thesis here, but this form serves to point out the difficulty of determining thematic roles for these forms.
Rule: Object N + V --> V  
[+ACT]  [+ACT]

J.2

The second most common type of N-AV compound involves a N that describes some material involved in the action of the verb (24%):

23.a  anο-  o-  stefanόn-o  
flower - wreathe  
σαfn-  o-  
laurel-

23.b  elε-  o-  xromatίz-o  
olive/olive oil - paint, color  
jίr-  
water

23.c  laδ-  o-  bojatίz-o  
oil - paint  
9

23.d  emat-  o-  vάf-o  
blood - paint

23.e  xris-  o-  sέn-o  
gold - tie  
sίνερ-  
iron

23.f  asvest-  o-  xρί-o  
plaster - anoint

9. The nominative/accusative singular neuter noun is ema-. The stem with at before neuter endings occurs in all plural cases and the genitive singular.
The difficulty of determining whether some compounds belong to this class or to the object-V class has already been noted.

Material -AV compounds are in turn similar to compounds where the noun represents an instrument, in that in full sentences instruments and materials would be objects of me "with":

24.a kli₇ - o- mandalόno
key - bolt/latch

24.b xir- -- -áyοyo
  hand  lead
  xalin-
  bridle

Instrument N compounds are not terribly common.

J.3 Agent Noun and Active Verb Compounds

In few N-active V compounds (five--plus three which might also be locative--out of 91) the N appears to be an agent:

10. No compound vowel appears here because the verb begins with /a/- inducing vowel contraction (Kaisse, 1977).
25.a **anemo- o- óério**  
wind  
beat  
(as in section VII.I.2)

**θalas- o- óério**  
sea  
-CV  
beat

"be buffeted by waves"  
(in Pring, 1982, the same translation is given for the passive form)

25.b **poo- o- plandázo**  
desire  
-CV  
burst/suffocate  
eroto-  
love-

"be love struck"

25.c **anemo-sorjázo**  
wind  
blow

"crash"

For one of these compounds (**anemo-óério**), the passive form (**anemo-óério**neme) is also listed in Kourmoules (1967), and my informants prefer the passive (one considers the active ungrammatical). Pring (1982) gives both **θalaso-óério** and **θalaso-óério**neme with the same meaning; again, one informant prefers the passive. The same informant offers a passive (**anemo-sorjázome**) instead of **anemo-sorjázo** listed in Kourmoules, meaning "to be blown down by the wind".

Other compounds are semantically unclear, but are judged as likely to be locative by informants:
26.a **anemo-skorpízo**

"scattered by the wind"  
(agt), or  
"scattered in the wind"  
(prep. obj - preferred by informant)

26.b **anemo-strovilízo**

"be whirled by the wind"  
"whirl in the wind" (preferred by informant)

26.c **anemo-kimatízo**

"fluttered by the wind"  
"flutter in the wind" (preferred by informant)

Plandázo (example 25.b) has a middle reading as well as a transitive one, as do many of the semantically unclear verbs above (e.g., those listed in example 27.). Crighton (1960) gives plandázo ápo pōθo "burst from desire" where pōθo is apparently an agent with apó and an active verb.

27.a **anem- o- strovilízo**

wind -CV whirl

27.b **anem- o- skorpízo**

wind -CV scatter

27.c **anem- o- kimatízo**

wind -CV wave/flutter
Note that the nouns that appear in these compounds (as well as in agent-plus-passive V or PPL compounds) are the kinds of N's that are most likely to appear in the agent phrases of passive VP's of either type, or in agent phrases of morphologically active middle verbs like mavrizo "blacken, be blackened". That is, they are natural forces, not individuals (see Chapter IV). They are in addition, not clearly distinguishable from instrument; they might well be termed instrumental agents, and my informants accept only the nouns in compounds with plandázo as unambiguous agents - where no passive verb is possible.

J.4 N- Passive Verb Compounds

Among -V compounds with morphologically passive verbs as second elements, the nominal element is most commonly an agent, (by a large margin--19 out of 29 compounds that my informants recognize: [66%]):

28.a **erot- o- xtipiéme**
love be struck

28.b **anem- o- floyizome**
wind be inflamed
As with DO-AV compounds, there are some compounds where the thematic/semantic role of the nominal element is difficult to determine. E.g.:

29. Qalas- o- pnîvome
    sea - be drowned

Crighton (1960) gives "to struggle against the waves" for the passive, and gives "to drown in the sea" (prep object) for the active Qalas-o-pnîvo. As with anemôérno, (and note that anemôérname is also listed in
Kourmoules), it is not clear that different situations are referred to by these translations.

