

# VOICE FROM SYNTAX TO SYNCRETISM

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Lefteris Paparounas

## ACKNOWLEDGMENT

A dissertation is (at most) completed, but never really complete. As it happens, acknowledgment sections often have the same fate, and this one is no exception: this section is not quite done, even though I have been wrestling with the wording here for longer than I have known what the dissertation was going to be about. The fact that the following paragraphs nonetheless continue to fall short of my expectations is, if anything, testament to how big of a debt of gratitude I owe to those listed here.

My dissertation committee is a group of people that I've often referred to as the *S-side dream team*. There's a veritable sea of things to be grateful to each of them for; here, I'll do my best to scratch away at the surface.

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All errors, of course, are my own.

**ABSTRACT**  
VOICE FROM SYNTAX TO SYNCRETISM

Lefteris Paparounas  
David Embick

This dissertation provides an investigation of the syntactic, morphological and interpretive properties of voice on the basis of a number of case studies from Modern Greek. The focus throughout is on diagnosing aspects of the syntax of argument introduction, and on reconciling these with the morphology and interpretation of argument relations. In so doing, I show that the core properties of the Greek voice system can be insightfully captured under an understanding of grammatical architecture where morphology is both syntactically informed and autonomous in the way it interprets and adjusts the output of the syntax.

The dissertation takes as its starting point a central fact concerning the realization of voice in Greek, namely, *Voice syncretism*, whereby a number of arguably distinct argument-structural configurations opposed to the active syncretize into the same set of morphological exponents. In Chapter 2, I show that the analysis of this phenomenon is illuminated by that of a second crucial fact of Greek verbal morphology, namely, Voice displacement: though we expect Voice distinctions to reside low in the syntactic structure, in Greek they appear indexed on word-peripheral affixes. A sharpened understanding of the two phenomena makes it possible to defend and make precise an analysis that links nonactive morphology to the absence of a thematic subject, and that affords nonactive, but not ‘active’, a privileged status at PF.

This perspective on the origins of Voice syncretism raises vexing questions for the syntax of verbal reflexives, one of the syncretizing categories *par excellence*. Verbal reflexives and reciprocals systematically bear nonactive morphology even though, unlike passives and their ilk, their surface subject is clearly linked to the agent role. In Chapter 3, I resolve the puzzle by showing that Greek evidences true unaccusative reflexives, whereby a structure employing a single syntactic argument originating low in the verbal phrase yields a reflexive interpretation. The resulting analysis sheds light on the nature of reflexive interpretations broadly construed, and on the differences between pronominal and verbal reflexivity more specifically.

Finally, Chapter 4 takes up the issue of argument introduction in (stative) passives in Greek. After establishing that eventive passives bear the structural profile that ensures their systematic participation in the

syncretism, I deploy eventive passives as a comparandum against which to probe the issue of inheritance of verbal properties in the stative passive. I uncover a range of novel generalizations that suggest the event and argument structure of the stative passive is distinguished from the eventive, and argue that the contrasts follow if Greek stative passives instantiate a ‘small’ mixed category, effectively an instance of complex head formation.



# TABLE OF CONTENTS

<b>ACKNOWLEDGMENT</b>	<b>iii</b>
<b>ABSTRACT</b>	<b>vii</b>
<b>LIST OF GLOSSING ABBREVIATIONS</b>	<b>xiii</b>
<b>1 INTRODUCTION</b>	<b>1</b>
1.1 PROLEGOMENA: WHAT AND WHY . . . . .	1
1.1.1 What this dissertation is about . . . . .	1
1.1.2 Why morphology? Why Greek? . . . . .	2
1.2 BRIEF THEORETICAL BACKGROUND . . . . .	4
1.3 ABOUT THE DATA IN THIS DISSERTATION . . . . .	7
<b>2 REALIZING VOICE</b>	<b>8</b>
2.1 INTRODUCTION . . . . .	8
2.2 UNDERSTANDING VOICE DISPLACEMENT . . . . .	10
2.2.1 Segmentation . . . . .	13
2.2.2 Morphological intervention and ‘active’ as the default . . . . .	18
2.2.3 Derivations: Interleaving specificity and locality . . . . .	23
2.2.4 Interim summary . . . . .	26
2.3 AN ANALYSIS OF VOICE SYNCRETISM . . . . .	26
2.3.1 Distributing nonactive morphology . . . . .	26
2.3.2 The generalization: Nonactive as a natural class . . . . .	31
2.3.3 Beyond the simple generalization: Two surface counterexamples . . . . .	37
2.3.3.1 Unmarked unaccusatives . . . . .	38
2.3.3.2 Deponents . . . . .	43

2.3.3.3	Implications: On the status of ‘active’, ‘nonactive’, and ‘unmarked’ . . . . .	49
2.3.4	Implementing the syncretism: Mediation and diacritics . . . . .	55
<b>3</b>	<b>REFLEXIVES AND VOICE</b>	<b>59</b>
3.1	INTRODUCTION . . . . .	59
3.1.1	Why reflexives? . . . . .	59
3.1.2	Starting insight: The unaccusative analysis of reflexives . . . . .	64
3.1.3	Preview of the analysis and roadmap . . . . .	66
3.2	GREEK REFLEXIVES: BASIC PROPERTIES . . . . .	67
3.3	DIAGNOSING UNACCUSATIVE SYNTAX . . . . .	72
3.3.1	Intransitivity . . . . .	74
3.3.1.1	Proxy readings . . . . .	75
3.3.1.2	Gapping . . . . .	76
3.3.1.3	Comparative ellipsis . . . . .	78
3.3.1.4	Focus alternatives . . . . .	80
3.3.1.5	Reciprocal scope . . . . .	83
3.3.1.6	<i>De re</i> . . . . .	86
3.3.1.7	Summary and discussion: Approaching intransitive reflexives . . . . .	88
3.3.2	Unaccusativity . . . . .	90
3.3.2.1	Predicative complements . . . . .	90
3.3.2.2	Event nominals . . . . .	94
3.3.2.3	Agent nominals . . . . .	96
3.3.2.4	Ethical genitives . . . . .	98
3.3.2.5	Summary of lower origin diagnostics . . . . .	100
3.3.2.6	Prefixal reciprocals and natural reflexives are unaccusative, too . . . . .	101
3.4	THE BASIC PROPOSAL: REFLEXIVE VOICE . . . . .	103
3.5	REFLEXIVE SEMANTICS . . . . .	104
3.5.1	Thematic restrictions on reflexivization . . . . .	105
3.5.2	Against anti-assistivity . . . . .	110
3.5.3	Against identifying variables: The importance of proxies . . . . .	115
3.6	ON TWO ALTERNATIVE ANALYSES . . . . .	122
3.6.1	‘Incorporation’? . . . . .	122
3.6.2	Expletive analysis? . . . . .	127
3.7	AFTO- NOMINALS . . . . .	133
3.8	CONCLUDING REMARKS: A ‘LEXICAL’ SOLUTION? . . . . .	136
<b>4</b>	<b>(STATIVE) PASSIVES</b>	<b>139</b>
4.1	INTRODUCTION AND ROADMAP . . . . .	139

4.2	ON CERTAIN CORE PROPERTIES OF THE GREEK EVENTIVE PASSIVE . . . . .	140
4.2.1	The status of the implicit agent . . . . .	142
4.2.1.1	Depictives . . . . .	146
4.2.1.2	Binding . . . . .	149
4.2.2	On the status of the <i>by</i> -phrase . . . . .	152
4.2.3	Broader discussion . . . . .	156
4.3	STATIVE PASSIVE: BACKGROUND POINTS . . . . .	158
4.3.1	The broader stakes: Three questions on mixed categories . . . . .	158
4.3.1.1	Empirical question: (Non)-inheritance of verbal properties . . . . .	160
4.3.1.2	Analytical question: Whence (non-)inheritance? . . . . .	161
4.3.1.3	Diagnostic question . . . . .	162
4.3.2	Return to stative passive: Roadmap . . . . .	163
4.3.3	Background on (Greek) stative passives . . . . .	168
4.3.3.1	Basic properties . . . . .	168
4.3.3.2	<i>-men-</i> versus <i>-t-</i> . . . . .	170
4.3.4	A further refinement: Target vs resultant states . . . . .	176
4.3.4.1	The reasoning . . . . .	177
4.3.4.2	Against the structural ambiguity account . . . . .	179
4.4	EVENTIVE $\neq$ STATIVE PASSIVE: MISMATCHES . . . . .	184
4.4.1	Approximative modification . . . . .	185
4.4.1.1	A (non-)ambiguity . . . . .	186
4.4.1.2	Approximatives in activity statives . . . . .	189
4.4.1.3	A counterfactual modifier . . . . .	190
4.4.1.4	Explaining the contrast . . . . .	190
4.4.2	Idioms . . . . .	193
4.4.3	Asymmetries in Voice reversals: Ingestives . . . . .	196
4.4.3.1	The pattern . . . . .	197
4.4.3.2	Deriving the pattern . . . . .	199
4.5	BUILDING STATIVES ‘SMALL’ . . . . .	206
4.5.1	Structure . . . . .	206
4.5.2	Interpreting the small structure . . . . .	208
4.6	WHAT ABOUT AGENT-ORIENTED MODIFIERS? . . . . .	210
4.6.1	A correct prediction: Reflexivization . . . . .	219
4.6.1.1	Excursus: <i>-t-</i> is different . . . . .	222
4.7	FOR THE FUTURE: ATTRIBUTIVE/PREDICATIVE CONTRASTS . . . . .	225
4.7.1	The basic contrast . . . . .	226
4.7.2	Bringing in polydefinites . . . . .	228
4.7.3	Some first conclusions . . . . .	232

<b>5 CONCLUSION</b>	<b>233</b>
5.1 SUMMARY OF FINDINGS . . . . .	233
5.2 RECURRING THEMES . . . . .	234
5.2.1 Syntactic versus morphological relations . . . . .	234
5.2.2 Two things versus one . . . . .	236
5.2.3 'Lexical' versus syntactic solutions . . . . .	237
<b>BIBLIOGRAPHY</b>	<b>238</b>

# LIST OF GLOSSING ABBREVIATIONS

1	first person
2	second person
3	third person
ACC	accusative
ACT	active
ADV	adverbial
AGR	agreement
ASP	aspect
COMP	complementizer
DAT	dative
DEF	definite
DEM	demonstrative
DIM	diminutive
F	feminine
FUT	future
GEN	genitive
GER	gerund
IMP	imperative
IPFV	imperfective
M	masculine
N	neuter
NACT	non-active
NEG	negative
NMLZ	nominalizer
NOM	nominative
NPST	nonpast
PASS	passive
PFV	perfective
PL	plural
POSS	possessive

PST past  
PTCP participle  
RECIP reciprocal  
REFL reflexive  
SG singular  
TNS tense  
VBZ verbalizer

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# INTRODUCTION

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1.1	PROLEGOMENA: WHAT AND WHY . . . . .	1
1.2	BRIEF THEORETICAL BACKGROUND . . . . .	4
1.3	ABOUT THE DATA IN THIS DISSERTATION . . . . .	7

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## 1.1 PROLEGOMENA: WHAT AND WHY

### 1.1.1 WHAT THIS DISSERTATION IS ABOUT

Two recent developments in generative theories of verbal argument structure form the point of departure for the present work. Though the developments themselves are particular to these theories, they are motivated largely by important empirical discoveries that any theory of the relevant phenomena ought to address.

The first development is the *delexicalization* of argument relations, that is, the idea that the syntactic introduction of (at least some) arguments is dissociated from the locus of lexical information.

In particular, I take as a point of departure the idea that external arguments are introduced by a dedicated functional projection in the verb phrase (Bowers 1993; Chomsky 1995; Harley 1995; Kratzer 1996), which I follow current work in labeling as Voice. I take this projection to also be the locus of voice alternations, with e.g. Alexiadou, Anagnostopoulou, and Schäfer (2015), Embick (1997, 1998), Kratzer (1996), Legate (2014), Legate, Akkuş, Šereikaitė, and Ringe (2020) and *pace* e.g. Collins 2005; Merchant 2013 and to some extent Bruening 2013. I also follow recent work arguing that Voice must be distinguished from the projection

implicated in the introduction of causative semantics (Alexiadou, Anagnostopoulou, & Schäfer 2006, 2015; Harley 2013; Legate 2014; Pyllkänen 2008; Schäfer 2008b). I term the the latter projection *v*, taking it purely for concreteness that the various functions also associated with this label are bundled together, though little would change if we took them to be split in any of various conceivable ways; these additional functions of relevance here include verbalization of category-neutral Roots (e.g. Harley and Noyer 2000; Marantz 1997); and eventivity/stativity (e.g. Embick 2004a).

The second, and related, development concerns the relationship between voice syntax on the one hand, and the morphology of argument structure alternations on the other. Delexicalized theories of argument structure provide a natural locus for the the morphology that accompanies valency-affecting phenomena. Under such theories, voice morphology need not be understood as a syntactic argument in itself (see e.g. Baker, Johnson, and Roberts 1989; Collins 2005 on passives), or as the formal corollary of the application of a lexical rule (see e.g. Bresnan 1982 on passives). Rather, a theory with argument-introducing heads makes available an approach where voice morphology can be understood as the morphological instantiation of these syntactic entities. Considering this view of voice morphology in more detail forms the point of departure for the present work.

### 1.1.2 WHY MORPHOLOGY? WHY GREEK?

A delexicalized theory of argument structure leads to two expectations concerning voice morphology. Firstly, as already taken for granted above, if the syntax includes argument-introducing projections, then we expect to be able to find ‘special’ exponents associated with distinct argument structures. The second expectation requires some background. It is standardly assumed that voice distinctions reside low in the syntactic structure, see references on this issue above. If this is so, then, by the Mirror Principle (Baker 1985), we expect voice morphology to surface in ‘inner’ positions of the word.

Examples such as (1), from Modern Greek, *prima facie* confirm both expectations. The active syntax (1a) is set apart from the passive (1b) by means of a difference in verbal form, in this case by means of the bolded exponents, left unglossed for now. Moreover, these exponents seem to occur in ‘inner’ portions of the word, in this case between the Root and the suffixes expressing subject agreement. From the perspective of the expectations just discussed, then, all seems well in Greek: we find ‘special’ morphology associated with argument-structural alternations, and this morphology surfaces close to the Root.

- (1) a. Sindoma, i                    ylosoloji                    θa anaptix-    s- un perierjes                    theories.  
 soon        the.NOM.PL linguist.NOM.PL FUT  $\sqrt{\text{DEVELOP}}$  S 3PL strange.ACC.PL theory.ACC.PL  
 ‘Soon, linguists will develop strange theories.’
- b. Sindoma, perierjes                    theories                    θa anaptix-    **θ**- un (apo ylosologyus).  
 soon        strange.NOM.PL theory.NOM.PL FUT  $\sqrt{\text{DEVELOP}}$  **θ** 3PL from linguist.PL  
 ‘Soon, strange theories will be developed by linguists.’



In other languages, cases like (1) may well illustrate the full picture concerning voice morphology, but this is not the case in Greek. Upon closer investigation, we encounter generalizations ostensibly in tension both with the ‘specialness’ of voice morphology, and with its expected positioning close to the Root.

Firstly, the morphology associated with passives (1b) is in fact also associated with other argument structures; (2) is a first example showing that the same morphology is found in (some) unaccusatives, though, as we will see in Chapter 2, the overall distribution encompasses other categories as well. At a minimum, then, (1b) and (2) together suggest that the morphology in question is not that ‘special’ after all: in this case, in lieu of a three-way active/passive/unaccusative split in the morphology, we find what seems to be a two-way active/nonactive distinction.

- (2) Sindoma, ta fita mu θa anaptix- **θ**-un (apo mona tus).  
 soon the.NOM.PL plant.NOM.PL 1SG.GEN FUT  $\sqrt{\text{DEVELOP}}$  θ 3PL from alone.PL 3PL.GEN  
 ‘Soon, my plants will grow (by themselves).’

Secondly, problems also arise for the positioning of the voice morphology. Though it seems that it appears where we expect it to, per Mirror Principle considerations, in (2) (a conclusion to be revised itself in Chapter 2), this is not so in (3). Here, though we no longer find the bolded exponents of (2), the verbal morphology continues to index the active/nonactive distinction. But the location of this indexing has changed: in (3), the active/nonactive distinction appears on the agreement suffixes, which must be associated with syntactic projections higher than Voice, and which we know to surface word-peripherally elsewhere, e.g. in (2).

- (3) a. I ylosoloji sineça anaptis- **un** perierjes theories.  
 the.NOM.PL linguist.NOM.PL constantly  $\sqrt{\text{DEVELOP}}$  3PL strange.ACC.PL theory.NOM.PL  
 ‘Linguists constantly develop strange theories.’  
 b. Perierjes theories anaptis- **onde** sineça (apo ylosologyus).  
 strange.NOM.PL theory.NOM.PL  $\sqrt{\text{DEVELOP}}$  3PL.NACT constantly from linguist.PL  
 ‘Strange theories are usually developed by linguists.’  
 c. Kapça fita anaptis- **onde** apo mona tus.  
 some.PL.NOM plant.PL.NOM  $\sqrt{\text{DEVELOP}}$  3PL.NACT from alone.PL 3PL.GEN  
 ‘Some plants grow on their own.’

From such facts, superficially examined as they are at this stage, we could draw two kinds of preliminary conclusions. It could be the case that the morphology here should be taken at face value, suggesting a somewhat exceptional syntax (in particular, one where the locus of voice distinctions can be unexpectedly high). Alternatively, we might decide that, in tension with a what-you-see-is-what-you-get approach, facts like the ones just surveyed merely illustrate the need for an articulated syntax-morphology mapping, one capable of ensuring that Voice distinctions can be neutralized at the point of realization, and that they can be expressed

peripherally even though their syntactic locus is low.

The dissertation defends a solution of the latter kind. The two phenomena at hand – *Voice syncretism* and *Voice displacement* – follow from a fully regular syntax, one where different kinds of argument-structural distinctions can be made low in the syntax, coupled with an elaborated morphology that, though fed by the syntax, can make decisions of its own. This view of the syntax/morphology interaction in the context of a delexicalized view of argument structure is the main contribution of the dissertation.

In reaching this conclusion, I chart the path from the syntax of Voice to its realization and interpretation across a range of case studies in Greek. Empirically, this project necessitates coming to grips with the various complexities raised by the realization of Voice in the language: as just discussed, distinct argument-structural configurations simply do not come labeled as such on the surface, and interpretive contrasts, sometimes subtle in themselves, become all the more difficult to detect when they are not signaled by differences in form. As such, I deploy a range of morphological, morphosyntactic and interpretive diagnostics throughout the dissertation, arriving at a number of novel generalizations concerning the properties of voice morphology, verbal reflexives, and stative passives, in the language.

## 1.2 BRIEF THEORETICAL BACKGROUND

In this section, I make precise certain background points crucial for the discussion to follow. I stress that the theoretical overview presented here is in no sense comprehensive, bibliographically or otherwise. Instead, the aim is to make explicit in a selective fashion certain specific assumptions, so that these specific points can be referred to when necessary in the main body of the dissertation.

I assume a version of Distributed Morphology (DM; Embick 2010; Embick and Noyer 2001; Halle 1990; Halle and Marantz 1993; Harley and Noyer 1999; Noyer 1992, among a great many others), a theory of syntax and morphology that takes as its starting point a specific version of the standard Y-model assumed in generative syntax since Chomsky (1977), one where the functions of the traditional lexicon are distributed across different loci of the grammar.

The primitives which the syntax manipulates in DM are syntacticosemantic features; items such as [+WH], [+D], [-PST]. Some of these, like [+WH], are purely formal, in the sense of driving the syntactic computation (see Chomsky 1995); others are additionally potentially relevant at the level of interpretation, such as [-PST]. Within DM, the term *morpheme* is sometimes reserved for a technical usage, referring specifically to (bundles of) features. I will adhere to this practice here, employing the more neutral term *exponent* to refer to the piece of phonology that comes to be associated with a given morpheme.

A central thesis of the theory is that the features manipulated by the syntax are *abstract*, namely, phonology-free. Morphemes come to be associated with exponents only at the PF interface, by a process known as Vocabulary Insertion. The devices that govern the association of morphemes with exponents are called Vocabulary Items, notated as in (4). (4a) is an instruction to imbue the feature [+ $\alpha$ ] on head X with the phonology /a/

when local to some feature  $[-\gamma]$ . (4b) is a more general instruction to pronounce the same element with the phonology /b/. The competition between Vocabulary Items is adjudicated by means of the Elsewhere Principle (see esp. Halle 1997), such that more specific Vocabulary Items are selected over more general ones as long as their context is met.

- (4) a.  $[+\alpha]_X \Leftrightarrow /a/ / [-\gamma] \_$   
 b.  $[+\alpha]_X \Leftrightarrow /b/$

I assume that the targets of Vocabulary Insertion are features on *heads*, with much work in DM (but for different perspectives, see e.g. Svenonius 2012, Caha 2018, and see Embick 2017 for focussed discussion).

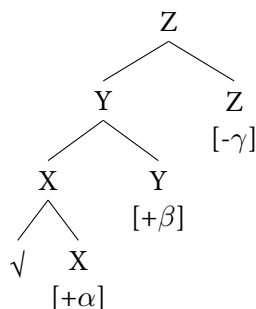
Two specific assumptions on Vocabulary Insertion are crucial to the discussion in Chapter 2. Firstly, I take Vocabulary Insertion to be *additive*, not *replacive*; in other words, association of an exponent like /a/ with a feature like  $[+\alpha]$  via a Vocabulary Item like (4a) does not involve overwriting of the morpheme by the exponent, but rather addition of the exponent to the morpheme. This requirement can be formalized in different ways, for instance by taking morphemes to always bear a variable that is itself replaced by exponents (Embick 2015); the details are not central here. What is crucial, however, is that only a replacive view will correctly predict certain kinds of allomorphic interactions, involving the capacity of a given morpheme to be referred to for the purposes of (non-phonologically-conditioned) allomorphy after it has undergone Vocabulary Insertion. As far as I can tell, much recent literature in DM has moved away from a replacive view of the kind in e.g. Halle (1990), and towards an additive view, motivated largely by the existence of such interactions; see Gribanova and Harizanov (2017) for one recent case study.

A second assumption concerns the theory of local contexts, that is, the component that would determine, for any structure in which features  $[+\alpha]$  and  $[-\gamma]$  are both contained, whether the two are local enough to each other to ensure insertion of /a/ by (4a). I assume an adjacency condition on allomorphy (see e.g. Allen 1979; Bobaljik 2012; Embick 2003, 2010; Siegel 1978), such that  $[+\alpha]$  and  $[-\gamma]$  must be adjacent heads in a given structure in order for the latter to successfully condition the shape of the former. I remain neutral in principle as to whether adjacency is defined linearly (e.g. Ackema & Neeleman 2003; Arregi & Nevins 2012; Embick 2010; Ostrove 2018) or derives from a structural condition (e.g. Adger, Béjar, & Harbour 2003; Bobaljik 2012), with the Greek facts approached in Chapter 2 not necessarily being probative in this respect (see discussion in Paparounas 2023).

Whenever necessary to illustrate morphological derivations in detail, however, I will use technology assuming a linear adjacency condition and the overall system in Embick (2010), for concreteness. The assumptions here will involve, firstly, that a privileged object at PF is the morphological word (m-word; Embick and Noyer 2001), effectively a (complex) head as in (5), which defines a (maximal) domain for different PF-relevant processes (see also discussion of complex head formation in Chapter 4). Secondly, I will assume that these structural representations are linearized into pairwise concatenation statements like the one in (6),

which states that the Root is concatenated with X, X with Y, and so on. It is this type of representation that is targeted by Vocabulary Insertion, constrained by the adjacency condition, which can be stated simply as the assumption that allomorphic conditioning is only possible under concatenation (see Embick 2010).

(5)

(6)  $\sqrt{\wedge} X_{[+\alpha]}, X_{[+\alpha]} \wedge Y_{[+\beta]}, Y_{[+\beta]} \wedge Z_{[-\gamma]}$ 

A final crucial assumption regarding allomorphy concerns the status of null exponents. I will take it that null nodes potentially have a special status, in being able to be transparent for the purposes of allomorphy; Greek provides good evidence for this position (see Paparounas (2023) and the brief overview of one of the case studies thereof in Chapter 2). To implement this potential transparency of null nodes, I will make use of the mechanism of Pruning (Embick 1995, 2003, 2010; Paparounas 2023). Pruning applied to a null exponent removes the morpheme and the exponent from the concatenation statement, and triggers a recomputation of the concatenation relations, with the result that two nodes previously separated by a null node are now in the same concatenation statement. For concrete illustration, assume that (6) has undergone insertion up to Y, as in (7) (assuming Root-outwards insertion; Bobaljik 2000), where the exponent of Y is null: if Pruning applies to Y, it will have the effect schematized in (8).

(7)  $\sqrt{/\pi/} \wedge X_{[+\alpha]/a/}, X_{[+\alpha]/a/} \wedge Y_{[+\beta]/\emptyset/}, Y_{[+\beta]/\emptyset/} \wedge Z_{[-\gamma]}$ (8)  $X_{[+\alpha]/a/} \wedge Y_{[+\beta]/\emptyset/}, Y_{[+\beta]/\emptyset/} \wedge Z_{[-\gamma]} \rightarrow X_{[+\alpha]/a/} \wedge Z_{[-\gamma]}$ 

Two aspects of Pruning merit further discussion. The first concerns the fact that Pruning is but one of many conceivable implementations of zero transparency, and is certainly a radical one. Pruning-based treatments of zero transparency are stronger than an account that affords null nodes their special transparent status by mere stipulation. To see why, consider the fact that Pruning is, by definition, a destructive operation: once a node is Pruned, it is (presumably) absent from the structure for good. Once embedded in a serial insertion architecture, this definitive nature of Pruning seems capable of predicting bleeding interactions, whereby Pruning of a node at a certain derivational step makes it impossible to refer to that node's content at any subsequent step of the derivation. Though I do not dwell on this aspect of Pruning here, bleeding interactions of precisely this kind are invoked as an argument in favor of Pruning and against weaker ways of encoding transparency in Paparounas (2023).

As to the second important question of which zeroes are Pruned, I adopt the view in Paparounas (2023), according to which Pruning is a last resort operation that applies, but does not necessarily succeed, whenever a VI demands access to a context not available in the current concatenation statement. Paparounas (2023) argues that the overall view of Pruning, as both a last resort and a destructive removal operation, seems to have some merits; I merely take this view for granted here in the interest of concreteness.

As for the interpretive branch, I assume a view of the interpretation of syntactic structure where the denotations of terminal nodes are typed functions noted in the lambda calculus. Following Heim and Kratzer (1998), Functional Application will be taken as the basic compositional rule. I further assume a standard ontology positing domains of entities (type  $e$ ), truth-values (type  $t$ ), and eventualities (type  $s$ ), the latter encompassing both events and states. For convenience, I follow standard practice in reserving variables  $x, y, z$  for entities;  $e, e', e_1, e_2, \dots$  for events; and  $s, s', s_1, s_2, \dots$  for states. I do not systematically notate types as subscripts on variables unless not doing so would result in ambiguity; hence  $\lambda x$  should be read as  $\lambda x_e$  unless otherwise noted.

### 1.3 ABOUT THE DATA IN THIS DISSERTATION

Greek judgments throughout were elicited from native speakers in addition to the native speaker author. There were two primary and two secondary consultants.<sup>1</sup> All examples have been checked with at least the primary consultants, and many with all four; additional judgments have been obtained in many cases from Greek-speaking linguists at conferences and through personal communication. Wherever variation between speakers was found, this is noted. As is common, I provide minimal pairs whenever possible, and use diacritics such as asterisks (\*) and question marks (?) to illustrate relative contrasts in acceptability, rather than absolute judgments. Examples taken from previous work retain the judgment diacritic of the original unless the judgment in question was found not to replicate. Finally, Greek examples are given transcribed in (broad) IPA transcription; examples from other languages use the Roman alphabet.

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<sup>1</sup>I am indebted to Yiannis Dakoumis, Efi Galiatsou, Alex Kalomoiros, and Konstantinos Paparounas, for their judgments.

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# REALIZING VOICE

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2.1	INTRODUCTION . . . . .	8
2.2	UNDERSTANDING VOICE DISPLACEMENT . . . . .	10
2.3	AN ANALYSIS OF VOICE SYNCRETISM . . . . .	26

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## 2.1 INTRODUCTION

As stated in [Chapter 1](#), this dissertation has a dual focus, tackling both the morphology and the syntax of argument structure alternations in Modern Greek. This dual focus is necessitated by the close relationship between these two domains: in Greek verbal morphology is intimately tied to syntactic argument structure.

To see this close connection, consider how syntax and verbal morphology seemingly go together in an active/passive alternation. In an active transitive structure such as (9a), the verb takes on its morphologically *active* form. (9b) is the corresponding passive, and the change in syntax from (9a) to (9b) is accompanied by a change in the shape of the verbal form: in (9b), the verb takes on its *nonactive* form.

- (9) a. I ylosoloji sineça anaptis- un perierjes theories.  
 the.PL.NOM linguist.PL.NOM constantly  $\sqrt{\text{DEVELOP}}$  3PL.ACT strange.PL.ACC theory.PL.ACC  
 ‘Linguists constantly develop strange theories.’
- b. Perierjes theories anaptis- onde sineça (apo ylosoloyus).  
 strange.PL.NOM theory.PL.NOM  $\sqrt{\text{DEVELOP}}$  3PL.NACT constantly from linguist.PL  
 ‘Strange theories are usually developed by linguists.’

Scrutinizing the realization of Voice further, beginning from the simple contrast in (9), reveals the two morphosyntactic puzzles that lie at the core of this dissertation.

A first observation concerns the placement within the verb of the pieces expressing the active/nonactive distinction. As already discussed in [chapter 1](#), we expect the syntactic underpinnings of this distinction to reside low in the syntactic structure; we furthermore expect syntactic lowness to manifest as morphological innerness (the Mirror Principle; Baker 1985). And yet, the Greek active/nonactive distinction is expressed on peripheral affixes, such as the agreement suffixes of (9). This phenomenon – *Voice displacement* – is the topic of [section 2.2](#).

A second observation emerging from (9) concerns the distribution of nonactive morphology. The morphology that realizes passives in (9b) is, in fact, not exclusive to passives, being also recruited to express a range of other structures opposed to the active, including unaccusatives, middles, experiencer verbs, and reflexives/reciprocals. This phenomenon – *Voice syncretism* – is the topic of [section 2.3](#).

Taken together, the analyses of the two phenomena presented below furnish certain important conclusions that crucially inform other parts of the dissertation.

The first conclusion concerns the realization of Voice in the language:

- (10) *The realization of the head Voice*
- a. Voice is always realized as /Ø/ in Greek.
  - b. The feature content of Voice conditions the realization of other, peripheral morphemes.

At a minimum, (10) serves as a useful guide to the reader in parsing the morphology of the verbal forms that recur throughout the dissertation. To classify a given form as active or non-active, one cannot rely on the realization of Voice itself, Voice being consistently zero; instead, one is to track the contextual influence that the featural specification of Voice exerts on the peripheral suffixes expressing aspect, tense and agreement.

In addition to its utility in clarifying that one will know the Voice specification of a given verbal form by the allomorphy displayed by peripheral suffixes, (10) can be taken to emphasize a certain type of abstractness inherent in the system developed below. If (10) is correct, then a node that is realized by means of a zero exponent nonetheless plays a crucial role in determining the realization of the structures in which it is embedded. That this may be so is expected on the framework presupposed and developed here, where the morphosyntactic feature content of a given element is dissociated from its realization. Concretely, it is the featural content of Voice (in particular, the presence/absence of the feature [NACT]) that plays a crucial role in determining the shape of adjacent morphemes; that this same feature happens itself to be realized as /Ø/ is, strictly speaking, a fully orthogonal fact on a Late Insertion-based framework of the kind assumed here. This would not necessarily be so in a less abstract, framework, say, in a framework where the featurally contentful elements were identified with those that are overtly realized (that is, on a ‘no-zero-exponents’ type of theory).

The second conclusion furnished by the discussion in this chapter concerns the distribution of Voice

morphology in the language. In particular, the analysis of Voice displacement developed below enables a particular view of what the role of ‘active’ and ‘non-active’ morphology is in the morphology of Modern Greek. The crucial generalization may be summarized as follows:

- (11) *The distribution of active and non-active morphology*
- a. Non-active exponents are specific, Voice-sensitive realizations of functional morphemes.
  - b. ‘Active’ exponents are not active in any sense; they represent the default realization of the functional morphemes making up the Greek verb.

(11a) is perhaps unsurprising: it states that the exponents marking a given form are nonactive are allomorphic realizations of a given node for the feature [NACT], in line with (10b). But (11b) states that the language’s ‘active’ exponents amount to the elsewhere case, not being Voice-sensitive at all, and instead inserted whenever the context for the insertion of the more specific nonactive exponents is not met.

As will be shown in section 2.2, this latter type of situation, whereby the context for insertion of the nonactive suffixes is not present, can arise in two ways. It can be the case that the relevant feature, [NACT], is simply absent from the structure. It can also be the case, however, that the relevant feature is present in the structure, but inaccessible to the target of allomorphy for reasons of locality. In what follows, it will be shown that the ‘active’ morphology of Greek appears in both types of situations, thus having the distribution of a true default.

That there is no active morphology in the deep sense will be argued to be a fact of some significance, explaining a range of otherwise puzzling facts at the juncture of syntax and morphology in the Greek system. These include the existence of syntactically non-active forms that surface with ‘active’ exponents; the simultaneous existence of unmarked and marked unaccusatives, alongside the total lack of unmarked passives and reflexives; and the existence of deponent verbs, but not their inverse. In terms of the implementation of Voice syncretism defended in section 2.3, the default status of ‘active’ morphology will be crucial in motivating the status of [NACT] as a privative feature, one assigned postsyntactically in a particular structural configuration.

Thus, although Voice displacement and Voice syncretism are superficially unrelated phenomena, the link between them runs deep: as will be argued below, the analysis of Voice displacement reveals a significant fact about what the correct analysis of Voice syncretism must look like, in the form of the default status of ‘active’ morphology.

## 2.2 UNDERSTANDING VOICE DISPLACEMENT

Modern Greek has been at the center of debate on the morphosyntax of Voice ever since at least Rivero (1990), where it was proposed that the language’s nonactive morphology be associated with a functional category Voice immediately dominating the VP. That the voice morphology of languages with Voice syncretism, like



Greek, be associated with the syntax of argument-structural alternations was an older intuition, harking back at least to Marantz (1984), where a feature [-LOGICAL SUBJECT] born by passive-like affixes triggered the construction of passive-like structures.

The proposal in Rivero (1990) cast this line of thinking in a new light, guided by two innovations of the time: firstly, the move to treat verbal inflection as associated with functional heads above the VP (Pollock 1989, and Chomsky 1988/Chomsky 1995: ch. 2); and secondly, the theory of passive in Baker (1988: ch. 6) and Baker et al. (1989), which took (English) passive morphemes to be case- and theta role-absorbing elements located on T/Infl. Rivero (1990) proposes to treat nonactive voice morphology as located on a head Voice, in line with the delexicalization of inflectional categories; and to treat it as an argument that absorbs the Case/theta role of V, in line with Baker et al. (1989); but in contrast with Baker et al. (1989), the ‘absorbing’ morphology in Rivero (1990) is located low, between Aspect and V, with the verbal morphology of Modern Greek (and Albanian) being offered as evidence for this move.

Almost immediately, however, the extent to which Modern Greek verbal morphology could readily be taken as probative with respect to the structural location of Voice was questioned (Joseph & Smirniotopoulos 1993), owing largely to disagreement with the segmentation in Rivero (1990). The ensuing uncertainty as to the informativeness of Greek verbal morphology on the position of Voice can be summarized in the following quote from Kratzer (1996), the work that was instrumental in formulating the contemporary conception of Voice as an external argument introducer:

‘While I do not think that these data show that Modern Greek doesn’t have independent heads for Voice, Aspect, and Tense...no evidence has been given that it does. Modern Greek, then, doesn’t help us with the question where voice heads are located with respect to other inflectional heads.’  
(Kratzer 1996: p. 124)

In other words, the long-standing intuition that Greek-type systems, where Voice morphology seems to track the absence of an external argument, can be probative with respect to the syntax of Voice as a functional category has stood alongside some amount of uncertainty over the specifics, especially concerning, in this case, the verbal morphology of Greek. This uncertainty is largely driven by the fact that, despite a certain amount of relative consensus on the nature of the functional categories involved in the structure of the verb in the language, there is continuous disagreement over how exponents are distributed across these categories. As a result, many previous important proposals differ in their treatment of individual affixes (among others see Christopoulos & Petrosino 2018; Galani 2005; Manzini, Roussou, & Savoia 2016; Matthews 1967; Merchant 2015; Ralli 2005; Rivero 1990; Roussou 2009; Vassilios Spyropoulos & Revithiadou 2009; Warburton 1973a).

Here, I do not take up the task of tackling the exponence and morphophonology of every category involved in Greek verbal morphology. This broader task is undertaken in Paparounas (2023), and I assume the segmentation of the Greek verb defended in that work without recapitulating here the arguments offered in its favor. Instead, I focus here on one of this paper’s case studies, namely, the realization of Voice distinctions

	ACT.IPFV.NPST	NACT.IPFV.NPST
1SG	γraf -o	γraf -ome
2SG	γraf -is	γraf -ese
3SG	γraf -i	γraf -ete
1PL	γraf -ume	γraf -omaste
2PL	γraf -ete	γraf- osaste / γraf -este
3PL	γraf -un	γraf- onde

Table 1: Imperfective non-past forms of *γrafo* ‘write’, first-singular.

on agreement suffixes. I cast the results of this case study to motivate the key properties of the realization of Voice in Greek most germane to this work, already prefaced in (10) and (11).

I begin with the analysis of Voice displacement. The phenomenon can be illustrated with the examples in (12)-(13).<sup>2</sup>

- |   |   |
|---|---|
| <p>(12) a. γraf- o<br/> <math>\sqrt{\text{WRITE}}</math> 1SG<br/> ‘I write.’</p> <p>b. θa γraf- s- o<br/> FUT <math>\sqrt{\text{WRITE}}</math> PFV 1SG<br/> ‘I will write.’</p> <p>c. e- γraf- s- a<br/> PST <math>\sqrt{\text{WRITE}}</math> PFV 1SG<br/> ‘I wrote.’</p> | <p>(13) a. γraf- ome<br/> <math>\sqrt{\text{WRITE}}</math> 1SG.NACT<br/> ‘I am being written.’</p> <p>b. θa γraf- θ- o<br/> FUT <math>\sqrt{\text{WRITE}}</math> PFV.NACT 1SG<br/> ‘I will be written.’</p> <p>c. γraf- θ- ik- a<br/> <math>\sqrt{\text{WRITE}}</math> PFV.NACT PST 1SG<br/> ‘I was written.’</p> |
|---|---|

Taken together, the subparts of this paradigm reveal two observations: firstly, Voice can be realized in unexpectedly peripheral positions of the word; and secondly, the location to which Voice is displaced varies across parts of the paradigm.

The first observation can be made by contrasting (12a) and (13a). Here, the exponents that differentiate the forms, marking them as either active or nonactive, are the agreement exponents, *-o* and *-ome*, respectively. Descriptively, then, these are cumulative exponents, expressing both the  $\phi$ -features of the subject and the active/nonactive distinction; a full paradigm is given in Section 2.2.

The second generalization that emerges from (12)-(13) concerns the apparent mobility of Voice marking. In the imperfective past forms shown in (12a) and (13a), the active/nonactive distinction is indexed on the agreement exponents, but this is not so in the other pairs of examples. In (12b) and (13b), the active/nonactive distinction seems to be marked by the perfective aspect exponents; the same is true in (12c)–(13c), where we

<sup>2</sup>In this section, I present the data in a form that ‘undoes’ certain regular phonological processes of the language, effectively giving phonological underlying representations in order to more clearly illustrate certain systematic morphological relationships. These phonological processes include continuant dissimilation (by which /γrafso/ in (12b) becomes [γrapso]); voicing assimilation (by which /pavso/ ‘stop.ACT.PFV.NPST’ becomes [pafso]); and degemination, as in the case of /djavazsa/ → [djavasa] ‘read.ACT.PFV.PST’, where degemination is presumably fed by voicing assimilation.

find in addition an alternation in the position and shape of the past tense marker.

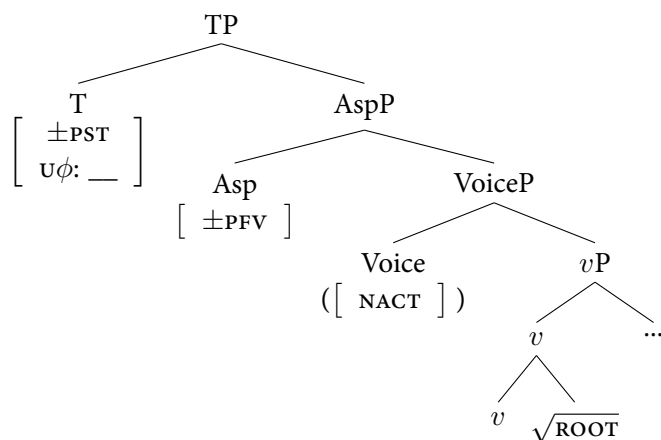
An analysis of Voice displacement, then, must not only allow the expression of Voice to be displaced to peripheral suffixes, but also ensure that the right suffix is targeted in each case. Additionally, it must capture the patterns of complementarity we observe: note, for instance, that when the perfective suffix marks nonactive (13b), the agreement suffix ceases to do so (*\*yrafθome*).

### 2.2.1 SEGMENTATION

The synthetic verbal morphology of Greek is structured around three descriptively binary oppositions, in Voice ('active' versus nonactive), aspect (imperfective versus perfective), and tense (past versus non-past, other tense distinctions being expressed via preverbal particles and auxiliaries).

Let us take these binary oppositions to be instantiated syntactically as shown in (14). Here, binary [PST] and [PFV] features reside on T and Asp, respectively, while T also bears a  $\phi$  probe (Chomsky 2000, 2001b) responsible for subject agreement. Finally, Voice may, under specific syntactic conditions described in section 2.3, be enriched with the diacritic feature [NACT]; though this enrichment takes place at an early stage of the PF side of the derivation, the feature is shown here as part of the syntactic representation for convenience.

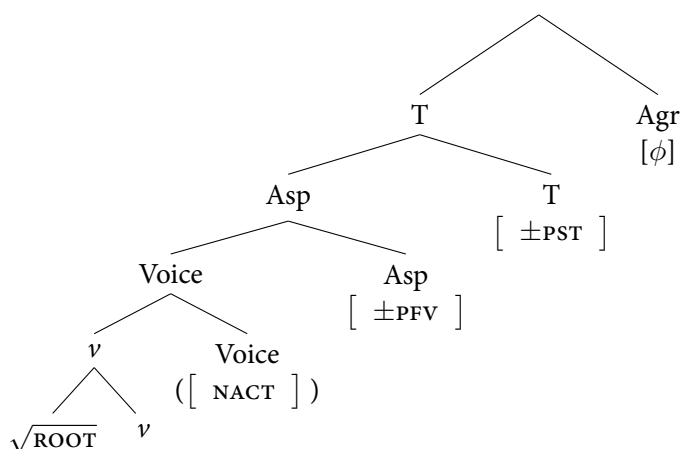
(14) *Hierarchical structure*



Assume further, in line with the assumptions made for the sake of concreteness in Chapter 1, that a syntactic representation like (15) is converted through affixation to a complex head like (15), which, once linearized, will form the input to Vocabulary Insertion. Alongside affixation, the move from a syntactic to a PF representation includes the conversion of T's valued probe into a dissociated morpheme, Agr; this morpheme will host the language's subject agreement prefixes, which are morphologically distinct from Tense. This is a more-less-standard treatment of (certain) agreement morphemes within the paradigm of Distributed Mor-

phology (see among others Bobaljik 2008; Halle and Marantz 1993, and for dissociated morphemes more generally see among others Adamson 2019; Choi and Harley 2019; Embick 1997, 2000).

(15) *Complex head*



The three binary oppositions in voice, aspect and tense produce the eight basic cells of Table 2, which lists the synthetic first-singular forms of the verb ‘write’, segmented and glossed in accordance with the analysis to be argued for here. Each of these basic forms further inflects for subject agreement (see Section 2.2).

<b>ACT.IPFV.NPST</b>	<b>ACT.PFV.NPST</b>
ɣràf -o √WRITE AGR	ɣràf -s -o √WRITE ASP AGR
<b>NACT.IPFV.NPST</b>	<b>NACT.PFV.NPST</b>
ɣràf -ome √WRITE AGR	ɣraf -θ -ò √WRITE ASP AGR
<b>ACT.IPFV.PST</b>	<b>ACT.PFV.PST</b>
è- ɣraf -a TNS √WRITE AGR	è- ɣraf -s -a TNS √WRITE ASP AGR
<b>NACT.IPFV.PST</b>	<b>NACT.PFV.PST</b>
ɣraf -òmun √WRITE AGR	ɣràf -θ -ik -a √WRITE ASP TNS AGR

Table 2: First-singular synthetic forms of *ɣrafo* ‘write’.

Table 2 omits analytic formations such as the future, formed via a preverbal particle in combination with a nonpast form (16). Also not shown in the table are compound tenses such as the perfect (17), formed with an auxiliary that agrees with the subject and a non-agreeing perfective nonpast form bearing a final *-i* that can be plausibly analyzed as default third-singular agreement (cf. the ‘active’ third singular in Section 2.2).

- |      |   |   |
|------|---|---|
| (16) | a. $\theta a$ $\gamma raf-$ $o$<br>FUT $\sqrt{WRITE}$ 1SG<br>‘I will be writing.’<br>b. $\theta a$ $\gamma raf-$ $s-$ $o$<br>FUT $\sqrt{WRITE}$ PFV 1SG<br>‘I will write.’                                      | c. $\theta a$ $\gamma raf-$ $ome$<br>FUT $\sqrt{WRITE}$ 1SG.NACT<br>‘I will be being written.’<br>d. $\theta a$ $\gamma raf-$ $\theta-$ $o$<br>FUT $\sqrt{WRITE}$ PFV.NACT 1SG<br>‘I will be written.’  |
| (17) | a. $ex-$ $o$ $\gamma raf-$ $s-$ $i$<br>$\sqrt{HAVE}$ 1SG $\sqrt{WRITE}$ PFV 3SG<br>‘I have written.’<br>b. $ex-$ $is$ $\gamma raf-$ $s-$ $i$<br>$\sqrt{HAVE}$ 2SG $\sqrt{WRITE}$ PFV 3SG<br>‘You have written.’ | c. $ex-$ $o$ $\gamma raf-$ $\theta-$ $i$<br>$\sqrt{HAVE}$ 1SG $\sqrt{WRITE}$ PFV.NACT 3SG<br>‘I have been written.’<br>d. $ex-$ $is$ $\gamma raf-$ $\theta-$ $i$<br>$\sqrt{HAVE}$ 2SG $\sqrt{WRITE}$ PFV.NACT 3SG<br>‘You have been written.’ |

The segmentation presented in Table 2 is empirically motivated at length in Paparounas (2023), and I refrain from recapitulating here the arguments presented therein for this segmentation. As discussed therein, identifying convincing empirical arguments for the exact way in which exponents distribute across morphosyntactic categories is an arduous task in Greek, and the paper devotes a considerable amount of space to arguments of this kind.

Instead, let us focus on the more specific question of how Voice distinctions are indexed in different parts of the paradigm. Recall firstly that Voice itself is never overtly realized; in Table 2, none of the exponents is mapped directly to Voice. However, Voice seemingly exerts its influence on three corners of the paradigm, of which only one will be our eventual focus in this section.

Firstly, Voice plays a role in determining the realization of perfective *aspect*. This effect can be seen in the top right corner of Table 2, in the perfective nonpast. (18) illustrates the forms in question, showing that the shape of the perfective exponent co-varies with voice:

- |      |   |
|------|---|
| (18) | a. $\theta a$ $\gamma raf-$ $s-$ $o$<br>FUT $\sqrt{WRITE}$ PFV 1SG<br>‘I will write.’<br>b. $\theta a$ $\gamma raf-$ $\theta-$ $o$<br>FUT $\sqrt{WRITE}$ PFV.NACT 1SG<br>‘I will be written.’ |
|------|---|

The /s/ /θ/ alternation persists in the bottom right corner of the table, in the perfective past:

- (19) a. e- yraf- s- a  
 PST  $\sqrt{\text{WRITE}}$  PFV 1SG  
 ‘I wrote.’
- b. yraf-  $\theta$ - ik- a  
 $\sqrt{\text{WRITE}}$  PFV.NACT PST 1SG  
 ‘I was written.’

This alternation is not phonological, /s/ and / $\theta$ / never alternating in the phonology of the language. Instead, it has the hallmarks of allomorphy, with the realization of Aspect being sensitive to Voice (as considered, for instance, in Warburton 1973b: p. 197). Let us assume the following Vocabulary Items for Aspect:

- (20) *Vocabulary Items for Aspect*
- a.  $[+\text{PFV}]_{\text{ASP}} \Leftrightarrow / \theta / / [\text{NACT}] \text{ \_\_}$
- b.  $[+\text{PFV}]_{\text{ASP}} \Leftrightarrow / s /$
- c.  $[-\text{PFV}]_{\text{ASP}} \Leftrightarrow / \emptyset /$

(20c) guarantees that imperfective aspect is consistently realized as zero, a straightforward fact about the language, as seen in the left column of Table 2.<sup>3</sup> (20a) and (20b) derive the displacement of voice distinctions to the perfective aspect morpheme. As given here, (20) simply assumes that the nonactive allomorph is the specific one; this choice will be shown below to be empirically well-motivated given the other patterns of Voice sensitivity in the language.

Note in passing that VIs like (20a) presuppose a view of Vocabulary Insertion that is *additive*, not *replacive*: in the case at hand, the feature NACT on Voice continues to be visible after the (in this case, zero) exponent has been added to this node. As discussed already in section 1.2, if insertion were replacive, in this case replacing the feature NACT with its (zero) exponent, then downstream sensitive to this feature would be predicted to be impossible. As we will see below, this type of inwards-looking morphosyntactically conditioned allomorphy recurs pervasively in the Greek system, making an additive view of insertion indispensable to account for the facts.