I have found only two N-PV compounds in which my informants take the nominal element as the direct object of the active transitive verb base:

30.a \( \text{stiø-} \ o- \ xtipiëme \)
breast -CV be hit

30.b \( \text{stiø-} \ o- \ kopjúme \)
breast -CV be struck

Note that examples 30.a, 30.b are essentially semantically identical with first element \( \text{stiø-} \) "breast" and second a verb meaning "hit, strike, beat". My informant has no clear intuitions on whether 30.a and 30.b are direct object compounds, or location compounds, but takes the semantically similar \( \text{stiø-}o-\text{bërmone} \) "breast-beat", as locative. Thus none of the possible object compounds with passive verbs clearly involve direct objects rather than locatives, suggesting that passive verbs cannot be the input to the object-compounding rule that is reasonably productive for active verbs (section VII.J.1). This distribution strongly suggests that Rivero's (see section VII.H) claim that object incorporation induces passive morphology is wrong,
since there are many examples of morphologically compounded active verbs with object N's in my corpus, and virtually no clear examples with morphologically passive verbs.

Other compound passive verbs have a nominal element which would be a prepositional object of the active V:

31. karav- o- tsakizome
     ship -CV be wrecked
     qrem-
     cliff

     "be shipwrecked"

There is one morphologically passive compound verb in which the nominal element is an intransitive verb subject. This verb is deponent, that is, it is active in meaning and there is no corresponding active:

32. lav- o- kimáme
     rabbit - sleep

     "to sleep lightly, to doze"

There are also a number of mysterious compounds where I have no idea what the grammatical relations of the components might be. (Such examples are not included in the count of compound types presented in VII.J.1.) E.g.:
33.a  after- o- zirízome  
    wing - be weighed

33.b  psix-anemizome  
    soul- be waved

33.c  astrap- o- xínone  
    lightning- be emptied

There are no passive V compounds in which the nominal element is a material and only one with an instrument noun:

34.  alil- o- ýron0- o-  
    each other -CV fist -CV

    kopúme  
    be struck

    "box with each other"

This morphologically passive verb is apparently derived from an active ýron0-o-kopó "to box".

In summary, N-PV compounds in which N is an agent are quite common, while N's bearing any other relation to the verb are very rare.

Rule: Agent N + [PAS] --> [+PAS]
The pattern of compounding for passive participles is different than patterns for either passive verbs or active verbs. Unlike active verbs, but like passive verbs, compounds where the nominal element is agent are common (63/202 compounds):

35.a θε- o- δοξμένος
     god - given

35.b ακριβ- o- φαυρμένος
     locust - eaten

35.c anem- o- σκορπίζμενος
     wind scattered

Unlike passive verbs, but like active verbs, material N- passive participle compounds occur frequently (84/202 compounds; see below examples 36.a-c). As with the active verb compounds discussed, there are some difficulties in determining whether the nouns in some forms should be counted as direct objects or as materials (fitévo, fiteménoς "plant", stróno, stroménoς "pave", as in active verbs; also sparménoς "sown" [examples 36.d-g, below] pley-ménoς "knitted" for passive participles). In some N-PPL compounds, the N might be
considered either a material or an agent (examples 36.h, 36.i):

36.a arvâr- o- pikilménos  
silver -CV adorned

36.b liθ- o- xtitzménos  
stone built

36.c emat- o- potizménos  
blood watered

36.d xris- o- plevménos  
gold

36.e iendr- o- fiteménos  
tree planted

36.f anθ- o- sparménos  
flower sown

36.g marmar- o- stroménos  
marble paved/spread

36.h xion- o- skepazménos  
snow covered  
(snow covers...as subj of active)

36.i ili- o- plimirizménos  
sun flooded  
(sun floods...)

There are also a relatively small number of compound participles in which the nominal element is the direct object of the corresponding active verb (33/202

11. Again, emat- is the stem used in genitive singular and all plural cases. The accusative and nominative singular stem is em-.
compounds). Recall that the class of compounds was present for passive verbs as well: the percentage of compounds of this type relative to the total number of compounds for passive participles and passive verbs is low for both groups (16% for passive participles; 0-7% for passive verbs) and is much lower than for active verbs (36%):

37.a vrak- o- foreménos
pants - worn
"pants wearing"

37.b xor- o- kokiménos (cf. active
gift - given V xoròkokò
"bribed")

37.c fil- o- fayoménos
leaf - eaten
"leaf-eaten"

37.d kem- o- metriménos
heat - measured
"heat measured"

37.e x- o- fuvùmenos
god fearing (deponent V)
"god fearing"

37.f x- o- vuvùmenos
god injure
"god injuring"
Some of these compounds, like 37.a, have active (and imperfective) rather than passive interpretations, as do a number of obj-ppl compounds which use the imperfective participle rather than the perfective participle (37.e, 37.f). Many others (like 37.b) correspond to object plus active verb compounds.

As Lascaratou and Warburton pointed out (see Chapter III), not all passive participles are derived from passive verbs -- this accounts for the quantitative discrepancy in the compounding chart (Table 15) -- there are many more passive participles than passive verbs (39 pages of participles in Kourmoules, vs. nine pages of passive verbs). When compounded participles which are either active in meaning (vrako-foreménos, probably from active verb) or which correspond to a compounded active verb are removed, there is essentially nothing left to this list, as there was nothing left to the list of object-passive verb compounds due to their locative interpretation.

Additionally, a few passive participles occur compounded with instrument nouns (38.a-.f below) and with intransitive subjects (38.g):
38.a **xalin -a yo Viménos**  
bridle-led

(active V exists, no o-, compounding vowel due to contraction)

38.b **pol-o- patiménos**  
foot stamped on

38.c **kli o- mandaloménos**  
key latched

(active V exists)

38.d **ksil-o- kopiménos**  
wood struck

38.e **vron o- kopiménos**  
fist struck

(also active V, passive V with ali1o)

38.f **xir- o- piazménos**  
hand grabbed

("grabbed by the hand" ? or "handgrabbed", again, referentially the same)

38.g **vrend- o- foniménos**  
thunder shouted/shouting

J.4 Summary of N-compounding Processes

Of the various relations that nouns hold to verbs and participles in the compounds discussed above, three semantic classes of nouns are reasonably productive for some subgroups of the set active verbs, passive verbs, and passive participles. Compounds in which the noun is
semantic object are common for active transitive verbs, and rare (or non-occurring) for passive verbs and participles. Compounds in which the noun is the semantic agent are common for passive verbs and participles, and rare for active verbs. As noted in section VII.J.2, the active verbs which permit agent compounding have passive verb "meanings". Compounds in which the noun is a material are common for both active verbs and passive participles, and non-occurring for passive verbs.

Table 16: OCCURRENCE OF MATERIAL NOUN

<table>
<thead>
<tr>
<th>COMPOUNDS</th>
<th>ACTIVE VERB</th>
<th>PASSIVE VERB</th>
<th>PASSIVE PARTICIPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object:</td>
<td>yes</td>
<td>rare</td>
<td>rare</td>
</tr>
<tr>
<td>Agent:</td>
<td>rare</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Material:</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

This pattern indicates that active verbs, passive verbs, and passive participles are input to different sets of lexical compounding processes, and, therefore, that the distinction between these classes must be lexical as well.
CHAPTER VIII

CONCLUSION

A. Lexical Passives in Modern Greek

Both types of passive (passive verbs and passive participles) have been shown here, on several grounds, to be lexical—that is, derivational categories—rather than syntactic and inflectional ones. Passive participles are adjectives (Chapter III) and therefore the product of a lexical rule rather than a syntactic rule, by Criterion A (category change). The relationship between active verbs and both passive verbs and passive participles show large numbers of exceptions, both gaps and semantic idiosyncrasies (Chapter IV); so both passives must be lexical by Criterion E (exceptionality). Neither passive interacts significantly with syntactic generalizations (Chapter V), and thus is not required to be the product of a syntactic rule by Criterion B and D (interaction, localness); while both types of passive are the input to sets of lexical rules distinguished from the set of such rules that applies to active verbs.
(Chapter VII). In particular, in most cases there is no active verb source for passive forms that are the result of the application of some lexical rules. This demonstrates that both passives are lexical by Criterion B (interaction).

B. Passive Verbs and Participles and the Organization of the Lexicon

The discussion of verb stem types in Chapter VI (where verb stems 0-4 are specifiable in form but have no semantic content distinct from each other) and the evidence presented in Chapter VII (where active verbs or passive verbs are input to particular lexical processes depending on voice, but making no reference to stem type) leads to the following conception of the lexicon.