Note now a crucial fact about Voice displacement to Aspect: it is consistent throughout the paradigm. That is, in (11b), every active perfective form bears /s/, and every nonactive perfective form bears / $\theta$ /, without fail. On the proposed understanding of Voice displacement as allomorphy, this systematicity follows naturally once we consider how the trigger and target of allomorphy are configured with respect to each other. Given that, in a representation like (15), or any sensible conversion of this representation into a linearized

<sup>3</sup>That imperfective is always null makes a privative analysis of aspect possible. Nothing hinges on this issue for the purposes of what follows, and I thus do not dwell on it here. Note, however, that Paparounas (2023) does employ privative aspect to derive certain facts about stem allomorphy in the language: as discussed therein, it is a systematic fact about the language that, whenever a given Root shows aspect-conditioned stem allomorphy, it is the *perfective* allomorph that is the elsewhere, with the imperfective stem allomorph inserted in a specified environment. This pattern seems to demand reference to [-PFV], though Paparounas (2023) does entertain very briefly an alternative making use of finiteness-related features that would (presumably) rely on T instead.

sequence, Asp and Voice are extremely local to each other, virtually any formulation of the locality conditions on allomorphy will allow the two to interact. In other words, the sensitivity of [+PFV] Asp to Voice will not be disrupted under any circumstances, ensuring that Asp can reliably index the features of Voice throughout the paradigm. Mundane as it seems, this observation is important insofar as, as we will see, the structure will not always co-operate with the demands of any particular Vocabulary Item; we will encounter immediately below one case where the trigger and target of allomorphy are not always local to each other, and hence the relationship between the two is modulated by morphological intervention.

Moving on from aspect, the past perfectives in (19) seemingly illustrate a second part of the paradigm where Voice seems to condition the realization of other morphemes. (19) shows allomorphy in the realization of the perfective exponent, as just discussed; but we also see a difference in the realization of Tense. Whether the /e/ /ik/ alternation also represents an instance of Voice displacement is in fact debatable, and the answer hinges to a large extent on the intricate distribution of the prefixal Tense marker in (19a). Since discussing the realization of Tense would take us far afield, I put Tense largely to the side here; see Paparounas (2023) for discussion and analysis of the realization of Tense in the language.

Consider now the third and final part of Table 2 where Voice displacement seems operative, namely its left column. In the imperfective, we find voice distinctions expressed by the subject agreement suffixes. In the imperfective nonpast (21), active forms take the ‘active’ *o*-series agreement exponents, with nonactive forms taking the nonactive *ome*-series. In the imperfective past (21), we find the same distribution, with additional allomorphy for [+PST], whereby the first-singular active exponent is now *-a*, and the corresponding nonactive exponent is *-òmun*.

- (21) a.  $\gamma\text{raf- } o$   
 $\sqrt{\text{WRITE 1SG}}$   
 ‘I write.’
- b.  $\gamma\text{raf- } ome$   
 $\sqrt{\text{WRITE 1SG.NACT}}$   
 ‘I am being written.’
- (22) a.  $\grave{e}\text{- } \gamma\text{raf- } a$   
 $\text{PST } \sqrt{\text{WRITE 1SG.PST}}$   
 ‘I was writing.’
- b.  $\gamma\text{raf- } \grave{o}mun$   
 $\sqrt{\text{WRITE 1SG.NACT.PST}}$   
 ‘I was being written.’

It is the displacement of voice to the agreement suffixes that is tightly conditioned by morphological locality, and allows us to see that ‘active’ morphology is in fact a global default in the language. I turn to this point in the next section.

### 2.2.2 MORPHOLOGICAL INTERVENTION AND ‘ACTIVE’ AS THE DEFAULT

We noted with respect to (18)–(19) that the displacement of voice to the perfective suffixes is consistent, occurring throughout the perfective part of the paradigm. The first crucial observation regarding the displacement of voice distinctions to the *agreement* suffixes is that things are different in this case: unlike Voice-conditioned allomorphy of the perfective morpheme, Voice-conditioned allomorphy of the agreement morphemes is *asymmetric*. Table 3, from Paparounas (2023), graphically highlights this fact: here, the non-active agreement endings appear in dark shading, and the ‘active’ ones in light shading.

<b>ACT.IPFV.NPST</b> γράφ -o $\sqrt{\text{WRITE}}$ AGR	<b>ACT.PFV.NPST</b> γράφ -s -o $\sqrt{\text{WRITE}}$ ASP AGR
<b>NACT.IPFV.NPST</b> γράφ -ome $\sqrt{\text{WRITE}}$ AGR	<b>NACT.PFV.NPST</b> γράφ -θ -ò $\sqrt{\text{WRITE}}$ ASP AGR
<b>ACT.IPFV.PST</b> è- γράφ -a TNS $\sqrt{\text{WRITE}}$ AGR	<b>ACT.PFV.PST</b> è- γράφ -s -a TNS $\sqrt{\text{WRITE}}$ ASP AGR
<b>NACT.IPFV.PST</b> γράφ -òmun $\sqrt{\text{WRITE}}$ AGR	<b>NACT.PFV.PST</b> γράφ -θ -ik -a $\sqrt{\text{WRITE}}$ ASP TNS AGR

Table 3: ‘Active’ and non-active Agr in the 1SG forms of ‘write’.

In the left column of Table 3, we observe the well-behaved distribution of agreement endings discussed above: ‘active’ endings in active forms, and ‘nonactive’ endings in the nonactive. The overall distribution, however, becomes asymmetric when we expand the scope of our investigation to the perfective: in the right column, we cease to find non-active agreement exponents. The ‘active’ endings seemingly overapply, occurring not only where we expect them to – in the syntactically active forms – but also in the nonactive forms.

The crucial forms are then the non-active perfectives, which are syntactically non-active forms that surface with part of their morphology (namely, the agreement suffixes) drawn from the ‘active’ set of exponents. In the interest of completeness, (23) illustrates that the forms in question indeed cannot be formed with the nonactive agreement exponents: forms like \**γράφome* and \**γράφθikòmun* are simply impossible, for all verbs in the language. These facts occur throughout person-number combinations; again for completeness, (23) shows that the same generalizations obtain in the third-singular.



- (23) a.  $\theta a$   $\gamma raf-$   $\theta-$  {  $o$  /  $*ome$  }  
 FUT  $\sqrt{WRITE}$  PFV.NACT 1SG 1SG.NACT  
 ‘I will be written.’
- b.  $\gamma raf-$   $\theta-$   $ik-$  {  $a$  /  $*\acute{o}mun$  }  
 $\sqrt{WRITE}$  PFV.NACT PST 1SG.PST 1SG.NACT.PST  
 ‘I was written.’
- (24) a.  $\theta a$   $\gamma raf-$   $\theta-$  {  $i$  /  $*ete$  }  
 FUT  $\sqrt{WRITE}$  PFV.NACT 3SG 3SG.NACT  
 ‘It will be written.’
- b.  $\gamma raf-$   $\theta-$   $ik-$  {  $e$  /  $*otan$  }  
 $\sqrt{WRITE}$  PFV.NACT PST 3SG.PST 3SG.NACT.PST  
 ‘It was written.’

It bears repeating that, although they bear ‘active’ agreement suffixes, the nonactive past forms have the syntactic distribution of other nonactive forms. Thus, a passive with a third-singular subject is obligatorily realized as in the grammatical version of (25a), with the form *γrafti*, bearing ‘active’ subject agreement; this nonactive perfective form thus distributes identically to a nonactive imperfective form, which inflects with nonactive agreement endings (25b).

- (25) a. I *fantastiki tis epiðosi*  $\theta a$   $\gamma raf-$   $\theta-$  {  $i$  /  
 the.NOM fantastic.NOM 3SG.F.GEN performance.NOM FUT  $\sqrt{WRITE}$  PFV.NACT 3SG  
 $*ete$  } *sto vivlio gines.*  
 3SG.NACT in.the book Guinness  
 ‘Her amazing performance will be written in the Guinness book of world records.’
- b. I *fantastiki tis epiðosi*  $\gamma raf-$  {  $ete$  /  $*i$  } *sto vivlio*  
 the.NOM fantastic.NOM 3SG.F.GEN performance.NOM  $\sqrt{WRITE}$  3SG.NACT 3SG in.the book  
*gines.*  
 Guinness  
 ‘Her amazing performance is being written in the Guinness book of world records.’

(25a) thus shows that, even though partly morphologically ‘active’, nonactive perfective forms occur in syntactically nonactive frames. (26a) shows, for completeness, the other side of the same coin: though it is partly morphologically ‘active’, a form like *γrafti* can never realize an active verb, just like the wholly morphologically nonactive *γrafete* in (26b):

- (26) a. I *Maria*  $\theta a$  {  $\gamma raf-$   $s-$   $i$  /  $*\gamma raf-$   $\theta-$   $i$  } *ti*  
 the.NOM Maria.NOM FUT  $\sqrt{WRITE}$  PFV 3SG  $\sqrt{WRITE}$  PFV.NACT 3SG the.ACC  
*ðiatrivi tis tu xronu.*  
 dissertation.ACC 3SG.ACC.GEN the.GEN year.GEN  
 ‘Maria will write her dissertation next year.’

- b. I Maria { yraf- i / \*yraf- ete } ti ðiatrivi  
 the.NOM Maria.NOM  $\sqrt{\text{WRITE}}$  3SG  $\sqrt{\text{WRITE}}$  3SG.NACT the.ACC dissertation.ACC  
 tis afto ton kero.  
 3SG.ACC.GEN DEM.ACC the.ACC time.ACC  
 ‘Maria is writing her dissertation these days.’

The asymmetric distribution of Voice-conditioning in the realization of Greek agreement endings is thus a proper morphological fact: though partly ‘active’ in their exponence, there is nothing syntactically active about the nonactive perfective forms (cf. Leu 2020; Ralli 2005; Roussou 2009).

In this section, this morphological fact will receive a morphological explanation, and will serve to highlight a deeper morphological fact of broad significance, namely, the default status of ‘active’ morphology.

The analysis that follows is aimed at capturing an intuition that emanates clearly from Table 3: the ‘active’ agreement exponents have the distribution of a default. Their overall distribution is unexpectedly broad, with these exponents appearing in forms that are in no sense specified as active.

We can capture this distribution by assuming that, unlike the nonactive endings, which are truly sensitive to the specification of Voice and only appear in syntactically nonactive forms, the ‘active’ exponents are in fact not Voice-sensitive at all, representing simply the default realization of agreement morphemes.

The vocabulary in (27) states just this intuition. The first two Vocabulary Items, (27a) and (27b), insert the non-active agreement suffixes *-ðmun* and *-ome*, analyzed here as Voice-sensitive allomorphs: these VIs both include Voice in their contextual environment. By contrast, the VIs (27c) and (27d), inserting the ‘active’ agreement exponents, are Voice-insensitive. There is nothing ‘active’ about their distribution, making them less specific from the perspective of Voice sensitivity; globally, (27b) and (27c) are equally specified, but crucially make reference to distinct categories in their contextual environment.

(27) *Vocabulary items for first-singular agreement*

- a.  $[1\text{SG}]_{\text{AGR}} \Leftrightarrow /ðmun/ / [\text{NACT}]_{\text{VOICE}} [+PST]_{\text{T}} \text{ \_\_}$   
 b.  $[1\text{SG}]_{\text{AGR}} \Leftrightarrow /ome/ / [\text{NACT}]_{\text{VOICE}} \text{ \_\_}$   
 c.  $[1\text{SG}]_{\text{AGR}} \Leftrightarrow /a/ / [+PST]_{\text{T}} \text{ \_\_}$   
 d.  $[1\text{SG}]_{\text{AGR}} \Leftrightarrow /o/$

As it stands, the Vocabulary in (27) will guarantee that the ‘active’ exponents, being less specific than their non-active counterparts, have the potential to appear in a broader range of environments. What remains is to specify the conditions under which this emergence of the elsewhere will take place: returning to Table 3, why is it that (27a) and (27b) can apply in the imperfective, but not the perfective?

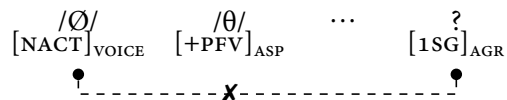
The answer, following Paparounas (2023), comes from considerations of allomorphic locality. What is at stake given the Vocabulary in (27) is the relationship between the potential trigger of an allomorphic relationship, Voice, and the target of insertion, Agr. From the perspective of the relationship between these two

nodes, what sets apart the imperfective and perfective columns of [Table 3](#) is the exponence of the nodes intervening between Voice and Agr. The crucial observation is that, in the imperfective, all intervening nodes are realized as zero; in the perfective, however, there always exists at least one overtly realized intervening node.

The overtness of intervening nodes is argued in [Paparounas \(2023\)](#) to be the crucial factor regulating the selection of allomorphs here. The guiding intuition is that null nodes have a special status from the perspective of allomorphy: unlike overtly realized nodes, which count as interveners for the purposes of allomorphic locality, some null nodes are effectively transparent ([Embick 2003](#)). In a system like Greek, this crucial difference between overt and null nodes will play a crucial role in modulating the visibility relations holding between nodes.

In the perfective, at least one of the nodes positioned between Voice and Agr is always overtly realized: perfective Asp is always overt,<sup>4</sup> and thus ‘closes off’ all nodes to its left, including Voice. This situation is schematized in [\(28\)](#), where the other potentially intervening node, Tense, is put to the side for the sake of exposition.<sup>5</sup>

(28) *Perfective aspect: Intervention*



In the imperfective [\(29\)](#), however, things will work differently: here, under any conceivably segmentation, all intervening nodes between Voice and Agr are null. If, as assumed, null nodes are transparent for the purposes of allomorphy, then only in the imperfective will Agr manage to ‘see’ Voice, and index its sensitivity to it. In [\(28\)](#), by contrast, the insertion mechanism will have to retreat to an elsewhere realization of Agr.

(29) *Imperfective aspect: Transparency*



The crucial observation for the purposes of this chapter lies in the difference in the realization of Agr that derive from [\(28\)](#) and [\(29\)](#). In [\(29\)](#), the transparency of intervening nodes permits the target of insertion, Agr,

<sup>4</sup>See [Paparounas \(2023: sec. 3.3\)](#) for analysis of the interesting behavior of the few verbs that take a null allomorph of the perfective, and for discussion of other cases where the difference in exponence between perfective and imperfective crucially affects visibility relations in Greek verbal morphology.

<sup>5</sup>It is important to note that some derivations where Voice is referred to by Agr will involve a timing-related intricacy once T is taken into account: in particular, derivations like [\(29\)](#) will require Pruning of T, but the content of T will also need to be referred to for the realization of Agr, since some VIs in [\(27\)](#) make reference to both T and Voice. See [Paparounas \(2023: ex. \(23\)-\(24\)\)](#) for an explicit account of the necessary order of operations here.

to access Voice, the trigger for insertion of the most specific allomorphs (27a)–(27b). In (28), allomorphic locality guarantees that this type of interaction cannot take place; in this case, the insertion mechanism retreats to the ‘active’ agreement exponents.

This retreat to the ‘active’ agreement exponents is readily understandable if these exponents have the status of an elsewhere, which can be inserted without reference to Voice (or, indeed, any other low node). If, on the other hand, the ‘active’ exponents were truly specified as active, their emergence in the nonactive perfectives would seem unexpected and accidental: on this type of account, it is difficult to offer a principled reason why the overtiness of intervening nodes should correlate with selection the active allomorphs of Agr.

As such, the proper analysis of the distribution of agreement exponents in Greek must capture two generalizations:

(30) *Distributing allomorphs of Agr*

- a. Agr can access Voice only when there are no overtly realized nodes intervening between the two.
- b. When Agr cannot access Voice, the non-Voice-sensitive allomorphs of Agr are inserted.

The next section offers an analysis aimed at making these two points concrete. Before proceeding to this section, however, some remarks are in order concerning the implications of (30) for the realization of Voice in Greek more broadly.

The analysis of the displacement furnishes two important conclusions on the featural make-up of Voice. Firstly, there exists a feature on Voice with realizational significance: although Voice itself is systematically null, its feature content plays a crucial role in determining the realization of Agr (and Asp). Secondly, the nonactive feature is all that is needed, from a realizational standpoint: Voice-sensitive VIs make reference to the nonactive, while ‘active’ agreement exponents are in fact not Voice-sensitive at all, having instead an elsewhere specification. From the perspective of realization, then, there is no need to posit a binary Voice feature for Greek, since ‘active’ is never referred to for the purposes of realization. As we will see in [section 2.3](#), the default status of ‘active’ is also well-motivated from a syntactic point of view, and brings within reach unified explanations for a range of otherwise puzzling facts concerning the distribution of voice morphology across verb classes.

Alongside these two important conclusions, a disclaimer is in order: if Voice is systematically null, as I have argued, then a theory according to which *all* null nodes are Pruned would incorrectly neutralize the sensitivity of more peripheral nodes to Voice, since Pruning would remove Voice from the structure. In other words, Voice in Greek will (normally) not be Pruned, although it is systematically zero. Observations like these underscore the importance of a *conditioned* view of Pruning, according to which the operation is triggered in specific circumstances, such that only certain zeroes are Pruned. This is the view sketched in [section 1.2](#), building on the more extensive discussion in Paparounas (2023), according to which Pruning is

triggered by VIs demanding access to a context to the left of the zero node in question. Applied to the Greek case, this view predicts that, if a VI demands access to a node to the left of Voice (in particular, the Root), then Voice will be pruned; and that, as a result, later stages of insertion will not be able to be sensitive to Voice, since Voice will have been removed. Paparounas (2023) argues that this prediction is borne out, and that this type of bleeding interaction is the correct analysis of the so-called athetic verbs in Greek. I cannot do justice to the details here, and refer the reader to this work for more.

### 2.2.3 DERIVATIONS: INTERLEAVING SPECIFICITY AND LOCALITY

The analysis of the distribution of agreement exponents in Paparounas (2023) makes use of three ingredients.

The first, already raised in (27) and repeated here as (31), is an asymmetric Vocabulary where only the non-active exponents are true Voice-sensitive allomorphs, with ‘active’ exponents being unspecified for, and thus insensitive to, Voice.

(31) *Vocabulary items for first-singular agreement*

- a.  $[1SG]_{AGR} \Leftrightarrow /òmun/ \ / \ [NACT]_{VOICE} [+PST]_T \ \_$
- b.  $[1SG]_{AGR} \Leftrightarrow /ome/ \ / \ [NACT]_{VOICE} \ \_$
- c.  $[1SG]_{AGR} \Leftrightarrow /a/ \ / \ [+PST]_T \ \_$
- d.  $[1SG]_{AGR} \Leftrightarrow /o/$

The second ingredient is an adjacency-based theory of allomorphy, of the kind already prefaced in section 1.2. As discussed therein, I assume that the relevant notion of adjacency is stated over nodes comprising a morphological word; for concreteness, I assume that the adjacency condition applies to linearized representations, noting that little would change, from the perspective of this particular case study, if we were to avail ourselves of an approach based on so-called structural adjacency (see Paparounas 2023 for brief discussion). Accordingly, in what follows, I make reference to linear adjacency in-text; the schematic representations employ hierarchical structures for the purposes of readability, with coiled lines connecting nodes to linearized exponents.

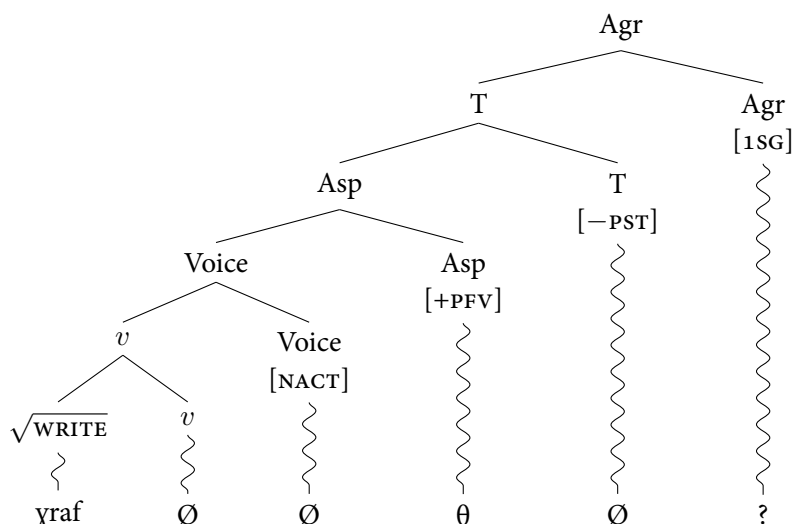
The final ingredient of the analysis concerns the mechanics of zero transparency. As discussed already in section 1.2, I assume that the transparency of null nodes follows from their eventual absence from the structure undergoing insertion: null nodes can, under specific circumstances, undergo a destructive operation, Pruning (Embick 2003, 2010), which removes them from the representation, thereby triggering recomputation of the adjacency relations in the structure.

These three ingredients will interact in intricate ways to give rise to the attested patterns, with each ingredient contributing a separate part of the pattern. Thus, the Vocabulary plays a crucial role in circumscribing the range of possible interactions: in particular, the default specification of ‘active’ endings (27c)–(27d) is what guarantees that these exponents can, under the right conditions, appear in a wide range of contexts.

Pruning will enable the Voice-sensitive exponents to be inserted, whenever intervening nodes are null. Finally, the adjacency condition will interact with the specificity-based ordering enforced by the Elsewhere Condition to constrain insertion; in particular, if the most specific VI, chosen by the Elsewhere Condition, has a context that is judged inaccessible by the adjacency condition, then the insertion mechanism will retreat to the next most specific VI.

To see this type of derivation at work, consider (32), schematizing the derivation of nonactive perfective nonpast *yrafθo*. Assume, with Bobaljik 2000 and much subsequent work, that insertion proceeds from the inside out, and suppose that insertion has been carried out up until T, such that Agr is the node currently undergoing insertion, schematized here by the question mark.

(32)



The Vocabulary Items in (31) will be evaluated in succession; by the Elsewhere Principle, this evaluation procedure begins with the most highly specified VI. In this case, the most specific VI is (31a). Its immediate context comprises [+PST], which is incompatible with the content of T in (32); since T is the node adjacent to Agr in this case, this incompatibility is immediately detectable, and the insertion mechanism proceeds to the next most specific VI.

The next most specific VI, (31b), is compatible with the feature content of the adjacent node T, and is thus retained for the moment. As its contextual specification demands access to the non-local node, Pruning will be triggered, by the assumptions in section 1.2. A first round of Pruning will succeed, since T is null, but the second instance necessary to make Agr adjacent to Voice will fail, since the next node, Asp, is overtly realized. (31b) is thus unsuitable after all, and the insertion mechanism must default to a yet less specific VI.

(31c) is incompatible with the content of T in (32), and we must retreat to another VI one last time. Fortunately, this final VI, (31d), is a true default, not demanding any context for its insertion. It is thus

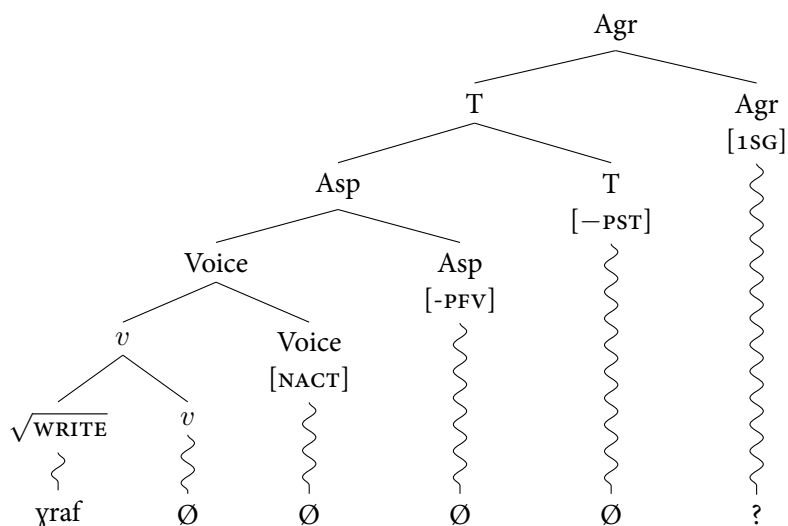
successfully inserted, correctly deriving the attested form.

The central property of the derivation just sketched is the interplay of specificity and locality in determining the outcome of insertion. The Elsewhere Principle plays a central role in the derivation, by ensuring that the most specific VIs will have their fit with the structure evaluated first; in the case at hand, (31d) could only be evaluated for insertion once three other VIs had been discarded as incompatible with the structure at hand. But locality, in the form of the adjacency condition, was also crucial in how the derivation unfolded: in particular, the overtiness of Asp prevented Agr from becoming adjacent with Voice, forcing the insertion mechanism to seek another, less specific VI to evaluate.

The same assumptions that guaranteed the insertion of a maximally underspecified exponent in (32) should guarantee the insertion of a more specific exponent in a structure that is minimally different. In particular, if we hold all other aspects of (32) constant but have Asp be null, Pruning should now be able to remove both T and Asp, making Agr and Voice adjacent and enabling insertion of a Voice-sensitive exponent.