B.1 Stem-based Derivational Rules and Stem Formation

First, there are at least two distinct types of derivational rules in the lexicon, distinguished by whether they take stems or lexemes as input. Rules which take stems as input, I call stem-based derivational rules; rules which take lexemes (that is, words) as input, I call lexeme-based derivational rules. The notion that stems differ from each other in form but not in semantic or syntactic content, and the idea that the class of derivational rules do not apply to lexemes (items which include specification of that
semantic and syntactic content), are both based on the following considerations.

There are cases where a derivational rule affixes material to a "passive" stem (Stem 3), but in which the meaning of the passive verb lexeme is not part of the meaning of the derived word:

1. See Chapter VII for evidence that Stem 3 is the base of these derivatives.
There is thus no particularly passive meaning in any of these derived nouns, clearly based on Stem 3 (traditionally termed the passive stem), and no semantic reason to claim that nouns in -simo are derived from passive verb lexemes.

There are also cases where a noun is derived from Stem 3, in which the associated verb has no passive at all. Thus stems which do not appear in the paradigm of the associated verb lexeme must nonetheless be listed in the lexicon. Thus there must be a class of derivational rules which refers specifically to stems, rather than to (the inflectional forms of) some lexeme, since there are no inflectional forms of these verbs which make use of Stem 3.

Note, in these examples that the derived noun lacks the s of the Stem 2, and is the expected form for Stem 3 (see the rule in Chapter VI):

2.a vomvó     "to hum" IV  
vom-     vomvis-  
STEM 1     STEM 2

vomvitis  "buzzer" N

2.b kolimbó     "to swim" IV, no passive verb  
kolimb-     kolimbis-  
STEM 1     STEM 2

kolimbitís  "swimmer"
Such rules are termed here stem-based derivational rules. They take stems as input and give lexemes as output.

Examples like 2.a and 2.b, in which the stem appearing in derived forms does not appear at all in the paradigms of the related active verbs, could lead to an analysis in which e.g., active verb lexemes were assigned Stem 3; and thus Stem 3 is part of such lexemes' lexical list. Such an analysis is possible, since stems have no semantic or syntactic content (1.a and 1.b), so Stem 3 is not semantically passive and perfective, and Stem 2 is not semantically active and perfective. In this analysis, stem formation rules apply to lexemes, as displayed in Figure 1 in Chapter I.

B.2 Root-based Derivation

Another analysis is possible - namely, that stem formation rules apply to ROOTS. Roots are forms with no separable or alterable morphophonemic content, and with underspecified semantic and syntactic content. In particular, the part of speech class and subcategorization features of roots are not specified. Roots are thus minimal lexical entries, equivalent in form to basic stems, in Zwicky's (1989) terminology, but they are not lexemes since they lack full specification of required syntactic and semantic information. I here call these items roots or
basic stems indiscriminately with the understanding that basic stems are underspecified in the way detailed here.

On this analysis, the active verb lexemes *kolimb-* "swim" and *vomy-* "hum" have stems by virtue of association with roots; roots have both stems and lexemes associated with them by stem formation rules. Stems are then associated with lexemes produced by a class of zero-derivation root-based derivational rules, by virtue of association with the same root. Under this analysis, lexemes do not require stems which never appear in their paradigms. Rather, stems are associated with lexemes on the basis of (1) association with a root; and (2) syntactic and morphological class (i.e., active verbs are assigned Stems 1 and 2; passive verbs are assigned Stems 1, 2, and 3; nouns in -ma also have stem -mat.

Root-based derivational rules produce actual lexemes from roots. Such root-based derivational rules include the rules which produce active and passive verb lexemes, respectively, from roots. Both the active and the passive verb rules are zero-derivation rules, since they involve no phonological operations at all; they do, however, assign part of speech and inflectional class (active or passive), among other things, with the result that passive verb lexemes have passive morphology, while active verbs have active morphology. As discussed in Chapters IV and V, verbs
which belong to the morphologically passive class typically, but not always, have subcategorization and semantic requirements such that their subjects are not agents, while active verb subjects typically, but not always, are agents. Other zero-derivation rules will assign roots to noun or adjective paradigms and meanings, often from the same roots that give active or passive verbs.