This situation is exemplified by (33), sketching the derivation of a nonactive *imperfective* past form. (33) resembles (32) in all respects but one, namely, the exponence of Asp: since Asp is now specified as [-PFV], it is realized as zero. This property of (33) is wholly independent of the exponence of Agr, but turns out to have important consequences for it: in particular, unlike in (32), Pruning can now successfully remove not only the first non-adjacent node, T, but also the second one, Asp. Once Voice and Agr are local to each other and the feature content of the relevant VI, (31b), is verified as compatible with the feature content of Voice in the structure, this VI will lead to insertion of *-ome* in Agr. The attested form *yrafome* will thus be derived, and the competition will be halted at that point; with a specific VI having been found compatible with the structure at hand, less specific VIs, in this case (31c)–(31d), will simply not be evaluated.

(33)



#### 2.2.4 INTERIM SUMMARY

In summarizing the results of the preceding sections, it is important to distinguish those components of the discussion that are essential to the dissertation going forward; those that are essential to this particular analysis of Greek Voice displacement; and those that are assumed fully for the sake of convenience.

The aspect of the preceding discussion central to what follows is the elsewhere nature of ‘active’ morphology, demonstrated through the case study of the exponence of agreement morphemes. At this stage, the defaultness of ‘active’ may seem a relatively minor point concerning the realization of certain categories; but, as will be shown in the next section, this relatively simple fact is instrumental in explaining certain otherwise mysterious properties of the Greek voice system.

This central point aside, certain technical aspects of the morphological analysis advanced in the previous pages are central to this particular analysis, but not crucial from the perspective of this dissertation as a whole. This include the precise mechanics of how allomorphic locality is taken to interact with the Elsewhere Principle to force patterns of emergence of the default; the dynamic nature of the evaluation of a particular VI against a particular structure; as well as the assumed implementation of Pruning. It is worth noting, however, that many of these fine-grained aspects of the system do receive motivation from other parts of the language; see Paparounas (2023).

Finally, some aspects of the system above represent choices made purely for the sake of concreteness. Chief among these is the choice to cast the analysis in linear, rather than structural, terms; not because the choice between linear and structural adjacency is more generally immaterial, but rather because the Greek verb does not provide the data required to disambiguate between these two types of analyses. Whichever approach eventually emerges as superior should be readily applicable to the data discussed above.

This clarificatory point almost concludes the discussion of exponence in this chapter. Before turning to the more syntactic aspects of the realization of Voice, however, consider one final note of a more general nature.

### 2.3 AN ANALYSIS OF VOICE SYNCRETISM

#### 2.3.1 DISTRIBUTING NONACTIVE MORPHOLOGY

Recall the Greek active/passive alternation illustrated in (9a) and (9b) of section 2.1, repeated here as (34) and (35).

- (34) I            ylosoloji            sineça    anaptis-    un            perierjes            theories.  
 the.PL.NOM linguist.PL.NOM constantly  $\sqrt{\text{DEVELOP}}$  3PL.ACT strange.PL.ACC theory.PL.ACC  
 ‘Linguists constantly develop strange theories.’



- (35) Perierjes theories anaptis- onde sineça (apo ylosologyus).  
 strange.PL.NOM theory.PL.NOM  $\sqrt{\text{DEVELOP}}$  3PL.NACT constantly from linguist.PL  
 ‘Strange theories are usually developed by linguists.’

The fundamental observation made with respect to these examples in section 2.1 concerned the connection between voice syntax and voice morphology. The syntax of passive (35) differs in familiar ways from that of active (34): the active’s accusative-marked theme corresponds to the passive’s nominative-marked surface subject; and the active’s agent is expressed in the passive as an (optional) *by*-phrase. To the extent that these case and argumenthood properties of (34)-(35) are characteristic of the so-called active-passive alternation, they suffice to justify the use of the labels ‘active’ and ‘passive’ for now; but much hinges on the proper analysis of the passive, and what its relation (if any) is to the active. See 4.2 for more on this point, with the Greek passive on the playing field; and for recent discussion of the (non-)unitariness of ‘passive’, see Legate (2021).

Importantly, the move from active to passive syntax in (34)-(35) is accompanied by a move from active to nonactive morphology. In (35)-(34), the active/nonactive opposition is expressed on the subject agreement exponents, this instance of allomorphy having been the topic of section 2.2.

Voice syncretism amounts to a generalization on the distribution of nonactive morphology: in Greek, the morphology realizing passives also realizes other structures opposed to the active. This type of syncretism is cross-linguistically common (see e.g. Bahrt 2021; Geniušienė 1987; Haspelmath 1990)), with some variation concerning which subset of the set of structures that excludes active transitives syncretizes.

Thus, nonactive morphology also realizes many unaccusatives (but not all; see section 2.3.3.1, and cf. Alexiadou and Anagnostopoulou (1999, 2004), Alexiadou et al. (2006). (36) illustrates one such case, where the Root  $\sqrt{\text{DEVELOP}}$  forms an internally caused unaccusative. The verbal form in (36a) is systematically identical to the passive formed from the same Root, (34). Importantly, however, the concomitant interpretations differ: whereas the passive (34) involves an agentive entailment, one that can be associated either with an existential or an overt *by*-phrase, (36a) does not involve an agentive entailment, witness the presence of the agent-denying modifier *by themselves* (see Chierchia 2004; Levin & Rappaport Hovav 1995). The other examples in (36) illustrate more nonactive unaccusatives.

(36) *Unaccusative*

- a. Kapça fita anaptis- onde apo mona tus.  
 some.PL.NOM plant.PL.NOM NEG  $\sqrt{\text{DEVELOP}}$  3PL.NACT from alone.PL 3PL.GEN  
 ‘Some plants grow on their own.’
- b. I thermokrasia stin opia to ksilo arxizi na kej-  
 the.NOM temperature.NOM on.the which the.NOM wood.NOM start.3SG COMP  $\sqrt{\text{BURN}}$   
 ete apo mono tu  
 3SG.NACT from alone 3SG.POSS  
 ‘The temperature at which wood starts to burn by itself.’

<https://tinyurl.com/3s4cfuzd>

- c. Proti fora stin karjera mu os anaynosti ... skiz- ete apo mono  
 first.NOM time.NOM in.the career 1SG.GEN as reader tear 3SG.NACT from alone  
 tu to eksofilo.  
 3SG.POSS the.NOM cover.NOM  
 ‘It’s the first time in my years as a reader that the book cover tears by itself.’ <https://tinyurl.com/58tjv5a9>
- d. Ean xriazeste ramata, o jatros sas bori na xrisimopiisi  
 if need.2PL stitch.ACC.PL the.NOM doctor.NOM 2PL.POSS may.3SG COMP use.3SG  
 to iðos pu ðiali- ete apo mono tu.  
 the.ACC kind.ACC that  $\sqrt{\text{DISSOLVE}}$  3SG.NACT from alone 3SG.POSS  
 ‘If you need stitches, your doctor may use the kind that dissolves by itself.’ <https://tinyurl.com/3cenay8e>

The same pattern is seen with middles, definable pretheoretically as generic intransitives whose surface subject is read as a theme, and arguably corresponding more narrowly to generic unaccusatives, albeit with agent-licensing properties that may set them apart from both unaccusatives and passives (for Greek, see esp. Alexiadou et al. 2015; Alexiadou and Doron 2012; Condoravdi 1989; Lekakou 2005; Schäfer 2008a; Tsimpli 1989; cf. e.g. Fellbaum 1986, K. Hale and Keyser 1988, Rapoport 1999, Roberts 1987: ch. 4). As Schäfer (2008a, 2008b) notes, this type of formation seems particularly productive in Greek.

(37) *Middle*

- a. Afta ta vivlia ðiavaz- onde efkola.  
 this.PL.NOM the.PL.NOM book.PL.NOM read- 3PL.NACT easily  
 ‘These books read easily.’
- b. I tenies tu Wes Anderson vlep- onde efxarista.  
 the.NOM.PL movie.NOM.PL the.GEN Wes Anderson watch 3PL.NACT pleasantly  
 ‘Wes Anderson’s films watch pleasantly.’
- c. O Joyce metafraz- ete ðiskola.  
 the.NOM Joyce translate 3SG.NACT with.difficulty  
 ‘Joyce is hard to translate.’

Finally, subject experiencer verbs in the language surface with nonactive morphology (Alexiadou & Iordachioaia 2014; Zombolou 2004; Zombolou & Alexiadou 2014). Though ‘experiencer’ is a somewhat vague class, the pattern is particularly clear with psych verbs; this is a remarkably broad class,<sup>6</sup> with numerous verbs of this type systematically surfacing in the nonactive, with their active counterparts being either ungrammatical or yielding distinct interpretations of the relevant Roots.

<sup>6</sup>A non-exhaustive list is as follows: *fovame* ‘fear’; *çerome* ‘be happy’; *stenahorieme*, *lipame* ‘be sad’; *esðanome* ‘feel’; *xriazome* ‘be in need of’; *erotevome* ‘fall in love’; *sevome* ‘respect’; *drepome* ‘be ashamed’; *embistevome* ‘trust’; *efxome* ‘wish for’; *sichenome* ‘despise’; *apexðanome* ‘detest’; *niazome* ‘care’; *enðiaferome* ‘be interested in’; *ðimame* ‘remember’; *skeptome* ‘think’; *onirevome* ‘dream’; *fandazome* ‘imagine’; *skarfizome* ‘think up, devise’; *anarotieme* ‘wonder’; *singendronome* ‘concentrate’; *silogizome* ‘cogitate’; *analogizome*

(38) *Subject experiencer verb*

- a. Ta peđja fov- unde to skotađi.  
the.PL.NOM child.PL.NOM  $\sqrt{\text{FEAR}}$  3PL.NACT the.ACC dark.ACC  
'Children are afraid of the dark.'
- b. Apexθan- ome ti via.  
detest 1SG.NACT the.ACC violence.ACC  
'I resent violence.'
- c. O Janis sev- ete ti Maria.  
the.NOM John.NOM respect 3SG.NACT the.ACC Mary.ACC  
'John respects Mary.'

(38) furnishes an observation of particular importance to the ensuing sections. The description of the distribution of nonactive morphology up to this point could have led us to believe that there is a necessary link between nonactive morphology and transitivity narrowly construed: all the instances of nonactive noted thus far, namely passives, unaccusatives, and middles, are arguably prime examples of intransitive structures. (38) clarifies that nonactive morphology is not, in fact, a signifier of transitivity *per se*: the relevant examples clearly show two arguments. The same point can be made all the more emphatically with passives of ditransitives:

- (39) a. Estila tis Marias to yrama.  
send.PST.1SG the.GEN Mary.GEN the.ACC letter.ACC  
'I sent Mary the letter.'
- b. To yrama tis stalθike tis Marias.  
the.NOM letter.NOM 3SG.F.GEN send.NACT.PST.3SG the.GEN Mary.GEN  
'The letter was sent to Mary.'

As we will see, what ultimately emerges as the conditioning factor for the appearance of nonactive morphology is not the number of arguments, but rather the syntactic status of the external argument.<sup>7</sup>

<sup>7</sup>reflect'; *ipoptevome* 'suspect'; *ligurevome/limbizome* 'crave'; *oreyome* 'have an appetite for'.

<sup>7</sup>An important desideratum for a more detailed morphologically-oriented study of Greek experiencer verbs concerns circumscribing more precisely that class of verbs that obligatorily surfaces with nonactive morphology. The generalization that tentatively suggests itself in this connection is that nonactive is found with just those subject experiencer verbs that have non-quirky subjects and that do not passivize. Let us support each component of this generalization in turn.

Note firstly that the verbs mentioned in the main text are distinct from the experiencer constructions that the language builds using quirky genitive (ia) or quirky accusative (ib) subjects. See Anagnostopoulou 1999 for extensive discussion, and cf. Anagnostopoulou 1994, 2003b for the role of clitic doubling in (i):

- (i) a. Ta endoma tis aresun tis Marias.  
the.NOM.PL insect.NOM.PL 3SG.F.GEN please.3SG the.GEN Mary.GEN  
'Mary likes insects.'
- b. Ta endoma tin enoxlun ti Maria.  
the.NOM.PL insect.NOM.PL 3SG.F.ACC annoy.3SG the.ACC Mary.ACC  
'Insects annoy Mary.'

The final class of verbs participating in the language's Voice syncretism are reflexive and reciprocal verbs, the topic of [Chapter 3](#). Greek shows two patterns of verbal reflexivization/reciprocalization, both of which go hand-in-hand with nonactive morphology.

Firstly, nonactive morphology obligatorily co-occurs with the language's reflexivizing prefix *afto-* (40a), and its reciprocalizing counterpart *alilo-* (40b).

- (40) a. Simfona me ti miθolojia, afti i theotita **afto-**  $\bar{\delta}$ imiuryi- **θ-**  
 according.to with the mythology this.NOM the.NOM deity.NOM REFL  $\sqrt{\text{CREATE}}$  PFV.NACT  
 ik- e apo to miðen.  
 PST.NACT 3SG from the zero  
 'According to mythology, this deity self-created out of nothing.'
- b. O Janis ke i Maria alilo-  $\bar{\delta}$ iorθon- onde sineça.  
 the.NOM John.NOM and the.NOM Mary.NOM RECIP correct 3PL.NACT constantly  
 'John and Mary correct each other all the time.'

Secondly, with a restricted set of Roots, nonactive morphology by itself suffices to yield a reflexive or reciprocal interpretation (cf. e.g. [Geniušienė 1987](#); [Kemmer 1993](#)). Reflexive readings thus arise when nonactive morphology is affixed to a Root denoting prototypically self-oriented events such as those denoted by grooming Roots; similarly, reciprocal readings are formed when Roots denoting naturally symmetric events are placed in the nonactive.<sup>8</sup>

- (41) a. O Janis ksiriz- ete kaθimerina.  
 the.NOM John.NOM shave 3SG.NACT daily  
 'John shaves daily.'

Secondly, there do exist certain Roots yielding nominative-accusative structures with nominative experiencers and 'active' morphology (iia); but these are crucially different from those verbs discussed in the main text in being able to passivize (iib), and thus presumably supporting agentive (that is, non-psychological) construals (a fact also true of the non-clitic-doubled version of (ib)):

- (ii) a. I opaði ayapun ti Maria.  
 the.NOM.PL fan.NOM.PL love.3PL the.ACC Mary.ACC  
 'The fans love Mary.'
- b. I Maria ayapçete apo opaðus se olo ton kosmo.  
 the.NOM Mary.NOM love.NACT.3SG from fan.PL in all the world  
 'Mary is loved by fans around the world.'

In terms of the analysis suggested in [section 2.3.2](#), these facts suggest that there are two pathways to the emergence of 'active' morphology with Roots like (i)-(ii): either they fail to combine with Voice in the first place, or they combine with regular agentive Voice. It is likely that both structures will be available for most Roots, yielding the ambiguity between experiential and agentive readings exhibited by many verbs; some Roots (e.g.  $\sqrt{\text{LIKE}}$ ) will only ever combine with the Voice-less structure. The puzzle, from the perspective of [section 2.3.2](#), is why none of these Roots can ever combine with expletive Voice. Possible correlations with stativity also deserve to be explored.

<sup>8</sup>An important question concerns the nature and scope of this pattern: what does it mean to be 'naturally' reflexive or reciprocal, and how many Roots are capable of counting as such? See [Chapter 3](#).

- b. I Maria ke o Janis sinanj- unde sto parko kaθe Pempti.  
 the.NOM Mary.NOM and the.NOM John.NOM meet 3PL.NACT in.the park every Thursday  
 ‘Mary and John meet in the park every Thursday.’

The syntax and interpretation of Greek verbal reflexives is the topic of [Chapter 3](#), and further discussion of these verbs is postponed to that chapter. For now, it suffices to note that verbal reflexives participate in Voice syncretism, and that pronominal reflexives do not. To see the latter fact, compare (40) and (41) with (42). (42) illustrates reflexivization by means of the language’s reflexive pronoun, (Anagnostopoulou & Everaert 1999; Angelopoulos & Sportiche 2022; Iatridou 1988) and its reciprocal counterpart (Paparounas & Salzmann *in press, accepted*): these always trigger active morphology on the verb.

- (42) a. Simfona me ti miθolojia, afti i theotita ðimiuryi- s- e ton  
 according.to with the mythology this.NOM the.NOM deity.NOM  $\sqrt{\text{CREATE}}$  PFV.ACT 3SG the.ACC  
**eafto tis** apo to miðen.  
 self.ACC her from the zero  
 ‘According to mythology, this deity created itself out of nothing.’
- b. O Janis ke i Maria ðiorθonun o enas ton  
 the.NOM John.NOM and the.NOM Mary.NOM correct.NOM the.NOM one.NOM the.ACC  
 alo sineça.  
 other.NOM constantly  
 ‘John and Mary correct each other all the time.’

This first look at the of non-active Voice in Greek reveals the following preliminary picture: non-active morphology realizes passives, unaccusatives, middles and experiencer verbs. Apparent complications to this simple picture will be examined in [section 2.3.3](#).

### 2.3.2 THE GENERALIZATION: NONACTIVE AS A NATURAL CLASS

The pattern described in the previous section, where the morphology opposed to the active realizes a range of structures beyond the passive, is cross-linguistically rather common. The typological literature provides numerous surveys of this type of syncretism (Bahrt 2021; Geniušienė 1987; Haspelmath 1987, 1990; Klaiman 1991). While the exact areas of focus differs somewhat between studies, the typological picture reveals that the syncretism of passive with at least one of unaccusative/middle and reflexive/reciprocal recurs across language families.<sup>9</sup> From this perspective, Greek closely resembles not only other Indo-European systems, such as Eastern-Armenian, Slavic and Latin, but also a diverse range of genetically unrelated languages from families including Uto-Aztecan, Turkic, Semitic and Nilo-Saharan languages.

That the same range of constructions can be shown to syncretize across language families provides a first important indication that there exists something here worthy of grammatical explanation. This point has not

<sup>9</sup>It is notable that psych verbs often do not figure prominently in the typological studies.

been lost on the theoretical literature, where patterns of Voice syncretism have attracted analytical interest from different theoretical perspectives (see among others Alexiadou et al. 2015; Babby 1975; Babby and Brecht 1975; Cranmer 1976; Embick 1997, 1998, 2004b; Key to appear; Lidz 1996; Marantz 1984; Oikonomou and Alexiadou 2022; Shibatani 1985). Important differences between individual studies aside, the theoretical literature on Voice syncretism is united in the intuition that patterns of Voice syncretism represent an instance of *natural class behavior*: the structures that syncretize do so by virtue of sharing some structural factor.

Before specifying how this intuition concerning natural class behavior can be implemented, it is important to ruminate on what exactly it amounts to, and what could supplant it.

At a bare minimum, the natural class intuition on the distribution of nonactive morphology is an intuition about systematicity: it states that the distribution of voice morphology in the relevant languages is not random.

But there is a deeper, more interesting point to be made. Consider once again the simple empirical picture sketched in section 2.3.1: ‘active’ morphology realizes active transitives, and nonactive morphology seemingly realizes virtually everything else. Forthcoming complications aside, this simple picture ostensibly lends itself to an approach where nonactive corresponds to the elsewhere: on this type of approach, nonactive morphology has the broad distribution that it does because it amounts to a default, with ‘active’ morphology being the more specified, and thus more restrictive, case. On this type of approach, nonactive is in fact not a natural class, but simply the elsewhere.

It is precisely this type of approach that has already been argued to be untenable, at least for the case of Greek. Recall a fundamental fact observed in section 2.2: in Greek, it is ‘active’ morphology that has the distribution of an elsewhere. As that section showed, we encounter situations in the verbal morphology of the language where some element is Voice-sensitive, in the sense of being capable of showing allomorphy for Voice, but is placed in a structure where it is not local to Voice; in this type of situation, the element in question retreats to an elsewhere realization. Crucially, this elsewhere realization corresponds to the language’s ‘active’ morphology, not to the nonactive. It is for this reason that we find syntactically nonactive forms with ‘active’ agreement exponents. In section 2.3.3, we will see that this default nature of ‘active’ morphology is crucial in explaining certain further aspects of the Greek voice system.

The broad distribution of nonactive in Greek thus cannot follow from an approach where nonactive is the default. Instead, ‘active’ morphology must itself be the elsewhere, with nonactive representing the more specified case targeting a natural class.

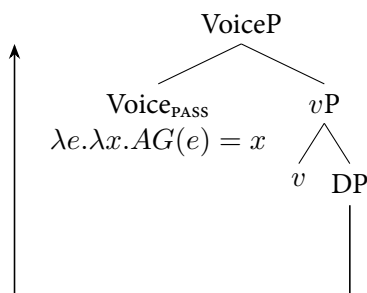
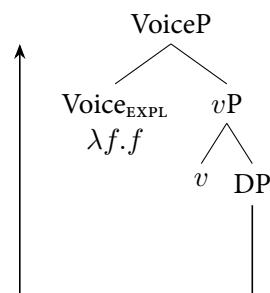
Once we turn to the question of how this natural class can be defined, we find a straightforward answer: nonactive morphology must be linked to the absence of a thematic subject.

(43) *The No Thematic Subject Hypothesis*

In Greek(-type systems), nonactive morphology realizes structures lacking a thematic subject.



The unaccusative in (46) involves a different flavor of Voice, one which is syntactically identical to that in (45), but which is semantically expletive, failing to introduce an agent (see section 2.3.3.1 below, following Alexiadou et al. 2015; Schäfer 2008b, and cf. Wood 2015). Though they are strictly speaking distinct syntactic entities, the Voice heads in (45)-(46) both share the property of failing to introduce a syntactic argument; by (43), they will receive the diacritic [NACT] at PF, deriving the participation of passives and unaccusatives in the Voice syncretism of Greek. Note in passing that, as will be discussed in section 2.3.3.1, (45) is not the only structure for unaccusatives in Greek.

(45) *Passive*(46) *Unaccusative/middle*

The next syncretizing category, middles, will also fall squarely within the purview of (46)/(45), at least in Greek. Middles of the Greek type are standardly taken to be passive-like (Lekakou 2005; Schäfer 2008a, 2008b: see esp.). In Schäfer (2008b), Greek-type middles are taken to have a syntax identical to (46), differing from unaccusatives only in *i*) the presence of a generic operator, and *ii*) the ability of an agent to be licensed ‘through the back door’ by the encyclopedic properties of certain *v*Ps (cf. esp. Condoravdi 1989).<sup>11</sup>

Finally, a standard analysis of subject experiencer verbs takes the experiencer to be generated low, in a position distinct from that of canonical external arguments (e.g. Arad 1998b; Belletti and Rizzi 1988; Pesetsky 1995; for Greek, see especially Alexiadou and Iordachioaia 2014). For Greek, this approach is particularly well-supported by two systematic differences between subject experiencer verbs and agentive transitives.

<sup>11</sup>I lack the space here to add to the long-standing question of the broader status of agentivity in middles. It is worth noting that my own judgments and those of my core consultants confirm the long-standing intuition that the agent in middles has a status somehow intermediate between its total absence in unaccusatives and its status as an entailment in passives: in particular, *by*-phrases can be licensed in Greek middles, but only in the presence of a focus-sensitive operator like those in (i). See also section 4.6 for the role of such elements in licensing the *by*-phrase ‘through the back door’ in stative passives.

- a. Afta ta vivlia ðiavaz- onde efkola, \*(akoma ke) apo peðja.  
 this.PL.NOM the.PL.NOM book.PL.NOM  $\sqrt{\text{READ}}$ - 3PL.NACT easily still and from child.PL  
 ‘These books read easily, even by children.’
- b. I tenies tu Wes Anderson vlep- onde efxarista, ??(iðios) apo ðianoumenos.  
 the.NOM.PL movie.NOM.PL the.GEN Wes Anderson watch 3PL.NACT pleasantly especially from intellectual.PL  
 ‘Wes Anderson’s films watch pleasantly, especially by intellectuals.’



Firstly, no subject experiencer verb ever undergoes passivization, as can be seen by comparing (38) to (47) (where any definite agents have been changed to referentially weaker nominals to clarify that the issue in (47) does not lie with the independent conditions governing the Greek *by*-phrase; see section 4.2 on the latter).

- (47) a. \*To skotaði fova- te (apo ta peðja).  
 the.NOM dark.NOM fear 3SG.NACT from the.PL child.PL  
 ‘The dark is feared by the children.’
- b. \*I via apexθan- ete (apo polus anθropus).  
 the.NOM violence.NOM detest 3SG.NACT from many.PL person.PL  
 ‘Violence is resented by many people.’
- c. \*I Maria sev- ete (apo tus maθites tis).  
 the.NOM Mary.NOM respect 3SG.NACT from the.PL student.PL 3SG.F.GEN  
 ‘Mary is respected by her students.’

We expect structures with derived subjects not to be candidates for passivization (Perlmutter 1978; Perlmutter & Postal 1984); if the external argument of experiencer verbs involves a non-canonical external argument, (48) falls under the purview of this generalization.<sup>12</sup>

Secondly, agentive transitives freely undergo agent nominalization with the nominalizer *-tis* (48); this is an extremely general process in the language (see also section 3.3.2.3 for more on this diagnostic).

- (48) { katakti- , apeleθtero- , orγano- , trayuðis- , xoref- } tis  
 $\sqrt{\text{CONQUER}}$   $\sqrt{\text{LIBERATE}}$   $\sqrt{\text{ORGANIZE}}$   $\sqrt{\text{SING}}$   $\sqrt{\text{DANCE}}$  NMLZ  
 ‘conqueror, liberator, organizer, singer, dancer’

Subject experiencer verbs, however, never nominalize to yield agent nouns (see also Grestenberger 2018: 495ff, for elsewhere in Indo-European). Thus, for instance, the nominalized counterparts of the finite experiencer verbs in (50) are all ill-formed, as shown in (50); the relevant examples would remain ill-formed if we chose not to provide an overt complement for the agent noun, or if we were to provide a cognate object (as (50b) in fact does). These observations provide further evidence that the external argument of subject experiencer verbs is distinct from that of agentive transitives, in a way that agent nominalization is sensitive to; see also section 3.3.2.3.<sup>13</sup>

<sup>12</sup>Note that the passivization diagnostic comes with its caveats for Greek, a language where passivization is not freely available. However, the non-passivization of subject experiencer verbs very plausibly represents one case where the test is reliable. Whereas it is true that not all canonical transitives cannot passivize, there still exists a crucial asymmetry with subject experiencer verbs, which constitute an exceptionally large class without a single member capable of undergoing passivization.

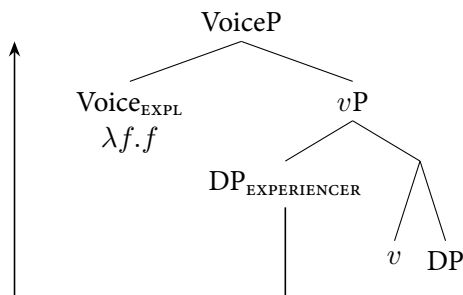
<sup>13</sup>Note that the Greek nominalizer *-tis* only ever derives agent nominals; in particular, unlike English *-er*, it lacks uses of the type in (i).

- (i) a. This one’s a keeper.  
 b. That timeless classic, the quarter pounder with cheese.

- (49) a. O Tolkien fandas-  $\theta$ - ik- e ena pelorio simban.  
 the.NOM Tolkien imagine PFV.NACT PST 3SG one.ACC huge.ACC universe.ACC  
 ‘Tolkien imagined a huge universe.’
- b. Onirevo- maste  $\gamma$ lika onira.  
 dream 1PL.NACT sweet.ACC.PL dream.ACC.PL  
 ‘We dream of sweet dreams.’
- c. I Maria si $\acute{c}$ en- ete ta endoma.  
 the.NOM Mary.NOM despise 3SG.NACT the.ACC.PL insect.ACC.PL  
 ‘Mary despises insects.’
- (50) a. \*O Tolkien itan fandas- tis (enos pelorriu simbandos).  
 the.NOM Tolkien be.PST.3SG  $\sqrt{\text{IMAGINE}}$  NMLZ one.GEN huge.GEN universe.GEN  
 ‘Tolkien was an \*imager of a huge universe.’
- b. \*Imaste oniref- tes ( $\gamma$ likon oniron).  
 be.1PL  $\sqrt{\text{DREAM}}$  NMLZ.PL sweet.GEN.PL dream.GEN.PL  
 ‘We are dreamers of sweet dreams.’
- c. \*I Maria ine sixas- tis (ton endomon).  
 the.NOM Mary.NOM be.3SG  $\sqrt{\text{DESPISE}}$  NMLZ the.GEN.PL insect.GEN.PL  
 ‘Mary is a despiser of insects.’

We can then understand subject experiencer verbs along the lines of (51), where the crucial aspect of the structure involves their higher argument being base-generated in a low position distinct from that of agents, thereby bringing them within the purview of (43). These verbs, too, must involve an expletive Voice projection, one which is specifierless, guaranteeing that (44) will extend to this structure as well; see section 2.3.3.1 for more on this point, and cf. footnote 7.

(51) *Subject experiencer verb*



The necessity of the expletive Voice projection with the relevant subject experiencer verb-forming Roots is, admittedly, somewhat mysterious. In tackling the distribution of nonactive morphology in its totality, I have not been able to devote to this particular point the focus it deserves to assess whether this depen-

dependency between particular Roots and the expletive projection is reducible to an independent factor, or if it must merely be stated by brute force. From a theoretical perspective, this might well be another place in the discussion of the distribution of nonactive morphology in Greek where we seem forced to countenance the ability of Roots to impose their will idiosyncratically in the low domain of the structure; arguably not an unexpected effect, in a theory separating Roots from functional structure (see Marantz 2013: pp. 159, 164 for this perspective drawing on related issues). I will note, additionally that, if this is simply a fact about the relevant Roots, it is one so robustly morphologically motivated in the learner's input that the representation in (51) is not inconceivable: in other words, it does not seem unthinkable that learners arrive at (51), plus a statement necessitating the expletive projection with the relevant Roots, as the best way to accommodate the presence of nonactive morphology in the relevant verbs.

So far, we have seen that the hypothesis in (43), along with its (for now tentative) implementation in (44), seems well-placed to derive the syncretism observed between passives, (some) unaccusatives, middles, and (a subset of) psychological experiencer verbs. These predicates all readily fall within the purview of (43), insofar as their surface subject is uncontroversially not a thematic subject, lending more-or-less straightforward support to the idea that there is no thematic subject in their structure to begin with.

However, the final syncretizing category noted in section 2.3.1, namely reflexive and reciprocal verbs, does not lend itself to this simple reasoning so easily. Unlike passives and their like, reflexives and reciprocals in Greek *do* bear a surface subject that is interpreted as an agent; there is thus a significant challenge raised by these verbs for any account of Voice syncretism based on the hypothesis in (43). In Chapter 3, I take up this challenge, showing that the language's reflexive and reciprocal verbs, far from constituting counterexamples to (43), in fact reinforce the analysis of Voice syncretism founded on this hypothesis.

For now, let us turn to certain structures that themselves seem to pose problems for (43).

### 2.3.3 BEYOND THE SIMPLE GENERALIZATION: TWO SURFACE COUNTEREXAMPLES

According to the NTSH (43), there exists in Greek and languages like it a deep-seated link between nonactive morphology and a particular kind of argument structure: nonactive Voice is linked to the absence of a thematic subject. Counterexamples to this hypothesis would arise whenever the presence of nonactive morphology dissociates from the lack of a thematic subject. Such dissociations can arise in two logically possible ways.

The first kind of counterexample would consist of verbal forms that lack a thematic subject and are *not* realized with nonactive morphology. The second class of potential counterexamples would be made up of forms that are realized with nonactive morphology but seemingly do have a thematic subject.

*Prima facie*, both types of forms are attested widely in Modern Greek. The language shows a number of unaccusative verbs that surface with 'active' morphology, which I refer to as unmarked unaccusatives, following Schäfer (2008b) and much related work cited below. Additionally, Greek resembles many other

languages with Voice syncretism in possessing a number of deponent verbs, that is, verbs that surface in the nonactive but are (apparently) transitive. Any approach to Voice syncretism must address such formations in one way or another; more narrowly, any approach based on the hypothesis in (43) owes a considerable amount of discussion here, to the extent that such approaches are judged to be called into question by the mere existence of such forms.

Here, I offer a discussion of this type, concluding that, in fact, neither unmarked unaccusatives nor deponents pose a problem for the NTSH as applied to Modern Greek. Though previous literature has devoted some discussion to both classes of verbs (see below), this section comes to the issue equipped with the nuanced understanding of Greek voice morphology developed in section 2.2, enabling certain novel conclusions to come to light.

In particular, we will see that, far from constituting true counterexamples, unmarked unaccusatives and deponents demand analyses that emerge as mutually reinforcing with both the NTSH and the understanding of Greek voice morphology developed in section 2.2. The resulting conclusions, bearing on the formal status of the notions ‘active’ and ‘nonactive’, are discussed in section 2.3.3.3.

Because the focus of this section is on examining in turn the two seemingly recalcitrant classes of verbs against the background of the NTSH, many important issues surrounding these verbs are left for work devoted more narrowly to them. Where possible, I lay the empirical groundwork for a more nuanced understanding of both unmarked unaccusatives and deponents in Greek-type languages; this sometimes comes at the cost of circumscribing somewhat broadly the range of admissible analyses in this domain.

### 2.3.3.1 Unmarked unaccusatives

It was noted above that many Greek unaccusatives surface with nonactive morphology; some examples were listed in (36), repeated here as (52). This observation is one of the pillars supporting the NTSH, unaccusatives being a canonical exemplar of verbal structures lacking thematic subjects (e.g. Burzio 1986; Perlmutter 1978).

- (52) a. Kapça fita anaptis- onde apo mona tus.  
 some.PL.NOM plant.PL.NOM NEG  $\sqrt{\text{DEVELOP}}$  3PL.NACT from alone.PL 3PL.GEN  
 ‘Some plants grow on their own.’
- b. I  $\theta$ ermokrasia stin opia to ksilo arxizi na kej-  
 the.NOM temperature.NOM on.the which the.NOM wood.NOM start.3SG COMP  $\sqrt{\text{BURN}}$   
 ete apo mono tu  
 3SG.NACT from alone 3SG.POSS  
 ‘The temperature at which wood starts to burn by itself.’ <https://tinyurl.com/3s4cfuzd>
- c. Proti fora stin karjera mu os anaynosti ... skiz- ete apo mono  
 first.NOM time.NOM in.the career 1SG.GEN as reader tear 3SG.NACT from alone  
 tu to eksofilo.  
 3SG.POSS the.NOM cover.NOM

‘It’s the first time in my years as a reader that the book cover tears by itself.’ <https://tinyurl.com/58tjv5a9>

- d. Ean xriazeste ramata, o jatros sas bori na xrisimopiisi  
 if need.2PL stitch.ACC.PL the.NOM doctor.NOM 2PL.POSS may.3SG COMP use.3SG  
 to iðos pu ðiali- ete apo mono tu.  
 the.ACC kind.ACC that  $\sqrt{\text{DISSOLVE}}$  3SG.NACT from alone 3SG.POSS  
 ‘If you need stitches, your doctor may use the kind that dissolves by itself.’ <https://tinyurl.com/3cenay8e>

But it is simply not the case that all of the language’s unaccusatives surface with nonactive morphology. In fact, a wealth of canonical unaccusatives bear active morphology, raising apparent complications for the NTSH.

- (53) a. Kaθe fora pu pame ja patinaz, o Janis peft- i.  
 every time COMP go.1PL for ice.skating the.NOM John.NOM fall 3SG  
 ‘Every time we go ice skating, John falls down.’  
 b. O Janis peθen- i.  
 the.NOM John.NOM die 3SG  
 ‘John is dying.’  
 c. I flova svin- i.  
 the.NOM flame.NOM extinguish 3SG  
 ‘The flame is burning out.’  
 d. To çoni ljon- i.  
 the.NOM snow.NOM melt 3SG  
 ‘The snow is melting.’

The coexistence of two types of morphologically distinguished unaccusatives is not unheard of; Haspelmath (1993) lists various examples of this type crosslinguistically, and the issue has attracted some amount of theoretical attention for various languages (see e.g. Labelle 1992; Labelle, Carter, Déchaine, Philip, and Sherer 1990; Labelle and Doron 2010 for French, cf. Martin and Schäfer 2014; Schäfer 2008b for German as compared with French and Greek). Importantly, in Greek, the difference in voice morphology between (52) and (53) does not clearly correlate with differences in event or argument structure, a point emphasized by studies on Greek unaccusatives (see e.g. Alexiadou & Anagnostopoulou 1999, 2004; Alexiadou et al. 2006, 2015; Schäfer 2008b).<sup>14</sup>

Both marked and unmarked unaccusatives clearly denote non-externally caused eventualities, as suggested by the felicity of modification by *by itself* in both (52) and (54).

- (54) a. [*Referring to the Balkan custom of wearing a piece of red yarn around one’s wrist for the month of*

<sup>14</sup>Note that other, orthogonal differences may obtain between the two classes. See Alexiadou and Anagnostopoulou (2004) on a possible aspectual difference between complete and partial change. See also e.g. Schäfer (2008b: ch. 2) on unintentional causer interpretations of ‘free’ datives in German; such differences do not obtain in Greek, see Schäfer (2008b: p. 71).

*March:]*

I klosti afti beni tin proti martiu, ke ... pefti apo moni  
 the.NOM thread.NOM this.NOM enter.3SG the first March.GEN and fall.3SG from alone  
 tis  
 3SG.POSS

‘This piece of thread is put on on the first of March, and falls off by itself.’

<https://tinyurl.com/bddf8f4c>

- b. ðilaði kata ti ynomi sas, o Cedric Diggory peθane apo  
 so according.to the.ACC opinion.ACC 2PL.POSS the.NOM die.PST.3SG from  
 monos tu?

alone 3SG.POSS

‘So, in your opinion, Cedric Diggory died by himself.’ (from the Greek translation of *Harry Potter and the Order of the Phoenix*, p. 212)

- c. I floya esvise apo moni tis.  
 the.NOM flame.NOM extinguish.3SG from alone 3SG.POSS  
 ‘The flame burned out by itself.’ <https://tinyurl.com/4sc5j695>
- d. O payos ljoni apo monos tu.  
 the.NOM ice.NOM melt.3SG from alone 3SG.GEN in.the mouth  
 ‘Ice melts by itself.’ <https://tinyurl.com/47wx6xrw>

Additionally, both classes of unaccusatives pattern together with respect to the few reliable unaccusativity diagnostics found in the language (see Alexiadou and Anagnostopoulou 1999, 2004, and cf. Chapter 3); for instance, they both participate in stative passive formation (see Chapter 4), (55), thus patterning unlike unergative verbs in the language.

- (55) a. To fito ine aneptiy- men- o.  
 the.NOM plant.NOM be.3SG develop PTCP N.NOM  
 ‘The plant is grown.’
- b. To ksilo ine ka- men- o.  
 the.NOM wood.NOM be.3SG burn PTCP N.NOM  
 ‘The wood is burnt.’
- c. O Cedric Diggory ine peθa- men- os.  
 the.NOM be.3SG die PTCP M.NOM  
 ‘Cedric Diggory is dead.’
- d. O payos ine lio- men- os.  
 the.NOM ice.NOM be.3SG melt PTCP M.NOM  
 ‘The ice is melted.’

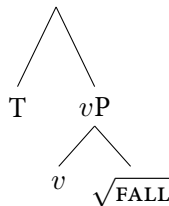
From the perspective of the NTSH (43), marked unaccusatives represent the well-behaved case, and it is the existence of unmarked unaccusatives that is surprising: if unaccusatives lack thematic subjects, they are

predicted to only ever surface with nonactive morphology, all things being equal (see e.g. Kallulli 2013 for this view).

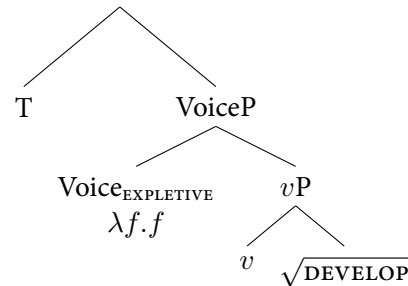
The dominant approach to this issue in recent literature states that all things are not equal; in particular, the marked/unmarked distinction in unaccusatives has been argued to arise from the coexistence within a single language of two different ways to build unaccusatives (Alexiadou et al. 2006, 2015; Schäfer 2008b).

According to this proposal, unmarked unaccusatives correspond to Voice-less unaccusatives, thereby effectively instantiating the structure originally proposed for unaccusatives in Kratzer (1996). Marked unaccusatives, on the other hand, are those unaccusatives that are built using a Voice head – one that is semantically expletive (Alexiadou et al. 2006; Doron 2003; Schäfer 2008b) in the sense that it is interpreted as the identity function, and thus, crucially, introduces no agentive semantics (cf. Kastner 2016; Myler 2016; Wood 2014, 2015; Wood and Marantz 2017 for related ideas)<sup>15</sup>. This distinction is schematized in (56)-(57), using two Roots that correlate with the unmarked/marked distinction in Greek for ease of exposition.

(56) *Unmarked unaccusative*



(57) *Marked unaccusative*



The role of the proposal in (56)-(57) is to bring the existence of unmarked unaccusative within the remit of the NTSH. The reasoning is as follows. In Greek-type voice systems, nonactive morphology is the realization of a Voice head with particular structural properties, per the implementation of the NTSH in (44). The structure in (57) bears a Voice head that falls within the purview of this rule, and this structure will thus be realized with nonactive morphology; but if the node targeted by this rule is missing from the structure altogether, as in (56), then nonactive morphology will not be inserted. From this perspective, then, unmarked unaccusatives represent a case where (44) has failed to apply due to its target not being present, thereby not posing problems for the NTSH.

<sup>15</sup>The works cited in the main text diverge in subtle but important ways on what exactly is intended by the term ‘expletive Voice’. For Schäfer (2008b) and Alexiadou et al. (2015), expletive Voice is a *syntactic* entity distinct from other ‘flavors’ of the same head (cf. Folli and Harley 2004) and deterministically associated with the expletive semantics. This is not so in the works by Wood, Myler and Kastner, where ‘expletive Voice’ is the term reserved for an *alloseme*, that is, for one of a few different contextual interpretations of the syntactically single and unitary entity Voice. Clearly, it is the former, narrow-syntactic conception of expletive Voice that is relevant to the issue discussed at this juncture in the main text. Insofar as particular Roots (e.g. Greek √DIE) involved in unaccusative structures systematically surface with nonactive morphology, the relevant Roots must be allowed to stand in a syntactic relation with the expletive Voice head.

Clearly, a lot hinges on the plausibility of (56)-(57), and, more specifically, on the question of whether this distinction is evidenced independently of what it is meant to derive, namely, the difference in morphology between the two classes of unaccusatives. This evidence has been hard to come by, and the analysis in (56)-(57) thus occupies a somewhat uneasy position, amounting to a strictly speaking syntactic distinction between two classes that have been argued not to exhibit any clear interpretive or syntactic differences. Put differently, the only role of the expletive Voice head in (57) is the hosting of nonactive morphology; while this is certainly a possible analysis, it cannot be said not to be *ad hoc*.

I thus take it that the distinction in (56)-(57) remains to be independently motivated, and motivation of this kind is an important goal for future work.

What is of more relevance here is to point out two observations: an analysis of the type in (56)-(57) hinges crucially on the understanding of Greek voice morphology advanced in section 2.2; and more broadly, any analysis of the unmarked/marked split in Greek unaccusatives must incorporate the conclusions of section 2.2. To my knowledge, both of these observations are novel (but cf. Grestenberger 2018: 501ff, where the question of the status of ‘active’ in Greek-type voice systems is briefly raised).

Let us begin with the first observation, by considering more closely the gist of the analysis in (56)-(57). If expletive Voice is present, nonactive morphology results, deriving a marked unaccusative; if no Voice is present, ‘active’ morphology results, deriving an unmarked unaccusative. What this analysis presupposes are the two points explicitly argued in section 2.2 on the basis of the facts surrounding Voice displacement in Greek: firstly, that ‘active’ voice morphology is really the elsewhere case (explicitly acknowledged, but not directly argued for, in Alexiadou et al. 2006, 2015, see also Alexiadou 2014a); and, secondly, that voice morphology (both nonactive and elsewhere) is never realized directly on Voice itself. If ‘active’ were not a default, it is unclear why the Voice-less structure in (56) should end up realized with ‘active’ morphology; similarly, if ‘active’ morphology were only inserted in the head Voice, as opposed to more peripheral nodes, then structures like (56) should never be capable of bearing any voice morphology at all. Thus, the assumption underlying this analysis of the unmarked/marked split is that ‘active’ morphology is the elsewhere (rendering ‘unmarked’ an apt terminological choice), and that voice morphology must be allowed to surface peripherally. The morphological arguments in favor of these two points advanced in section 2.2 thus make (56)-(57) viable, even if the question of syntactic support for this proposal remains.

More broadly, if the arguments of section 2.2 are on the right track, any analysis of the unmarked/marked split must incorporate the conclusions emanating from the discussion therein. In particular, unmarked unaccusatives cannot be derived by making reference to a positively specified ‘active’ Voice feature, since there is no such entity that is ever referred to at the point of realization. As we will see, this elsewhere status of ‘active’ in fact derives several striking features of the Greek voice system, the existence of unmarked unaccusatives being just one. These points are developed in more detail in section 2.3.3.3.

Finally, though (56)-(57) has been repeatedly noted to be in need of independent motivation, it in fact becomes possible to mount an argument against the obvious alternative to it, namely, a ‘purely morpholog-



ical' solution where the differences between unmarked and marked unaccusatives arise only at the point of realization, or shortly before. The argument is developed in [section 2.3.3.3](#).

### 2.3.3.2 Deponents

A second apparent challenge to the NTSH as applied to Greek comes from the language's deponent verbs, that is, the numerous two-argument verbs that surface with nonactive morphology (see e.g. Embick 1997; Grestenberger 2018; Kallulli 2013; Zombolou & Alexiadou 2014). Deponents are a common feature of Greek-type voice systems (see e.g. Grestenberger 2018); (58) gives a first few examples from Modern Greek.

- (58) a. I Maria katarj- ete tus andayonistes tis.  
 the.NOM Mary.NOM curse NACT.3SG the.ACC.PL competitor.ACC.PL 3SG.F.GEN  
 'Mary curses (i.e. puts a curse upon) her competitors.'
- b. Panda metaçiriz- ome me prosoçi politima andikimena.  
 always handle 1SG.NACT with care precious.ACC.PL item.ACC.PL  
 'I always handle precious artifacts with care.'
- c. Mu aresi na ðiiy- ume istories sta peðja.  
 1SG.GEN please.3SG COMP narrate 1SG.NACT story.ACC.PL to.the child.PL  
 'I like narrating stories to children.'
- d. Akoma ðiapraymatev- onde tis leptomerias tis simfonias.  
 still negotiate 3PL.NACT the.ACC.PL detail.ACC.PL the.GEN deal.GEN  
 'They're still negotiating the specifics of the deal.'

As (59) clarifies, nonactive morphology is obligatory in (58): the relevant Roots never surface suffixed with 'active' morphology.

- (59) a. \*I Maria katara- i tus andayonistes tis.  
 the.NOM Mary.NOM curse 3SG the.ACC.PL competitor.ACC.PL 3SG.F.GEN
- b. \*Panda metaçiriz- i me prosoçi politima andikimena.  
 always handle 1SG.NACT with care precious.ACC.PL item.ACC.PL
- c. \*Mu aresi na ðiiy- o istories sta peðja.  
 1SG.GEN please.3SG COMP narrate 1SG story.ACC.PL to.the child.PL  
 'I like narrating stories to children.'
- d. \*Akoma ðiapraymatev- un tis leptomerias tis simfonias.  
 still negotiate 3PL the.ACC.PL detail.ACC.PL the.GEN deal.GEN

Such verbs raise a number of questions; those of interest here are listed in (60).

(60) *Questions on the Modern Greek deponents*

- a. Which verbs make up the class of deponent verbs?
- b. What are the properties of their surface subject?
- c. How stable are the properties of deponents across speakers?

Focussing on (60a-b), I will eventually concur with the emerging view in the literature that Modern Greek deponents bear a non-canonical external argument (with Grestenberger 2018 and Zombolou 2004, who defend different versions of this view; and *pace* Angelopoulos, Collins, and Terzi 2020 and Embick 1997, 1998, who take deponents to be canonical transitives but draw very different conclusions from that point onwards). This much suffices for the discussion here, insofar as it suggests that deponents in Modern Greek are in fact compliant with the NTSH. It is worth noting at the outset, however, that the Modern Greek deponents raise several more questions that cannot be tackled directly here, related chiefly to (60c); as will be discussed briefly below, the deponents represent a corner of the Greek voice system that seems to be in flux, with some variation observed across speakers.

How the class of deponents should be circumscribed beyond the simplest descriptive level is a matter of some complexity, and thus the answer to (60a) is not always straightforward. The examples in (59) paint a somewhat idealized picture in selecting those nonactive-bearing transitives that can reasonably, from a pre-theoretic standpoint, be seen as agentive; but incorporating more examples of verbs that have been termed deponent in the literature on Modern Greek reveals some murkiness, in directions that end up linking the descriptive question in (60a) to the analytical one in (60b).

Firstly, many of the verbs termed deponent in the literature on Modern Greek have translations that would be classified as subject experiencer verbs in other languages; and indeed, *bona fide* subject experiencer verbs in Modern Greek are ‘deponent’ in the sense that they obligatorily surface with nonactive morphology, see section 2.3.1. Recall further that the verbs referred to as subject experiencer verbs in section 2.3.1 bore a characteristic syntactic profile distinguishing them from regular transitives. As we will see, deponents pattern in a similar way for most speakers, suggesting that, although transitive, they bear a non-canonical external argument, much like subject experiencer verbs.

Other verbs typically classified as deponent bear an external argument that could be construed as directly affected by the event and which, thus, may have been linked to a low (Applicative) position at an earlier point in the history of the language. These include verbs denoting events from which the external argument ends up benefiting (*ðanizome* ‘borrow’; *promiθevome* ‘procure’; *ðiapraymatevome* ‘negotiate’; *emborevome* ‘trade’; *ekmetalevome* ‘exploit’) or suffering (*xreonome* ‘incur, be charged with’). It is possible to show, however, that, even if the external argument of these verbs was somehow directly linked to a beneficiary/maleficary position at some earlier point, this is no longer so in the modern language; for instance, the following example, where the verb ‘negotiate’ co-occurs unproblematically with a (disjoint) ethical dative, clarifies that there is no straightforward sense in which the surface subject of this verb is necessarily construed as the beneficiary:

- (61) O manager tis aθlitrias tis ðiapraymateftike ena fovero  
 the.NOM manager the.GEN athlete.GEN 3SG.F.GEN negotiate.NACT.3SG one.ACC amazing.ACC  
 neo simvoleo.  
 contract.ACC  
 ‘The athlete’s manager negotiated an amazing contract to her benefit.’