The basic meaning assigned to roots will often (if not always) make one part of speech, or, for verbs, one voice, semantically basic. E.g., mavr- root meaning "black", is semantically basically an adjective. Such relations between root meaning and "basic" part of speech are often difficult to determine:

3. ROOT ROOT-based Lexemes

<table>
<thead>
<tr>
<th>tim-</th>
<th>tim- -V</th>
<th>&quot;honor&quot;</th>
<th>(e.g., timó)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;honor&quot;</td>
<td>tim- -N</td>
<td>&quot;honor&quot;</td>
<td>(e.g., timí)</td>
</tr>
</tbody>
</table>

Even when the root meaning is apparently more appropriate to a verb than a noun, it does not follow that the noun lexeme is morphologically derived from the verb:
4. **ROOT**  

**ROOT-based Lexemes**

<table>
<thead>
<tr>
<th>Vraf-</th>
<th>&quot;write&quot;</th>
<th>Vraf-</th>
<th>&quot;write&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vraf-</td>
<td>-V &quot;write&quot;</td>
<td>(e.g., vráfo)</td>
<td></td>
</tr>
<tr>
<td>Vraf-</td>
<td>-N &quot;write&quot;</td>
<td>(e.g., vráf)</td>
<td></td>
</tr>
</tbody>
</table>

Other root-based derivational rules do attach morphological material (generally suffixes):

5. **ROOT**  

**ROOT-based Lexemes**

5.a mavr-  

"black"  

mávros -ADJ "black"  

(mzero-derivation)

mavriz- -V "blacken"  

(e.g., mavřizo, mavřizome)

5.b qim-  

"memory"  

qim- -V "remember"  

(e.g., qimáme)  

(zero-derivation)

5.c var-  

"heavy"  

var- -ADJ "heavy"  

(e.g., varós)  

(zero-derivation)

var- -V (varéme  

"be bored")

varen -V (varéno  

"be weighted")

The output of non-zero root-based derivational rules can be the input to zero-derivation root-based processes as well; the output of non-zero root-based derivational rules might thus be called *derived roots*.
Thus this class of derivational rules do not produce fully specified lexemes, but rather new roots (with, in this case, a basic verb meaning). I choose this analysis over one in which only fully specified lexemes are the input to stem formation, inflectional, and derivational rules for several reasons.

First--a minor point--, it is not necessary to postulate for a lexeme the existence of stems which do not appear in the paradigm of that lexeme. Instead, stems are assigned to lexemes on the basis of root and word class.

Second, active-passive pairs are related by derivation from the same root, not by derivation of passive from active (or vice-versa), thus allowing the existence of one member of the pair without the other (see Chapter IV for many examples). Active verbs with no corresponding passive verbs are permitted - the passive rule failed to apply to the root; passive verbs with no corresponding actives are
permitted - the active rule failed to apply. This is particularly important in those cases in which derivation from a root is semantically and morphologically feasible by the application of different rules, but in which derivation of the passive from the active is both semantically and morphologically idiosyncratic:

7.a ROOT LEXEME

\( \text{šim} \) Active verb \( \text{šímízo} \)
"memory" "remind"
(by non-zero root-based derivation - suffix -iz)

Passive verb \( \text{šim-áme} \)
"remember"
(by zero-derivation - passive rule)

7.b ROOT LEXEME

\( \text{var-} \) Active verb \( \text{varéno} \)
"heavy" "weigh down, weigh"
(by non-zero root-based derivation - suffix -en)

Active verb \( \text{varó} \)
"strike"
(by zero root-based derivation - active rule)

Passive verb \( \text{variéme} \)
"be bored"
(by zero root-based derivation - passive rule)
B.3 Lexeme-based Derivational Rules

A third class of derivational rules, called here lexeme-based derivational rules, derive new lexemes from fully specified lexemes. The prefixation and compounding rules of Chapter VII are of this type. Such rules require inputs with specified syntactic (word-class), semantic, and morphological features. Thus alilo- and afto- prefixation require semantically and syntactically specified passive verbs as their input - that is, they require lexemes as input. They thus also produce new lexemes/basic stems which are input to stem formation rules. Generally, the stem formation rules provide the same allomorphy for prefixed lexemes and their unprefixed sources. There are some cases where this is not the case: e.g., lexemes with prefix + le(γ)- "say", have Stem 2 as leks-, rather than the (i)-p- of the unprefixed lexeme. Stems produced by this second cycle of stem formation can be input to stem-based derivational rules also; the -ia rule of Chapter VI is clearly of this type, since it only applies to prefixed stems.