It is possible to glimpse origins of this type for even certain more agentive-seeming deponents; for instance, *katarieme* ‘curse’ is etymologically ‘put in a prayer against’, and *epititheme* ‘attack’ perhaps etymologises to ‘place oneself against’.

Needless to say, these conjectures, even when well-motivated at the diachronic level, almost certainly do not form part of the grammar of the average modern speaker. They do, however, raise the possibility that the external argument of deponents may have a special status in the synchronic grammar, too.

Indeed, once we turn to question (61b), we find that the surface subject of deponents seems to have a status distinct from that of regular transitives. Passivization is a crucial diagnostic to this end: deponents do not passivize in Modern Greek (at least not typically – see below), as shown in (62)-(63).

- (62) a. Panda metaçir- iz- **ome** me prosoçi politima andikimena.  
 always  $\sqrt{\text{HANDLE}}$  VBZ 1SG.NACT with care precious.ACC= objects.ACC  
 ‘I always handle precious artifacts with care.’  
 b. \*Panda metaçir- iz- **o** me prosoçi politima andikimena.  
 always  $\sqrt{\text{HANDLE}}$  VBZ 1SG.ACT with care precious.ACC= objects.ACC  
 ‘I always handle precious artifacts with care.’  
 c. \*Ta politima andikimena prepì na metaçiriz- onde me prosoçi.  
 the.NOM precious.NOM object.PL.NOM must.3SG COMP  $\sqrt{\text{TREAT}}$  3PL.NACT with care  
 ‘Precious artifacts should be treated with care.’
- (63) a. I andayonistes tis kataras- θ- ik- an ti Maria.  
 the.NOM competitor.PL.NOM her  $\sqrt{\text{CURSE}}$  PFV.NACT PST.NACT 3PL the.ACC Mary.ACC  
 ‘Her competitors cursed Mary.’  
 b. \*I andayonistes tis kataras- an ti Maria.  
 the.NOM competitor.PL.NOM her  $\sqrt{\text{CURSE}}$  3PL.ACT the.ACC Mary.ACC  
 ‘Her competitors cursed Mary.’  
 c. \*I Maria kataras- θ- ik- e (apo polus andayonistes tis).  
 the.NOM Mary.NOM  $\sqrt{\text{CURSE}}$  PFV.NACT PST.NACT 3SG from many competitors her  
 ‘Mary was cursed (by many of her competitors).’

As noted in [footnote 12](#), the passivization diagnostic must be treated with care in Greek, where passivization is occasionally limited; what is instructive is the comparison between the class of non-deponent transitives and that of deponents, and in particular the observation that, whereas the former occasionally

includes verbs that resist passivization, the latter is entirely comprised of verbs with this property.<sup>16</sup>

We can thus take the impossibility of passivization to evidence a syntax for deponents similar to that defended in section 2.3.2 for subject experiencer verbs. In both classes of verbs, the surface subject originates lower than agents, deriving both the obligatory presence of nonactive morphology and the impossibility of passivization. This position – that deponents crucially resemble experiencer verbs in bearing a non-canonical external argument – is defended Grestenberger (2018) and Zombolou and Alexiadou (2014), though the resulting implementations differ in ways to be discussed below.

The upshot of this position is clear: if the subject of deponents is not introduced by Voice, then deponents can easily be made compliant with the NTSH. This central point of this section seems well-motivated, but is flanked by several points of empirical complexity that I discuss presently; these deserve to be addressed by future work on deponents in Greek and languages with similar voice systems.

A first area of complexity arises from the observation that the properties of deponents may vary across speakers, in a way that highlights deponents as a corner of the Greek voice system that is still in flux. To see why, consider two core generalizations on deponents drawn above: they always surface with nonactive morphology, and they do not undergo passivization. Though these generalizations systematically hold for me and my consultants, as well as many other speakers I have encountered, one does find attested examples that seemingly contravene both generalizations.

Firstly, one does encounter Roots normally taken to form deponents surfacing with ‘active’ morphology, such as those in (64). In (64a) and (64b), we find ‘active’ morphology with  $\sqrt{\text{NARRATE}}$ , one of the deponent-forming Roots *par excellence*; the same is found in (64c) with the unprefix version of  $\sqrt{\text{HANDLE}}$  in (62), and with  $\sqrt{\text{EXPLOIT}}$ , another Root that normally only forms deponents for the vast majority of speakers.

- (64) a. %To docimanter ... afij- i tin istoria tu istoriku XFM.  
 the.NOM documentary  $\sqrt{\text{NARRATE}}$  3SG the.ACC story.ACC the.GEN historical.GEN XFM  
 ‘The documentary tells the story of the historical [radio station] XFM.’ <https://tinyurl.com/bdhwcfbt>
- b. %Eçi na mas afij- i poles joiteftikes istories.  
 have.3SG COMP 1SG.GEN  $\sqrt{\text{NARRATE}}$  3SG many.ACC.PL charming.ACC.PL story.ACC.PL  
 ‘She has many charming stories to tell us.’ <https://tinyurl.com/yc448vnb>
- c. %çiriz- i apoklistika o iðjos ke afti tin periptosi.  
 $\sqrt{\text{HANDLE}}$  3SG exclusively the.NOM same.NOM and DEM.ACC the.ACC case.ACC  
 ‘He himself alone is handling this case, too.’ <https://tinyurl.com/yczn93xh>
- d. %θelise na ekmatalev- i to savato-çiriako.  
 want.PST.3SG COMP  $\sqrt{\text{EXPLOIT}}$  3SG the.ACC Saturday-Sunday.ACC  
 ‘She wanted to be taking advantage of the weekend.’ <https://tinyurl.com/44vwmye7>

<sup>16</sup>Noting the impossibility of deponent passivization in Modern Greek, Grestenberger (2018) surmises that ‘we do not expect passivization in strictly bivalent voice systems, since the passive use of nonactive morphology is presumably blocked for deponents.’ It is not fully clear what this expectation corresponds to, from an analytical standpoint.

Such examples are blatantly unacceptable for myself and my consultants, but are nonetheless widely attested (anecdotally, even in spontaneous oral productions).

In assessing the relevance of such data to syntactic theorizing, it is important to keep at bay what Merchant (2016) has shrewdly dubbed the ‘fetishization of attestation’: the mere fact that examples like (64) are attested is by no means a guarantee of their grammatical in the technical sense, or even of their being acceptable by the same speakers who produced them. But examples like (64) do at least raise the possibility that certain speakers may be in the process of ironing out the kinks found in the voice system in the form of (some) deponents, possibly by inflecting the relevant Roots as regular transitives; see also Roussou and Tsimpli (2007: 149ff) for more examples and discussion to this end. What the exact status of such examples is for the relevant speakers is a question best left to a more systematic study of deponents, where access to speakers systematically accepting examples like (64) will be crucial.

The same can be said of a second type of example, apparently attesting deponent-forming Roots found in the passive. Representative examples are given in (65); once again, such formations may reflect reanalysis of deponents into regular transitives.

- (65) a. %Jati voiθa sto na metaçiriz- onde alla peðja os skupiðja?  
 why help.3SG to.the COMP  $\sqrt{\text{HANDLE}}$  3PL.NACT other.NOM child.NOM as trash.NOM.PL  
 ‘Why does he help with other children being treated like trash?’<sup>17</sup> <https://tinyurl.com/58s484ux>
- b. %I iroes tetçon istorion ekmatalev- onde apo ta MME.  
 the.NOM.PL hero.NOM.PL such.GEN.PL story.GEN.PL  $\sqrt{\text{EXPLOIT}}$  from the mass.media  
 ‘The heroes of such stories are exploited by the mass media.’ (from Roussou and Tsimpli 2007: p. 150, originally attested online)

A second point of empirical complexity concerns the extent to which a full assimilation of the class of deponents to that of subject experiencer verbs is warranted. Recall that, *modulo* the facts just discussed, both classes obligatorily surface with nonactive morphology, and do not passivize. It is in part such convergences that lead Zombolou and Alexiadou (2014) to identify deponents with subject experiencer verbs (cp. Embick 2000: p. 193 for Latin). However, Grestenberger (2018), who also proposes a low origin for the external argument of deponents, raises a few objections to this view,<sup>18</sup> proposing instead that this argument is an agent, albeit one not introduced by Voice. Though Grestenberger does not provide a worked-out view of what this analysis amounts to, one empirical point raised therein deserves some attention here, concerning the behavior of deponents under agent nominalization.

<sup>17</sup>For most speakers, including my consultants, this example is only acceptable if parsed as a transitive, thus ‘...help with *pro* treating other children like trash’. The context in the linked article clarifies that a passive parse is intended, however.

<sup>18</sup>Those diagnostics in Grestenberger (2018: 493ff) that are taken from Embick 1997: 216ff (in turn from Anagnostopoulou 1999) take differences between agentive transitives and *object* experiencer verbs as the baseline; it is not clear whether the resulting comparison between putative *subject* experiencer verbs (i.e. deponents) and agentive transitives is instructive. In other words, given independent structural differences between subject and object experiencer verbs, the fact that deponents unlike object experiencer verbs in this case is not necessarily probative as to the nature of their external argument. Grestenberger takes the relevant diagnostics

Recall from (48)–(50) that, alongside resisting passivization, subject experiencer verbs resist agent nominalization as well. Grestenberger (2018: ex. (14)) provides a few Modern Greek examples suggesting that deponents do not pattern the same way, replicated in (66).<sup>19</sup>

- (66) { çiris- , ekmetalef- , mimi- } tis  
 $\sqrt{\text{HANDLE}}$   $\sqrt{\text{EXPLOIT}}$   $\sqrt{\text{IMITATE}}$  NMLZ  
 ‘user, exploiter, imitator’

These examples are accepted by speakers who do not allow the relevant Roots to appear with ‘active’ morphology, clarifying that (66) cannot result solely from reanalysis by innovative speakers. To the extent that such examples can be found with more deponent-forming Roots, they may indeed speak against a full assimilation of deponents to the class of subject experiencer verbs. If that turns out to be the case, several important analytical questions will arise: two analytical options would involve a ‘low agent’ analysis of the type proposed (but not elaborated upon) in Grestenberger (2018), or an analysis whereby the relevant argument is first associated with a distinct role and receives the agent role separately, via movement or a process at LF. Which, if any, of these options will eventually be necessary is left open here.

A final empirical question on deponents places them against a broader cross-linguistic background. The presence of a class of verbs bearing the label ‘deponent’ is arguably a hallmark of Greek-type voice systems at least within Indo-European, being found also in, for example, Classical Greek (Grestenberger 2018: see e.g.), Latin (see Embick 1997; Grestenberger 2018), and Sanskrit (Grestenberger 2018), and (possibly) Albanian, where however the descriptively deponent verbs are never transitive (Kallulli 2013). There is no reason to expect these different systems to all generate what has been descriptively classed as deponency in the same way; at the same time, comparative work may help to at least circumscribe the range of possible strategies for arriving at this surface outcome. Much empirical work remains to be carried out. For instance, Embick (1997) provides a range of examples suggesting that Latin deponents occur in passive syntax, favoring a particular treatment of Voice syncretism (see below); Grestenberger (2018) expresses some skepticism, conjecturing that the relevant forms have been reanalyzed as alternating transitives, but this objection is not immediately reconcilable with the observation that many of Embick’s examples involve the same Root being used as a transitive and a passivized deponent by the same author.

While many questions have arisen, some analyses of deponents do not seem admissible. For instance, the assertion in Angelopoulos et al. (2020) that deponents provide grounds on which to reject the NTSH seems at best premature on a few fronts. The impossibility of passivization, not noted by these authors, is a crucial observation; all the more worrying is the move to reject the NTSH without any consideration of the distribution of nonactive morphology in this or any other related language, much less any attempt to offer a viable alternative to the NTSH. Crucially, the position that these authors (tacitly) espouse, namely, that Greek voice

to be tests for agency, but it is not clear whether this assumption is warranted.

<sup>19</sup>Grestenberger also lists *katarastis* ‘curser’, which is however judged as unacceptable in my consultant pool.

morphology can mismatch syntactic argument structure in unpredictable ways, is empirically disfavored by a number of considerations that emerge once we examine the distribution of Greek voice morphology across verb classes, as we have just done. I turn to these considerations next.

### 2.3.3.3 Implications: On the status of ‘active,’ ‘nonactive,’ and ‘unmarked’

The discussion in this subsection has occasionally been tentative: in discussing apparent counterexamples to the NTSH, various open empirical questions have been uncovered, and weak points of existing analyses have been identified. But the at once holistic and detailed look at the realization and syntax of voice pursued in this chapter has also made it possible to identify certain important generalizations, and these become crucial in beginning to circumscribe the shape of the appropriate solution to the problem of Voice syncretism. Here, I lay out these generalizations by synthesizing individual points made thus far in connection with the NTSH and its predictions with respect to particular verb classes.

The generalizations in question can be most parsimoniously stated with reference to three key notions that have arisen repeatedly in the discussion of voice morphology: ‘active,’ ‘nonactive’ and ‘unmarked.’ Let us examine each of these in turn.

‘Active’ voice morphology has been argued not to correspond to a morphosyntactic object, such as a feature [(+)ACTIVE], in Greek. Three corners of the system have enabled us to arrive at this conclusion:

(67) *Facts motivating the non-existence of [(+)ACTIVE]*

- a. *Morphological distribution:* ‘Active’ exponents have the status of a default.
- b. *Restricted mismatches:*
  - (i) There are both unmarked and marked unaccusatives.
  - (ii) There are deponents.
  - (iii) There are no unmarked passives (=anti-deponents) or reflexives.

(67a) is the topic of [section 2.2](#): ‘active’ voice morphology in fact corresponds to the set of elsewhere exponents for various categories surfacing to the right of Voice in the verbal morphology. These exponents have the distribution of an elsewhere insofar as they surface not just in syntactically active forms, but also in syntactically nonactive forms when Voice is not allomorphically visible.

(67b) is a summary of various observations made thus far concerning the distribution of active and non-active morphology across verb classes. The crucial point here is that we do find apparent syntax/morphology mismatches – that is, cases where a given structure surfaces with the ‘wrong’ voice morphology – but these mismatches are both amenable to an NTSH-compliant analysis and, more importantly, restricted relative to the full set of conceivable mismatches.

Firstly, we find unmarked unaccusatives, discussed in [section 2.3.3.1](#); the existence of this category is not surprising given the default nature of ‘active’ voice morphology. Secondly, we find deponent verbs, which

surface with nonactive morphology even though their external argument is ostensibly a thematic subject; upon closer inspection, these can be shown to lack canonical external arguments, thus in fact being fully in line with the NTSH, at least in Greek.

The point that bears emphasizing here is (67b-iii), which lays bare the restricted nature of apparent mismatches in the morphosyntax of Voice. Though the language has unmarked unaccusatives, there are no counterparts to this category outside of unaccusatives. In particular, there are no unmarked passives or reflexives: the language does not furnish a single instance of active morphology realizing a passive syntax, (68); and active morphology is never capable of being associated with reflexive or reciprocal interpretations. Let us consider these cases more closely.

A hypothetical ‘unmarked passive’ is given in (68); this type of example would involve effectively the mirror image of a deponent, that is, a syntactically passive verb that surfaces with active morphology.

(68) *Hypothetical ‘anti-deponent’ verb*

John VERB-ACT by Mary.

Interpretation:  $\lambda e.VERB(e) \wedge AG(e) = Mary \wedge TH(e) = John$

Such examples are simply not found. A particularly striking case illustrating this point comes from the Roots that Alexiadou and Anagnostopoulou (2004) classify as Class III in their discussion of the behavior of different verb classes with respect to the causative alternation and the distribution of (non)active morphology. Verbal structures formed from these Roots surface with ‘active’ morphology when transitive or unaccusative, and nonactive morphology when passive. We thus find the following pattern:

- (69) a. O Janis ađjas- s<sup>20</sup>- e ti sakula.  
 the.NOM John.NOM empty PFV 3SG the.ACC bag.ACC  
 ‘John emptied the bag.’
- b. I sakula ađjas- s- e {apo moni tis / \*apo to Jani }.  
 the.NOM bag.NOM empty PFV 3SG from alone 3SG.GEN from the John  
 ‘The bag emptied by itself/by John.’
- c. I sakula ađjas- θ- ik- e {apo to Jani / #apo moni tis }.  
 the.NOM bag.NOM empty PFV.NACT PST 3SG from the John from alone 3SG.GEN  
 ‘The bag was emptied by John/by itself.’

In (69a), we find ‘active’ voice morphology realizing an active transitive syntax. (69b) shows that the intransitive variant also surfaces with ‘active’ morphology: in the terms of the discussion in section 2.3.3.1, (69b) is an unmarked unaccusative. Finally, (69c) shows a passive, realized with nonactive morphology. Note the differential availability of an agent-contributing *by*-phrase and the agent-denying adverbial *by itself*,

<sup>20</sup>/s/-final Roots such as this one trigger degemination, and thus surface with a single [s], when occurring before the ‘active’ perfective exponent -s. I retain the aspectual -s in the transcription to keep things consistent with other examples involving non-/s/-final Roots.



justifying the use of the labels ‘unaccusative’ and ‘passive’.

The crucial point of interest to the present discussion is the impossibility of the *by*-phrase in (69b). This is a verb that builds its unaccusative variant using active morphology, and is also implicated in passive syntax. It seems reasonable to surmise that, if the language allowed the combination of the two, yielding passive syntax with active morphology, it is precisely this class of verbs that would exhibit this effect; (69b) clarifies that this is not the case.

Similar conclusions arise in the domain of reflexive verbs. The following set of examples prefaces the domain of [Chapter 3](#); it illustrates that verbal reflexivization in Greek goes hand-in-hand with nonactive morphology. This fact is shown in (70) for so-called natural reflexives like *wash*, and (71) for the language’s productive reflexivization strategy using the prefixal reflexivizer *afto-*.

(70) I        Maria    pli-    θ-        ik-        e.  
 the.NOM Mary.NOM  $\sqrt{\text{WASH}}$  PFV.NACT PST.NACT 3SG  
 ‘Mary washed.’ (*inherent reflexive*)

(71) O        Janis     afto-    ḍiafimis-    θ-        ik-        e.  
 the.NOM John.NOM REFL  $\sqrt{\text{ADVERTISE}}$  PFV.NACT PST.NACT 3SG  
 ‘John advertised himself.’ (*derived reflexive*)

Consider now (72) and (73), both illustrating that ‘active’ morphology is incompatible with reflexivization. In (72), a Root like  $\sqrt{\text{WASH}}$  combined with ‘active’ morphology is shown to accommodate at most a transitive reading with a null object, but not a reflexive reading; in (73), the reflexivizer *afto-* is simply ungrammatical with ‘active’ morphology. Though these examples use reflexives, the same observations hold for verbal reciprocals, also discussed in [Chapter 3](#).

(72) I        Maria    e-    plin-    Ø-        e.  
 the.NOM Mary.NOM PST  $\sqrt{\text{WASH}}$  PFV.ACT 3SG  
 ?‘Mary washed something’ (fine in a context with a salient object of washing)  
 ✗ ‘Mary washed herself’

(73) \*O        Janis     afto-    ḍiafimi-    s-        e.  
 the.NOM John.NOM self  $\sqrt{\text{ADVERTISE}}$  PFV.ACT 3SG

(72)-(73) thus serve as another illustration of the systematicity of the distribution of nonactive morphology. It bears emphasizing that (72) and (73) do not amount to quirks of the particular Roots selected for illustration: no verb in the language participates in verbal reflexivization with active morphology.<sup>21</sup> Rather, the co-occurrence of verbal reflexivization with nonactive morphology is a completely systematic fact, just as in the case of passives surfacing obligatorily with nonactive morphology.

Overall, then, the mismatches that we find between voice morphology and Voice syntax are severely re-

<sup>21</sup>See [footnote 26](#) for discussion of the two fossilized verbs that only ostensibly counterexemplify this generalization.

stricted relative to the full range of logically possible mismatches. Such facts are taken here to follow straightforwardly from a privative treatment of voice features, one where Voice can bear at most the [NACT] (see esp. Alexiadou et al. 2015; Embick 1997, 1998; Rivero 1992). If there is no feature [(+)ACT] to make reference to, then the unattested mismatching categories, namely ‘active’ passives and reflexives, simply cannot be generated; see below for more discussion. The restricted nature of syntax/realization mismatches in the domain of voice in Greek thus call into question approaches that assume binary Voice features for Greek, even if this is usually done for reasons of concreteness and little more (see for instance Merchant 2015).

More importantly, the facts just discussed emerge as completely incompatible with any account that takes voice morphology to be fully independent from the syntax of Voice, and thus predicts that voice morphology and Voice syntax should be able to mismatch each other willy-nilly. It is perhaps telling that no approach of this kind has ever been explicitly defended, to my knowledge, for Greek-type voice systems; but such an approach is implied by explicit rejections of the NTSH (43), at least to the extent that these fail to be accompanied by an alternative approach to the distribution of voice morphology (see Angelopoulos et al. 2020 for a recent example).

In contrast to ‘active’ morphology, nonactive morphology must be taken to correspond to a feature [NACT], assigned to Voice in a particular syntactic configuration in keeping with the NTSH (43), repeated here as (74).

(74) *The No Thematic Subject Hypothesis*

In Greek(-type systems), nonactive morphology realizes structures lacking a thematic subject.

The obvious question that arises now concerns how to formalize (74), that is, how to specify the conditions under which [NACT] is assigned. I turn to this question in section 2.3.4, where the NTSH is argued to follow from a realizational rule translating an instruction not to merge Voice with a specifier into a PF-active diacritic.

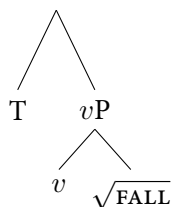
Finally, let us turn to the status of the notion ‘unmarked’ afforded by the present understanding of voice morphology and Voice syntax. The term ‘unmarked’ has been thus far reserved for a particular class of unaccusatives, those surfacing with ‘active’ morphology, as discussed in section 2.3.3.1. There, it was noted that the term ‘unmarked’, adopted from previous literature, is apt: the relevant verbs surface with elsewhere (‘active’) morphology. As discussed in section 2.3.3.1, one possible analysis of these verbs maintains that unmarked unaccusatives correspond to the absence of Voice; that these verbs surface with ‘active’ morphology is in turn made possible by the default nature of ‘active’, which is completely indifferent to the presence, much less the featural content, of the head Voice. This much has already been noted.

Importantly, the discussion in this section enables a more fine-grained look into how the notion ‘unmarked’ must be implemented in Greek-type voice systems: the solution to the existence of unmarked unaccusatives must have a syntactic component, as opposed to being purely morphological in nature. Let us see

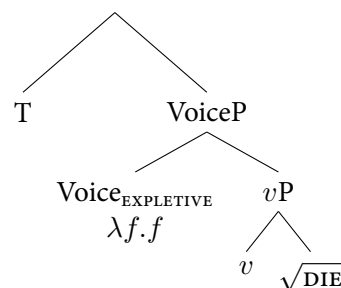
why.

Recall from [section 2.3.3.1](#) the approach to unmarked unaccusatives tentatively assumed therein, building on Schäfer (2008b) among many others. On this approach, schematized in (56)–(57) and repeated in (75), unmarked unaccusatives differ from marked ones in lacking the Voice projection altogether. This is a syntactic difference, in the sense that unmarked unaccusatives are taken to be syntactically ‘smaller’ than marked ones.

(75) a. *Unmarked unaccusative*



b. *Marked unaccusative*



This syntactic approach was argued in [section 2.3.3.1](#) to bear a heavy burden of proof; we are now able to suggest that it emerges as superior relative to purely morphological approaches to the marked/unmarked split. To see what is intended by the term ‘purely morphological’, consider two more possible analyses of unmarked unaccusatives, schematized in (76). Both examples schematize rules operative at PF, operating on the output of the syntax and before Vocabulary Insertion. The first is a rule of Impoverishment (Bonet:1991), which in this case deletes [NACT] in the context of certain Roots, ensuring that elsewhere ‘active’ morphology will be inserted when they are present. The second, equally admissible solution invokes a rule of Pruning (see Embick (2003, 2010), Paparounas (2023) and [section 2.2.3](#) above), which in this case removes the Voice head when it bears [NACT] in the context of the relevant Roots; this rule is stated in prose in (76) simply to avoid details orthogonal to this part of the discussion, concerning the kinds of representations over which Pruning operates.

(76) a. *Voice Impoverishment*

[NACT] → ∅ / { √FALL, √DIE, ... }

b. *Voice Pruning*

Prune Voice when it bears [NACT] in the context of the following Roots: { √FALL, √DIE, ... }

These two analyses have different properties, insofar as one removes a feature and the other a head; it is thus important to ask whether they make different predictions, and they well may (see Paparounas 2023 for how Pruning predicts bleeding of certain kinds of allomorphy). What is important for the present discussion is that solutions of the type in (76) are rules of PF, and thus follow syntax; they are thus different in kind from the solution in (75), a syntactic solution in the relevant sense.

The crucial observation revolves around an overgeneration problem: morphological solutions to the marked/unmarked split of the type in (76) incorrectly predict the existence of unmarked passives and reflexives. If certain Roots can trigger the absence of [NACT] right before Vocabulary Insertion, either by Impoverishment or via Pruning, then there is no principled reason why such a Root would not be capable of forming an unmarked passive or reflexive. To derive such a form, the syntax would construct a normal passive or reflexive, and then the Root involved in this structure would trigger (76a) or (76b) at PF. This type of derivational pathway would give rise to examples like (68) or (73), which have been noted repeatedly to be impossible.

The impossibility of such forms could, of course, follow from an incidental fact, namely, the absence due to happenstance of certain Roots from the contextual specification of rules like those in (76). In other words, it could be the case that all the Roots appearing in the lists making up the context of the rules in (76) are Roots that form unaccusatives, and not Roots that can form transitives and can thus be eligible for passivization and reflexivization. But, while mechanically possible, this solution is conspiratorial: it treats as incidental the fully systematic fact that the only category worthy of the label ‘unmarked’ are certain unaccusatives, and that unmarked passives and reflexives are non-existent. A fact this systematic arguably deserves a more principled treatment; that the purely morphological treatment is not principled in the relevant sense can be seen by the fact that it necessitates positing a list that contains items that arguably form a natural class, namely, many Roots that form unaccusatives.

This problem argued to arise with (76) is, of course, not specific to these rules themselves; the conclusion is rather much broader. If we allow PF to be able to remove the feature [NACT] before Vocabulary Insertion, we risk overgenerating unmarked forms, and thus foregoing a principled treatment of the notion ‘unmarked’ in the domain of voice morphology. Unmarkedness, in the relevant sense, must then not arise at PF; rather, it must be a syntactically implemented property. One possibility in this connection is to allow particular Roots to select their environment, to the extent that they can furnish an instruction *not* to merge Voice.

It is important to stress that this point is in no sense a generalized argument against Impoverishment, Pruning, or PF rules; it rather amounts to a reason not to use this toolkit in this particular case.

We thus see that a syntactic approach to the marked/unmarked split seems to be on the right track, insofar as it seems to capture the facts where a morphological analysis fails to do so. In fact, it has the potential to go beyond this level, and allow a principled view into why the facts are the way they are. Let us conclude with this point.

It was noted repeatedly above that, in Greek, unaccusatives (and their ilk, such as middles) are the only category that can be unmarked, in the relevant sense of the term: we find unaccusatives that surface with ‘active’ morphology, but no passives or reflexives with the same property. This asymmetry is, on the syntactic view, not accidental. Unaccusatives lack agent entailments: it thus seems necessary to allow the grammar to construct them without employing at all the head responsible for introducing agentivity, Voice. But, to the extent that we allow the grammar to manipulate a flavor of this element that is semantically inert, namely

Voice<sub>EXPLETIVE</sub>, then the presence of this element in an unaccusative structure will make no difference: with or without expletive Voice, an agent-less interpretation will be derived.

With passives and reflexives, however, this cannot be so. Passives will involve agentivity, either by means of an existentially closed agent or an overt *by*-phrase (see e.g. Bruening 2013, and see Section 4.2 for discussion of both the implicit agent and the *by*-phrase in Greek passives). Verbal reflexives in Greek are strongly agent-oriented, as will be shown in Chapter 3. On the assumption that agentivity is introduced solely by Voice, there will then simply be no way to derive a passive or reflexive in the absence of Voice: no Voice-less structure will lead to the interpretation that we understand as passive or reflexive, where an agent is entailed. Since ‘unmarked’ corresponds to Voice-less, there will then be no unmarked passives or reflexives.

Many questions remain on the treatment of unmarked unaccusatives discussed here, and these have been noted repeatedly. What is of interest here is that the holistic look at the voice system of Greek pursued thus far has provided the conclusion that a treatment of this general type, where unmarked unaccusatives are syntactically distinguished from marked ones, seems to be on the right track along multiple fronts relative to conceivable alternatives.

#### 2.3.4 IMPLEMENTING THE SYNCRETISM: MEDIATION AND DIACRITICS

The detailed look at the exponence and distribution of Greek voice morphology has incrementally added up, over the course of this chapter, to an overarching examination of the predictions of the Non Thematic Subject Hypothesis, repeated in (77), against the details of the Greek system. The hypothesis in (77) has been argued to capture a range of facts in the morphosyntax of Greek Voice.

(77) *The No Thematic Subject Hypothesis*

In Greek(-type systems), nonactive morphology realizes structures lacking a thematic subject.

It is now time to offer an implementation of this hypothesis, one that not only accounts for the distribution of voice morphology in the language as per (78) but also, crucially, one that does justice to the various instructive asymmetries inherent in the system (for instance, the existence of deponents vis-à-vis the non-existence of anti-deponents).

Faced with the question of what (77) follows from, a large volume of work on the language adopts a realizational rule like the one introduced in section 2.3 as (44), repeated here as (78). As discussed there, this is an enrichment rule applying before Vocabulary Insertion to supply a feature NACT to the head Voice in a particular structural configuration. As given, (78) is in fact only partial; see below.

(78) Voice → Voice<sub>NACT</sub> / No DP specifier \_\_\_

A rule like (78) raises two sorts of questions. The first is a mechanical one: it concerns how the different aspects of (78) may be formalized, and in particular, how we may understand the rule’s contextual specifica-

tion, given in (78) as prose.

For concreteness, we can envisage an approach to this question that capitalizes on the role of structure-building features. If we assumed a theory where the bottom-up creation of syntactic structures is driven by features on heads (see among others Adger 2003; Collins 2002; Merchant 2019; S. Müller 2010; Svenonius 1994), then (78) can be recast as a (context-less) rewriting rule, as follows:

$$(79) \quad \textit{Feature transduction} \\ [-D]_{\text{VOICE}} \rightarrow [\text{NACT}]_{\text{VOICE}}$$

(79) presupposes a view of the featural content of Voice whereby the presence/absence of a specifier of Voice depends on the feature [D] on this head (see e.g. Alexiadou, Anagnostopoulou, Iordăchioaia, and Marchis 2012; Alexiadou et al. 2015; Schäfer 2008b, 2017; Wood 2015); it differs from these approaches (and follows Bruening 2013, 2014; Oikonomou and Alexiadou 2022, as well as Kastner 2016, 2017, but only in part<sup>22</sup>) in explicitly taking this feature to be binary. For Greek, this move is motivated empirically by the need to make reference to those Voice heads that fail to introduce an external argument DP. Reference of this type is made by different parts in the grammar: not only at PF (79), but also in the syntax, at least insofar as the existence of marked unaccusatives (see section 2.3.3.1) can be understood as particular Roots (or Root+*v* combinations) demanding the presence of specifierless Voice (in this case, Expletive Voice specifically) syntactically.

(79) is labeled a feature transduction rule, in the sense that its role is to ensure that a syntactic feature is led through ('transduced') to PF. By hypothesis, purely formal features like  $[\pm D]$  do not survive to the interfaces. This idea is directly encoded in theories where (privative) structure-building features are discharged (or 'checked') (e.g. Adger 2003; G. Müller 2010; Svenonius 1994), and perhaps implicit in theories with binary structure-building features (e.g. Bruening 2013); the issue is of course broader, connecting with considera-

<sup>22</sup>Kastner (2016, 2017) makes use of binary [D] on Voice; in Hebrew, whose voice system resembles the Greek one in certain crucial respects, reference to [-D] is necessary, too. But Kastner also posits a third, underspecified setting of this feature, which amounts to Voice being unselective as to the presence of a specifier (see also Nie 2017; Oseki 2017; Oseki and Kastner 2017). This third setting is not necessary for the Greek case, and it is worth being precise about why.

In Kastner's analysis, the underspecified setting is used to derive the 'elsewhere' distribution of the XaYaZ template, appearing on some unaccusatives, unergatives/transitives, and figure reflexives. This distribution is surface-parallel to the distribution of 'active' morphology in Greek. This type of distribution was captured above not by means of underspecified Voice, but by having 'active' be a true default at the level of the vocabulary, with nonactive being the sole true Voice feature active at PF (see also main text below). The two analyses thus diverge with respect to where 'defaultness' arises, namely, in the syntax or at the level of the vocabulary. They also differ with respect to the additional devices each requires to capture the full range of facts: underspecified Voice requires rules of allosemy to guarantee that this head is interpreted in different ways based on whether it has ended up with a specifier or not, whereas the analysis above requires a dedicated Expletive Voice projection (see section 2.3.3.1).

Comparing these analyses directly, with Greek as the case at hand, is not a simple matter. Let us keep other assumptions constant, in assuming in particular a rule like (79) that ensures that the realizational level proper can only 'care' about those Voice heads that bore [-D] in the syntax. Once this assumption is made, a lot hinges on how the putative underspecified Voice head will pattern with respect to this rule; the answer to this question is not obvious to me.

tions familiar from Chomsky (1995). Many worthwhile issues aside, the assumption underlying (79) is that the presence/absence of a specifier is a purely structural notion, not one that pronunciation (much less interpretation) ordinarily makes reference to.

If we grant this much, then (79) is needed to ensure that the distribution of nonactive voice morphology seems to be a phenomenon where this purely structural notion *is* referred to, at PF. The right-hand side of (79) is meant to represent a feature, labeled [NACT] for convenience, that is PF-relevant. In other words, (79) is intended as a way of ensuring that the purely formal structure-building feature [-D] survives to PF. This situation ensures that [-D] is distinct both from features like [+PST]<sub>T</sub>, which are not only PF- but also LF-relevant, and thus must arguably be assigned a different status in the syntax in the first place (cf. interpretable features in Chomsky 1995); and also from other purely formal features like [EPP], which, unless transduced to PF by a rule similar to (79), will be deleted once their work of driving the syntactic derivation is done.

It must be noted, however, that, if the analysis of nonactive morphology in (79) turns out to be correct, it will not constitute the only case where a purely formal feature is found to survive to PF. Consider a possible counterpart drawn from an empirical domain distinct from voice, in the form of morphological reflexes of successive-cyclic A' movement in languages such as Irish (McCloskey 2001) and Dinka (van Urk & Richards 2015). In the domain of extraction, such cases are noteworthy precisely because they constitute morphological realizations of what is arguably an otherwise purely formal property of certain heads, namely, the attraction of a moving element; (79) could be understood, somewhat broadly, as a similar kind of beast in the domain of voice.

A second question, one of perhaps broader interest, asks what sorts of architectural commitments (79) entails, and to what extent these commitments are, in fact, necessitated by the facts (79) is intended to capture.

(79) expresses, in the terms of Embick (1998), a *mediated* view of the syntax/morphology interface: on this type of view, there exist objects occupying a domain in between the syntax proper, concerned with constituent structure, and what could be termed morphology in the narrow sense, that is, that component concerned with exponence and pronunciation. (79) is an object of this kind, taking as its contextual specification a syntactic configuration and supplying a diacritic feature, to play a role in the morphology proper.

Embick (1997, 1998) presents a detailed study of why facts like those in Greek seem to demand a mediated view of this kind. A central part of the argument concerns the behavior of deponents, which Embick assumes instantiate a canonical transitive syntax, with an external argument introduced by Voice. Given this assumption, deponents do not fit the structural description of (78), yet their participation in Voice syncretism is truly systematic, in a way that renders a homophony account implausible. Rather, Embick argues, deponents must represent a case of *inherent specification*, such that (79) is in fact augmented to have a disjunctive context as in (80) (see also Embick 2000).

- (80) Voice  $\rightarrow$  Voice<sub>NACT</sub> / No DP specifier \_\_ OR LIST1 \_\_  
 where LIST1 = {  $\sqrt{\text{CURSE}}$ ,  $\sqrt{\text{EXPLOIT}}$ , ... }

(80) is in some sense the completed version of rule (78); it states that nonactive encompasses not only a syntactically definable context, but also a set of idiosyncratic cases, where what matters is the presence of particular Roots. In this sense, (80) is a *diacritic* treatment of nonactive, where this diacritic feature is introduced at a level fed by the syntactic structure, preceding Vocabulary Insertion, and capable of being sensitive to particular Roots. A level with these properties is a level mediating between the syntax proper and the morphology in the narrow sense; hence, systems like Greek one are taken to favor a view of the syntax-morphology interface where the relation between the two is mediated in this way, rather than being in some sense fully direct.

There is a clear sense in which this argument for the mediated view hinges on deponents: in particular, it is because of the assumption that deponents are regular agentive transitives that it becomes necessary to postulate a diacritic treatment of nonactive in order to ensure that these verbs participate in the syncretism. But, as discussed in [section 2.3.3.2](#), it is in fact unclear that this is the right treatment of deponents in Modern Greek: they may well be amenable to a low external argument analysis.

If this is so, it may seem at first blush that the mediated view loses its *raison d'être* for the case of Modern Greek (though it may well go through in other systems, where deponents truly resemble transitives syntactically). For the case of Modern Greek, if deponents in fact fit the context of (78), then the disjunction in (80) is not strictly necessary (at least as long as we allow particular Roots to force particular loci for the introduction of their arguments). If there need be no disjunction, then we return to a rule whose context is defined only syntactically, i.e. (78). implemented as (79). But if we decide that (79) is all we need, then it is natural to wonder whether we in fact need (79) at all: since all that (79) does is change a syntactic, structure-building feature into a PF-relevant feature, perhaps we can do away with the transduction rule and allow the morphology to refer directly to the purely formal feature [-D].

This is a possible move, but not the correct one. Eschewing the assumption that purely formal features are not visible at PF would result in a perfectly coherent theory, yet one that would overgenerate faced with the facts discussed in this section. In particular, this section has amassed a range of evidence suggesting that 'active' is not an object with morphological status in the Greek system: 'active' is really the language's elsewhere morphology for all potentially Voice-sensitive verbal morphemes (see (67) for a summary). If this is so, then allowing the morphology to make direct reference to syntactic structure-building features would treat this fact as something of accident: if both [-D] and [+D] were visible at PF, nothing would explain the pervasive asymmetries between the two features at the level of realization.

Thus, even though the argument for a mediated approach to voice morphology from deponents does not clearly stand for Modern Greek, a different argument does, namely, the one from the non-existence of 'active' morphology. The complete claim here is thus that, whereas [-D]<sub>VOICE</sub> survives to PF, [+D]<sub>VOICE</sub> does not, by virtue of the simple absence of a rule counterpart to (79) that targets this feature.



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## REFLEXIVES AND VOICE

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3.1	INTRODUCTION . . . . .	59
3.2	GREEK REFLEXIVES: BASIC PROPERTIES . . . . .	67
3.3	DIAGNOSING UNACCUSATIVE SYNTAX . . . . .	72
3.4	THE BASIC PROPOSAL: REFLEXIVE VOICE . . . . .	103
3.5	REFLEXIVE SEMANTICS . . . . .	104
3.6	ON TWO ALTERNATIVE ANALYSES . . . . .	122
3.7	AFTO- NOMINALS . . . . .	133
3.8	CONCLUDING REMARKS: A ‘LEXICAL’ SOLUTION? . . . . .	136

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### 3.1 INTRODUCTION

#### 3.1.1 WHY REFLEXIVES?

Of the verb classes participating in the Voice syncretism of Greek, reflexives constitute perhaps the most puzzling case. Recall from [Chapter 2](#) the main structures found to syncretize in the language: passives, middles, (marked) unaccusatives and experiencer verbs are realized uniformly, by means of nonactive morphology. These structures form a natural class, motivating the Non-Thematic Subject Hypothesis (NTSH) of [Chapter 2](#), and the particular implementation of Voice syncretism discussed there.

From the perspective of the NTSH, the participation of reflexives in Voice syncretism is surprising. The NTSH is motivated, in the case of the other verb classes participating in the syncretism, by the simple observation that their surface subject is never associated with the agent role. Unaccusatives and middles lack agentivity altogether; subject experiencer verbs have a surface subject with distinct properties from those of agents, as diagnosed in [section 2.3.2](#); and in passives, the agent entailment is never associated with the surface subject.

The surface subject of reflexives, however, does become associated with the agent role. As such, in (81), Mary seems to be both the agent and the patient of a washing event, just as John is seemingly both the agent and the patient of the advertising event in (82). Similarly, each of Mary and John are both patients and agents in the reciprocal hugging and supporting events of (83) and (84).

- (81) I Maria pli- θ- ik- e.  
the.NOM Mary.NOM  $\sqrt{\text{WASH}}$  PFV.NACT PST 3SG  
'Mary washed.' (inherent reflexive)
- (82) O Janis afto-  $\delta$ iafimis- θ- ik- e.  
the.NOM John.NOM REFL  $\sqrt{\text{ADVERTISE}}$  PFV.NACT PST 3SG  
'John advertised himself.' (derived reflexive)
- (83) I Maria ke o Janis a $\gamma$ galias- θ- ik- an.  
the.NOM Mary.NOM and the.NOM John.NOM  $\sqrt{\text{HUG}}$  PFV.NACT PST 3PL  
'Mary and John hugged.' (inherent reciprocal)
- (84) I Maria ke o Janis alilo- ipostirix- θ- ik- an.  
the.NOM Mary.NOM and the.NOM John.NOM RECIP  $\sqrt{\text{SUPPORT}}$  PFV.NACT PST 3PL  
'Mary and John supported each other.' (derived reciprocal)

As will be shown in [section 3.5.1](#), the link between this type of reflexivization and agentivity runs particularly deep in Greek. For now, it suffices to show that verbal reflexives unproblematically pass the tests usually taken to diagnose agentive semantics, such as agent-oriented adverbs and instruments. (85) demonstrates for natural reflexives, but the same facts hold for natural reciprocals, as well as derived reflexives and reciprocals.<sup>23</sup>

- (85) O Janis ksiris- θ- ik- e { prosektika / me to kenurjio ksirafi }.  
the.NOM John.NOM  $\sqrt{\text{SHAVE}}$  PFV.NACT PST 3SG carefully with the.ACC new.ACC razor.ACC  
'John shaved carefully/with the new razor.'

<sup>23</sup>Note that other diagnostics that often travel together with instruments and agent-oriented verbs need not necessarily do so in the case of verbal reflexives. Thus, for instance, *by*-phrases are ruled out (i), by whatever more general constraint rules out the introduction of two agents (including of the same agent twice); whether examples like (i) are ungrammatical in the technical sense, or simply incoherent, is not an entirely straightforward question.

(i) #O Janis afto-  $\delta$ iafimis- θ- ik- e apo ti Maria / apo to Jani.  
the.NOM John.NOM REFL  $\sqrt{\text{ADVERTISE}}$  PFV.NACT PST 3SG from the Mary from the John

Returning to the morphology of verbal reflexives, it is important to note that it is not merely the case that reflexives and reciprocals *can* occur with nonactive morphology; rather, they *must* do so. Hence, the counterparts of (81) and (83) with active morphology may have at most a transitive reading with a null object, but lack a reflexive reading, see (86) and (88); moreover, derived reflexives and reciprocals with active morphology are altogether ungrammatical, see (87) and (89).

- (86) I Maria e- plin- Ø- e.  
 the.NOM Mary.NOM PST  $\sqrt{\text{WASH}}$  PFV.ACT 3SG  
 ?‘Mary washed something’ (fine in a context with a salient object of washing)  
 ✗ ‘Mary washed herself’
- (87) \*O Janis afto- ðiafimi- s- e.  
 the.NOM John.NOM REFL  $\sqrt{\text{ADVERTISE}}$  PFV.ACT 3SG
- (88) I Maria ke o Janis aŋgalia- s- an.  
 the.NOM Mary.NOM and the.NOM John.NOM  $\sqrt{\text{HUG}}$  PFV.ACT 3PL  
 ?‘Mary and John hugged someone’ (fine in a context with a salient object of hugging)  
 ✗ ‘Mary and John washed each other’
- (89) \*I Maria ke o Janis alilo- ipostirix- s- an.  
 the.NOM Mary.NOM and the.NOM John.NOM RECIP  $\sqrt{\text{SUPPORT}}$  PFV.ACT 3PL

In Greek, then, reflexives and reciprocals are *Voice-selective*: they only occur with nonactive Voice morphology.

These facts raise an important challenge for the view of Voice syncretism outlined in [Chapter 2](#): if nonactive morphology follows from the absence of a thematic subject, and if thematic subjects are (canonically) agentive, then why does the morphology group reflexives, a structure where the surface subject is associated with agentive semantics, together with passives, unaccusatives, middles and experiencers, whose surface subject never is? Moreover, why are reflexive verbs Voice-selective, not being able to occur with ‘active’ morphology?

In this chapter, I propose to resolve these puzzles by closely tying reflexivity to Voice. In its broadest formulation, the central claim of the chapter may be summarized as follows: verbal reflexivization goes hand-in-hand with a particular type of Voice morphology because verbal reflexivity arises at the level of the external argument introducer, Voice ([Bruening 2006a](#); [Key to appear](#); [Labelle 2008](#); [McGinnis 2022](#); [Spathas et al. 2015](#), and cf. [R. Kayne 1975](#); [Marantz 1984](#); [Pesetsky 1995](#), on which see [section 3.1.2](#) below). In Greek-type languages, the relevant type of Voice has passive-like properties. That is, the reflexive and reciprocal structures in (81)–(84) involve a Voice syntax virtually identical to that of passives and unaccusatives: there is just a single argument nominal, and it is merged in the internal argument position. At the interface with pronunciation, the lack of an external argument groups these structures together with passives etc., under nonactive morphology. At the interpretive interface, the Voice head implicated in the derivation of reflexive

structures differs minimally from that of passives in identifying the agent role with the theme role, instead of existentially closing it.

The bulk of the empirical attention of the chapter, then, is devoted to demonstrating using a range of diagnostics that *afto*- reflexives (as in (82)) and their reciprocal counterparts (as in (84)) have the syntax of intransitive unaccusatives. By defending this Greek-internal point, I explore its consequences for a range of broader issues concerning reflexivity, Voice, and the relationship between the two.

A first important question concerns how reflexive interpretations are derived. At a very coarse level of granularity, we can imagine at least two classes of answers. It could be the case that reflexive predicates are dyadic, such that, at some relevant level of representation, there are two participants that are identified, see e.g. (90a); or it could be the case that there is just a single participant saturating the unique argument role of a monadic predicate, and some other part of the structure asserts that this predicate is reflexive, e.g. (90b).

- (90) a. *Dyadic reflexive*  
 $\lambda y \lambda x. Verb(e) \wedge Agent(e) = x \wedge Theme(e) = (y) \wedge x = y$   
 b. *Monadic reflexive*  
 $\lambda x. Verb(e) \wedge Participant(e) = x \wedge Reflexive(e)$

A denotation of the type seen in (90a) corresponds to the kind of denotation we expect to arise from a structure bearing two syntactic arguments that end up identified or covalued. This is the type of situation associated with anaphor binding; see e.g. the semantics of anaphoric binding in Heim and Kratzer 1998, and cp. arity-reducing analyses like Bach and Partee 1980. It is worth noting that (90a) is an extreme case used here for exposition, in that binding à la Heim and Kratzer (1998) does not actually involve this denotation, but rather semantic binding (with the help of an assignment function and a principle regulating the distribution of indices) of a variable contributed by reflexive pronouns; but (90a) and the analysis of anaphor binding in Heim and Kratzer (1998) converge in positing dyadic predicates taking two arguments, and this is the dimension crucial here.

(90b) is naturally compatible with a syntax bearing one argument and a reflexivizer of some kind (for different approaches, see e.g. Büring 2005: 40ff, Labelle 2008, Lechner 2012, Reinhart and Siloni 2005, Spathas 2010). From this coarse-grained division, the space of analytical possibilities can be carved up into finer-grained options based on, for example, what level of the grammar the terms ‘monadic’ and ‘dyadic’ are taken to refer to (e.g. syntax proper, the ‘lexicon’, or interpretation); how exactly identification of the arguments of a dyadic predicate is enforced; what mechanism is responsible for reflexivizing a monadic predicate; and so on, see Sportiche (2022) for recent overview. To sort through the large space of possibilities defined by the different answers to these questions is to articulate a theory of reflexivity.

In what follows, I will argue that the Greek cases above instantiate a particular variant of monadicity: alongside being syntactically intransitive, Greek reflexives will be argued to require the type of denotation

shown in (91), where there exists just a single entity, the internal argument DP, saturating an argument position, and the only type of identification that takes place targets thematic roles: it is the role borne by said variable that is identified with a different role.<sup>24</sup>

$$(91) \quad \lambda e. Verb(e) \wedge Theme(e) = DP \wedge Agent(e) = Theme(e)$$

An additional question concerns whether reflexivity is a unitary phenomenon, at either the syntactic or the interpretive level. Of crucial interest here is the relationship between transitive constructions with a reflexive pronoun, and their apparent counterparts formed by ‘verbal’ means, such as Greek (82). If the discussion that follows is on the right track, pronominal and verbal reflexives cannot (always) be assimilated to each other: I will argue that, in Greek, only argument reflexives involve a transitive syntax where reflexivity can be effected by identification of two variables. Intransitive reflexives instead furnish just one event participant, and employ thematic role identification as in (91).