It seems possible to me that only zero-derivation and lexeme-based derivation in Greek actually produce lexemes, and that stem-based derivation produces derived roots, which like basic roots, are underspecified. In support of this
possibility note that stem-based derived neuter nouns in -ma (e.g., má6i-ma "lesson", Stem 4 "learn" = ma6i-, plural nominative ma6f-ma-ta) have the allo-stem in -mat- for inflectional purposes, just as some basic nouns do (e.g., éma "blood", singular; émata, plural). Note however, that the -ma rule assigns at least part of speech. Lexeme-based derivational rules might be expected to produce derived roots (basic stems) as well, so that only roots (derived or basic) are input to stem formation.

C. Summary of Lexical Rule Types

The following rule types have been discussed in this chapter:
Table 17: LEXICAL RULE TYPES

<table>
<thead>
<tr>
<th>RULE TYPE</th>
<th>INPUT</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Root-based</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Zero-</td>
<td>root/basic</td>
<td>lexemes</td>
</tr>
<tr>
<td>(e.g., Passive,</td>
<td>stem</td>
<td></td>
</tr>
<tr>
<td>Active)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Non-zero</td>
<td>root/basic</td>
<td>root/basic</td>
</tr>
<tr>
<td>(e.g., -iz,</td>
<td>stem</td>
<td>stem</td>
</tr>
<tr>
<td>-en-)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Stem-based</td>
<td>stem</td>
<td>lexeme</td>
</tr>
<tr>
<td>(e.g., -ia,</td>
<td>lexeme</td>
<td>or</td>
</tr>
<tr>
<td>-simo)</td>
<td></td>
<td>root/basic</td>
</tr>
<tr>
<td>3. Lexeme-based</td>
<td>lexeme</td>
<td>lexeme</td>
</tr>
<tr>
<td>(e.g., alilo-,</td>
<td></td>
<td>or</td>
</tr>
<tr>
<td>-afto)-</td>
<td>root/basic</td>
<td>root/basic</td>
</tr>
<tr>
<td></td>
<td>stem</td>
<td>stem</td>
</tr>
</tbody>
</table>

Stem Formation     root/basic       stem
Inflection         stems of          inflected
                   lexemes             forms

Only lexeme-based derivation corresponds precisely to the usual conception of derivational rules in which derivational rules operate on words to give other words, and, as I indicated in VIII.B.3, there is at least an economy motivation for taking the output of lexeme-based derivational rules as roots/basic stems. Rules of all types
where I’ve indicated that a root/basic stem or a lexeme is the output can in turn be the input to stem formation rules, and, at least in some cases, to other derivational rules. All lexemes, and their associated stems are the input to inflectional rules.

Interaction between rule types is as follows:
D. Concluding Remarks

It must be emphasized that the conclusion that passive is a derivational rather than an inflectional category and the resulting notion of the structure of the lexicon presented in this chapter is a surprising one. As I have mentioned a number of times in this dissertation, all treatments of Greek of which I am aware assume the inflectional status of the category passive. The conclusion presented here is the result of a close examination of a relatively large number of lexical verbs in Greek; it is significantly not the product of introspection by a native speaker or of consideration of standard examples. I maintain that the possibility of my surprising conclusion depends on the methodology employed here, but rarely employed in theoretical linguistics (exceptions include Gross [1979] on complementation in French, Postal [1974] on raising verbs in English, Dowty [1979] on object deletion and dative shift). This methodology can be expected to be particularly important in considerations of whether some phenomenon in some language ought to have a syntactic or lexical explanation, since the amount of exceptionality is of primary importance, but speakers seem to have no notion
of the extent of exceptions to a given generalization. The results of such a close examination such as that presented here suggest that similar examinations be undertaken in other cases where the possibility of a lexical analysis exists, or is likely. Such cases at least include those in which the operation of the rule involves change in subcategorization (relation-changing rules), since, given the discussion of schematization presented in Chapter V, such changes can be viewed as alterations in the valency of a single lexical item or of a larger phrase. I suspect that cases like Greek, where such subcategorization changes are marked by "messy morphology" are particularly likely to be appropriately analyzed as lexical, since they are, I assume, more likely to be learned as separate words.
BIBLIOGRAPHY