This dissociation of ‘morphological’ reflexives from reflexive pronouns amounts to the claim that there exist at least two distinct types of reflexivity: Voice-based reflexivization and anaphoric binding are argued below to have different properties, and to thus be distinct (with e.g. Safir 2004: ch. 4, at least to some extent, and *contra* e.g. the notion of ‘verbal’ and pronominal reflexivization being in direct competition found in Reinhart and Reuland 1993). This claim has two important consequences.

The first concerns the proper analysis of reflexivizing morphology such as the element *afto-* in (82). Two broad classes of treatments of such elements can be envisioned. Under one type of approach, reflexivizers are arguments themselves: they are merged in an argument position and are assigned a thematic role themselves, or serve as reflexivizing functions. They may additionally ‘incorporate’ into the verbal form in some way. Under this analysis, ostensibly intransitive reflexives are really ‘hidden transitives’. Under a different type of analysis, the relevant exponents mark the presence of some functional head in the structure responsible for carrying out reflexivization; they are not themselves arguments. I will argue at length that *afto-* verbs are truly syntactically intransitive, and that *afto-* itself must be treated as an exponent of a reflexivizing Voice head, as opposed to a ‘defective’ reflexive argument (see in particular section 3.6.1). As such, the stance taken here is in line with treatments of other types of Voice morphology as reflective of the presence of a particular functional structure (e.g. Embick 1998; Legate 2014; Pylkkänen 2008), and not as an argument in itself (e.g. Baker et al. 1989; Collins 2005).

Over the course of developing these theoretical points, the chapter also makes certain methodological contributions, in the form of collecting, sorting through, or even developing, diagnostics for the argument structure of reflexives. In what follows, I deploy a range of tests for *a)* the transitivity of reflexive verbs com-

<sup>24</sup>At this point, the reader may wonder why (91) makes reference to the roles Agent and Theme specifically, rather than generalizing across thematic roles somehow. As we will see, a hallmark of *afto-* reflexives is that they bear a restricted distribution in terms of the roles they are able to identify: *afto-*, for instance, identifies only Agents, but not experiencers, with the theme and nothing else. See Section 3.5.1.

pared to *bona fide* transitives with a reflexive pronoun argument; and *b*) the position of the sole argument of reflexives. The latter domain is one where robust diagnostics have been especially difficult to come by. Many unaccusativity diagnostics target the presence/absence of agentive entailments; but, since verbal reflexives are often by definition agentive, standard tests often prove uninformative when faced with reflexives. Greek complicates the picture further, due to the general paucity of reliable unaccusativity diagnostics in the language. It is thus hoped that the empirical generalizations laid out below represent a step forward, both Greek-internally and with respect to diagnosing the syntax of reflexive verbs generally.

### 3.1.2 STARTING INSIGHT: THE UNACCUSATIVE ANALYSIS OF REFLEXIVES

The previous section outlined the empirical puzzle that forms the point of departure for this chapter, namely, the relationship between verbal reflexivization and Voice syncretism. We have seen that nonactive morphology canonically realizes structures lacking a thematic subject; reflexive verbs have a surface subject associated with the agent role, and yet they are obligatorily realized with nonactive morphology.

To address this puzzle, the chapter develops at length an intuition articulated in previous work: many authors have noted that the link between reflexivization and nonactive morphology in Greek(-type languages) would follow naturally if Greek reflexives were unaccusative (Alexiadou 2014c; Alexiadou et al. 2015; Alexiadou and Schäfer 2014; Embick 1998, 2004b; Rivero 1992; Spathas et al. 2015, but see Papangeli 2004; Tsimplici 1989). Although this insight has been articulated repeatedly, it has largely remained at the level of conjecture, with concrete empirical arguments in favor of the applicability of the unaccusative analysis in Greek having proven hard to find.

To clarify what is at stake, consider the unaccusative analysis of reflexives, as classically developed for Romance *se/si*. One popular analysis of French (92) is as in (93) (Marantz 1984: 152ff; R. Kayne 1988; Pesetsky 1995: 102ff; Burzio 1986). Here, the reflexive clitic *se* originates as an external argument, with its antecedent (here *Jean*) being a deep object; A-movement of the antecedent across the reflexive element yields the correct binding configuration, deriving also the attested linear order. This movement of a low argument to grammatical subject position being reminiscent of the classical analysis of passives and unaccusatives, the unaccusative analysis of reflexives earns its name.

- (92) Jean     *se*    *voit*.  
       Jean.NOM REFL *see*.3SG  
       ‘John sees himself.’

*French*

- (93) Jean<sub>i</sub> *se*<sub>i</sub> [<sub>VP</sub> *voit* t<sub>i</sub> ]

The original motivation for (93) stems from striking differences between *se* and non-reflexive clitics first noted in R. Kayne (1975: ch. 5). For example, in French, expletive insertion, allowed with unaccusatives (94a), is disallowed with transitives (94b), including those taking a non-reflexive clitic object (94c). Strikingly,

however, expletive insertion is allowed with transitives taking a reflexive clitic (94d).

- (94) a. Il est arrivé trois femmes.  
 3SG.M.NOM be.3SG arrive.PTCP three woman.PL  
 ‘There arrived three women.’ (R. Kayne 1975: p. 330)
- b. \*Il a dénoncé la décision trois mille hommes.  
 3SG.M.NOM have.3SG denounce.PTCP the decision three thousand man.PL  
 ‘\*There denounced the decision three thousand men.’ (R. Kayne 1975: p. 379)
- c. \*Il l’= a dénoncée trois mille hommes.  
 3SG.M.NOM 3SG.F.ACC have.3SG denounce.PTCP three thousand man.PL  
 ‘\*There denounced it three thousand men.’ (R. Kayne 1975: p. 379)
- d. Il s’= est dénoncé trois mille hommes ce mois-ci.  
 3SG.M.NOM 3SG.ACC.REFL be.3SG denounce.PTCP three thousand man.PL DEM month-here  
 ‘\*There denounced themselves three thousand men this month.’ (R. Kayne 1975: p. 381)

The pattern in (94) follows straightforwardly if reflexive clitic-taking verbs lack an underlying external argument; the same holds of the other considerations adduced by Kayne, including the different behaviors of reflexivized and transitive verbs under causativization, as well as auxiliary selection.

(93) raises two questions. A first, empirical one concerns whether this is indeed the correct analysis of ‘clitic’ reflexives in (some subset of) the Romance languages; this has been a point of enduring controversy (see the references above as well as Embick 2004b and McGinnis 2004 versus e.g. Chierchia 2004; Labelle 2008; Reinhart and Siloni 2005; Sportiche 2014).

But there is a second, narrower question particular to (93). If this were to turn out to be the appropriate analysis for some given case of ‘clitic-based’ reflexivization, we would be obliged to ask why the derivation of reflexive verbs must proceed in this way – in other words, what the factor is that forces an unaccusative derivation for verbs taking a reflexive clitic. Marantz (1984), R. Kayne (1988) and Pesetsky (1995) (the latter citing lectures by Kayne) suggest to that end a strong restriction on the placement of reflexive clitics; this restriction, stated in (95) in somewhat anachronistic terms, is dubbed here the *External Argument Generalization*, following McGinnis (2004).

(95) *The External Argument Generalization*

(Romance) reflexive clitics are obligatorily merged as external arguments.

The reasoning behind (95) is as follows: if *se* must be generated externally, then any other argument (notably, the necessary antecedent for the reflexive element) must originate elsewhere, namely, internally. (95) thus enforces the basic structure of (93), with the reflexive element c-commanding the antecedent in the base. The A-movement step then follows (and strictly speaking results from a distinct factor, namely, Condition A of the binding theory). In other words, (95) is what guarantees that (93) is the only possible structure for

reflexive clitic-taking verbs in the relevant languages.

As such, what is standardly referred to as the unaccusative analysis of (Romance) reflexives is bipartite. It consists of two strictly speaking independent components, stated informally in (96):

- (96) *Components of the unaccusative analysis of Romance reflexives*
- a. The full DP is an internal argument.
  - b. The reflexive element is an index-bearing anaphoric DP, one which is bound when the full DP A-raises across it.

(96) provides the essential context for the present study of Greek reflexives. While (96a) and (96b) arguably go together in Romance, this need not be the case cross-linguistically. Indeed, the detailed examination of the morphosyntax of Greek reflexives that follows will support (96a), and motivate a recasting of (96b). With respect to (96a), I will adduce a number of novel generalizations supporting a low origin for the full DP argument of Greek reflexive verbs. Regarding (96b), however, I will show that the Greek reflexivizer *afto-*, as well as its reciprocal counterpart, behaves unlike anaphoric DPs in all conceivable respects.

Together, the two observations bring the syntax of Greek reflexives fully in line with that of unaccusatives and passives, resolving the puzzle that reflexives raise for the distribution of nonactive morphology in Greek: just like in passives and unaccusatives, the internal argument of reflexives is the only argument around, and the absence of an underlying external argument guarantees that reflexives, just like passives and unaccusatives, are realized with nonactive morphology.<sup>25</sup>

Taken on its own, the latter observation – namely, that Greek reflexives are intransitive – will motivate a recasting of the External Argument Generalization for Greek. According to the intuition underlying (95), (one type of) reflexivity is intimately tied to the introduction of the external argument. Here, I propose to retain this core intuition, but derive it from a different source. Since the Greek reflexivizer is not itself an argument, the link between reflexivity and external argument introduction cannot originate from a restriction like (95). Instead, the link arises from the fact that the reflexivizer realizes a reflexivizing flavor of the external argument introducer, Voice.

### 3.1.3 PREVIEW OF THE ANALYSIS AND ROADMAP

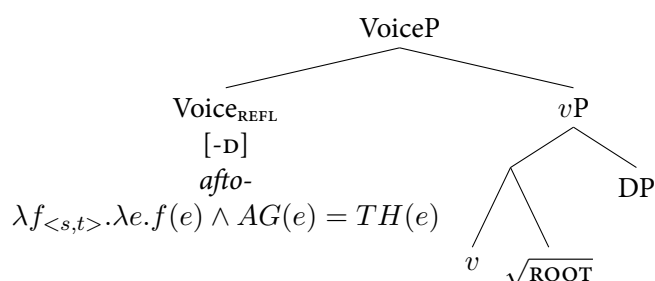
The analysis of *afto-* reflexives to be proposed in this chapter is as in (97). Verbal reflexives in Greek have the syntax of passives, with a single argument originating *vP*-internally. Responsible for the reflexive interpre-

<sup>25</sup>Recall from Chapter 2 that Greek also shows unmarked unaccusatives, i.e. unaccusatives that surface with the language's elsewhere ('active') Voice morphology. In Chapter 2, the co-existence of marked and unmarked unaccusatives was related to the presence versus absence of expletive Voice, following among many others Schäfer (2008b). This proposal, coupled with the analysis of reflexives to be proposed in this chapter, will correctly derive the complete lack of unmarked *reflexive* verbs in Greek: if reflexivization is carried out by a (specifier-less) Voice head, then there will be no way to derive a verbal reflexive with 'active' morphology. The same can be said about the lack of unmarked passives, where Voice is needed to existentially close the agent argument. See section 2.3.3.3 for more discussion on this point.



tation is a reflexivizing variant of Voice, one which semantically identifies the agent and theme roles, tied to the event variable. The idea is that the agent role is, descriptively speaking, ‘passed down’ to the internal argument, such that a reflexive interpretation arises from an unaccusative structure in the absence of (semantic or syntactic) binding. Syntactically,  $\text{Voice}_{\text{REFL}}$  bears the feature [-D], thereby failing to introduce a nominal in its specifier and becoming associated with nonactive morphology at PF (see [Chapter 2](#)).

(97)



The rest of the discussion in this chapter is structured as follows.

[Section 3.3](#) diagnoses the syntax of Greek verbal reflexives and reciprocals. It begins by providing a battery of tests suggesting that there is only one syntactic argument in the structure of these verbs, namely the surface subject; it then argues that this argument originates as a deep object. This section forms the empirical backbone of the chapter.

[Section 3.4](#) outlines the basic proposal of the chapter. In [section 3.5](#), I delve into the issue of the interpretation of this element, defending the idea that the exponent *afto-* must be associated specifically with a reflexivizing syntax; that the type of reflexivization must involve identification of thematic roles, not entity variables; and that the resulting semantics insightfully accounts for the thematic restrictions obeyed by Greek verbal reflexives.

[Section 3.6](#) discusses two alternative analyses of the Greek facts, one taking *afto-* to be an incorporated anaphoric argument, the other treating the same element as xpletive argument; both are shown not to be compatible with the data. [Section 3.7](#) investigates a final empirical puzzle, concerning the behavior of *afto-* in nominals.

[Section 3.8](#) concludes, providing some remarks comparing the analysis presented here to a ‘lexical’ account of reflexivization.

### 3.2 GREEK REFLEXIVES: BASIC PROPERTIES

The most well-studied reflexivization strategy in Greek is the use of an active transitive verb taking as its complement the reflexive pronoun (98) (see Anagnostopoulou & Everaert 1999; Angelopoulos & Sportiche

2022; Iatridou 1988).

- (98) a. I Maria katiyori- s- e ton eafto tis sto ðikastirio.  
the.NOM Mary.NOM  $\sqrt{\text{ACCUSE}}$  PFV.ACT 3SG the.ACC self.ACC 3SG.F.GEN in.the court  
'Mary accused herself in court.'
- b. Simfona me ti miθologia, afti i θeotita ðimiuryi- s- e ton  
according.to with the mythology this.NOM the.NOM deity.NOM  $\sqrt{\text{CREATE}}$  PFV.ACT 3SG the.ACC  
**eafto tis** apo to miðen.  
self.ACC 3SG.F.GEN from the zero  
'According to mythology, this deity created itself out of nothing.'
- c. O Janis plirose pola ja na ðiafimi- s- i ton  
the.NOM John.NOM pay.PST.3SG many.PL.ACC to COMP  $\sqrt{\text{ADVERTISE}}$  PFV.ACT 3SG the.ACC  
**eafto tu** sto LinkedIn.  
self.ACC his on.the LinkedIn  
'John paid a lot of money to advertise himself on LinkedIn.'

But Greek also reflexivizes predicates by means of an intransitivization strategy, namely by prefixing the element *afto-* to an intransitive form of the verb bearing nonactive morphology (Alexiadou 2014a; Embick 1998, 2004a; Rivero 1992; Spathas et al. 2015; Tsimpli 1989; Zombolou 2004).

- (99) a. I Maria **afto-** katiyori- θ- ik- e sto ðikastirio.  
the Mary.NOM REFL  $\sqrt{\text{ACCUSE}}$  PFV.NACT PST 3SG in.the court  
'Mary self-accused in court.'
- b. Simfona me ti miθologia, afti i θeotita **afto-** ðimiuryi- θ- ik-  
according.to with the mythology this.NOM the.NOM deity.NOM REFL  $\sqrt{\text{CREATE}}$  PFV.NACT PST  
e apo to miðen.  
3SG from the zero  
'According to mythology, this deity self-created out of nothing.'
- c. O Janis plirose pola ja na afto- ðiafimis- θ- i  
the.NOM John.NOM pay.PST.3SG many.ACC.PL to COMP REFL  $\sqrt{\text{ADVERTISE}}$  PFV.NACT 3SG  
sto LinkedIn.  
on.the LinkedIn  
'John paid a lot of money to self-advertise on LinkedIn.'

*afto-* verbs are always intransitive in the sense that no (overt) nominal other than their surface subject is ever found: compare thus (99a) with (100).

- (100) a. I Maria katiyori- s- e { ton eafto tis / ton Jani }.  
the.NOM Mary.NOM accuse PFV.ACT 3SG the.ACC self.ACC her the.ACC John.ACC  
'Mary accused herself/John.'

- b. \*I Maria (afto-) katiyori-  $\theta$ - ik- e { ton eafto tis / ton  
 the.NOM Mary.NOM REFL  $\sqrt{\text{ACCUSE}}$  PFV.NACT PST 3SG the.ACC self.ACC her the.ACC  
 Jani }.  
 John.ACC

Both *afto-* and nonactive morphology are necessary for a reflexive interpretation to emerge.<sup>26</sup> If *afto-* is prefixed to an active form, the result is downright ungrammaticality (101); in other words, *afto-* obligatorily co-occurs with nonactive morphology.

- (101) \*I Maria afto- katiyori- s- e (ton eafto tis / ton Jani).  
 the.NOM Mary.NOM self-  $\sqrt{\text{ACCUSE}}$  PFV.ACT 3SG the.ACC self.ACC 3SG.F.GEN the.ACC John.ACC  
 ‘Mary self-accused<sub>ACTIVE</sub> herself/John.’

If, on the other hand, a nonactive form appears without *afto-*, this form normally has a non-reflexive denotation. This fact is illustrated in (102), where the nonactive form can only be interpreted as a passive (‘Mary was accused’), as opposed to having the stronger, contextually appropriate reflexive reading (‘Mary was accused by Mary’).

- (102) [Mary testifies against herself in court.]  
 #I Maria katiyori-  $\theta$ - ik- e.  
 the.NOM Mary.NOM  $\sqrt{\text{ACCUSE}}$  PFV.NACT PST 3SG  
 Intended: ‘Mary accused herself’

There is exactly one class of verbs capable of supplying a reflexive interpretation without *afto-*, namely, the class of so-called naturally reflexive verbs (NRVs). In Greek, as in other languages (see Geniušienė 1987; Kemmer 1993), the relevant roots often denote prototypically self-oriented acts such as grooming (e.g. *wash, shave, comb, scratch, apply make-up to oneself*) and a diverse range of body actions (e.g. *exercise, train, (un)dress,*

<sup>26</sup>The handful of verbs that ostensibly counterexemplify this generalization are very plausibly not decomposable (see also footnote 70). *aftosçediazo* ‘to improvise’ is not reflexive in any sense, nor does it bear a straightforward synchronic relation to the bare verb *sçediazo* ‘design’; more instructively, the (predicative) participle of this verb surfaces unproblematically (*aftosçediazmenos* ‘improvised’), even though reflexivizing *afto-* never combines with the *-men-* participle. Two more verbs are plausibly not decomposable. Firstly, *aftoktono* ‘to commit suicide’ appears to be *afto-*-prefixed; but there is no simplex verb *\*ktono* in Modern Greek – this being the ‘kill’ verb in earlier stages of the language – though an argument for a bound Root treatment can be made on the basis of the verb *limoktono* ‘starve to death’ and some derivatives (e.g. *patro-ktonos* ‘father killer’). Secondly, *aftomolo* ‘to defect’ is an archaic verb, likely absent from many speakers’ lexicons, whose apparent constituent *\*molo* shows no other trace in the modern language. Finally, the prefixal reciprocator *alilo-* shows similar fossilized traces occurring with ‘active’ morphology: *alilepiðro* ‘interact’ is a recent morpheme-by-morpheme calque of its translation, likely via French *interagir* (Efthymiou 2019: p. 365). Similarly, *aliloynrafo* ‘correspond’ is ostensibly a solid example of a true reciprocal surfacing with ‘active’ morphology, but does not survive closer scrutiny. If it were indeed composed of the reciprocator and the Root  $\sqrt{\text{WRITE}}$ , we would expect the stress pattern typical of prefixed verbs, thus *\*aliloynrafo*; we instead find *aliloynrafò*, suggesting that we are again dealing with a non-decomposed calque (this time of French *correspondre*, according to the online Triandafylides dictionary). Zombolou (2008: p. 16) also lists *alilo-siblriono* ‘RECIP-complete’ and *alilo-sin-prato* ‘RECIP-with-act’ as apparent ‘active’ reciprocals; the former is in fact only grammatical for me and my consultants without nonactive morphology, and I have not been able to find speakers accepting the latter.

*feed oneself, weigh oneself*).<sup>27</sup>

(103) shows that a nonactive NRV can take a non-reflexive interpretation without the reflexivizer (compare (102)); (104) shows that, like other verbs (101), NRVs do not yield reflexive interpretations in the active.

- (103) I Maria pli-  $\theta$ - ik- e.  
 the.NOM Mary.NOM  $\sqrt{\text{WASH}}$  PFV.NACT PST 3SG  
 ✓ ‘Mary was washed’  
 ✓ ‘Mary washed herself’

- (104) I Maria e- plin-  $\emptyset$ - e.  
 the.NOM Mary.NOM PST  $\sqrt{\text{WASH}}$  PFV.ACT 3SG  
 ?‘Mary washed something’ (fine in a context with a salient object of washing)  
 ✗ ‘Mary washed herself’

For completeness, consider that, like *afto-* verbs, nonactive NRVs appear to be intransitive, such that (105) is fully parallel to (100).

- (105) a. I Maria eplin-  $\emptyset$ - e { ton eafto tis / ton Jani }.  
 the.NOM Mary.NOM wash PFV.ACT 3SG the.ACC self.ACC 3SG.F.GEN the.ACC John.ACC  
 ‘Mary washed herself/John.’  
 b. \*I Maria pli-  $\theta$ - ik- e { ton eafto tis / ton  
 the.NOM Mary.NOM  $\sqrt{\text{WASH}}$  PFV.NACT PST 3SG the.ACC self.ACC 3SG.F.GEN the.ACC  
 Jani }.  
 John.ACC

Interestingly, NRVs in fact do not tolerate *afto-* prefixation altogether, all things being equal.<sup>28</sup>

<sup>27</sup>As in other languages, there are complications to this simple generalization in Greek, suggesting that the class of so-called naturally reflexive verbs is not, in fact, fully uniform from an encyclopedic perspective. Many examples can be adduced to this end, (i) and (ii) being given here as first indications: there is no straightforward sense in which tying up is a prototypically self-oriented action, or in which kicking is prototypically reciprocal or symmetric.

- (i) Kaθos to plio plisiaze tis sirines, o Oδiseas (#afto-)  $\delta\epsilon$ -  $\theta$ - ik-  
 while the.NOM ship.NOM approach.PST.3SG the.ACC.PL siren.ACC.PL the.NOM Odysseus.NOM REFL  $\sqrt{\text{TIE}}$  PFV.NACT PST  
 e sto katarti.  
 3SG to.the mast  
 ‘As the ship approached the sirens, Odysseus tied himself to the mast.’  
 (ii) O Janakis ke i mikri Maria (#alilo-) klotsi- unde sineça.  
 the.NOM little.John.NOM and the.NOM little.NOM Mary.NOM RECIP  $\sqrt{\text{KICK}}$  3PL.NACT constantly  
 ‘Little John and little Mary are always kicking each other.’

<sup>28</sup>Examples like (106) are often marked with ‘\*’ in the literature on Greek (e.g. Papangeli 2004: pp. 61–62). The acceptability of such examples in fact improves in contexts that facilitate heavy contrastive focus on *afto-*:

- (106) #I Maria **afto-** pli- **θ-** ik- e.  
 the.NOM Mary.NOM REFL  $\sqrt{\text{WASH}}$  PFV.NACT PST.NACT 3SG  
 ‘Mary self-washed.’

Finally, alongside the reflexive prefix, Greek shows a reciprocal prefix *alilo-* whose distribution fully parallels *afto-*: it is compatible only with nonactive (107) and not active (108) verbs,<sup>29</sup> and appears in complementary distribution with naturally reciprocal verbs (109).

- (107) I Maria ke o Yianis **alilo-** thamvas- **θ-** ik- an ston kaθrefti.  
 the.NOM Mary.NOM and the.NOM Yanis.NOM RECIP  $\sqrt{\text{ADMIRE}}$  PFV.NACT PST 3PL in.the mirror  
 ‘Mary and John admired each other in the mirror.’
- (108) \*I Maria ke o Yianis **alilo-** thamva- **s-** an ston kaθrefti.  
 the.NOM Mary.NOM and the.NOM Yanis.NOM RECIP  $\sqrt{\text{ADMIRE}}$  PFV.ACT 3PL in.the mirror
- (109) I Maria ke o Janis (**#alilo-**) angalias- **θ-** ik- an.  
 the.NOM Mary.NOM and the.NOM Janis.NOM RECIP  $\sqrt{\text{HUG}}$  PFV.NACT PST 3PL  
 ‘John and Mary hugged.’

*afto-* is thus to (98) as *alilo-* is to (110), which uses the (understudied) Greek reciprocal pronoun (see Paparounas and Salzmann [accepted](#)).

- (110) I Maria ke o Janis ayapun o enas ton alo.  
 the.NOM Mary.NOM and the.NOM John.NOM love.3PL the.NOM one.NOM the.ACC other.ACC  
 ‘Mary and John love each other.’

Note finally that *afto-* is not a (morphophonological) clitic, under any sensible construal of the term; this conclusion can be illustrated by comparing *afto-* to the Greek pronominal clitics. The latter are host-insensitive, in that they surface on the verb in synthetic verb forms (111a) but on the auxiliary in compound tenses (111b)-(111c); *afto-* always remains on the main verb (112).

- (i) ðen epline o Janis ti Maria. ?I Maria AFTO- pliθike.  
 NEG wash.PST.3SG the.NOM John.NOM the.ACC Mary.ACC the.NOM Mary.NOM REFL wash.NACT.PST.3SG  
 ‘John didn’t wash Mary; Mary washed HERSELF’

This observation clarifies why (106) is marked as infelicitous, rather than ungrammatical, in the main text: this example is plausibly deviant due to pragmatic redundancy of some sort, rather than a grammatical constraint proper.

<sup>29</sup>As with *afto-* (see [footnote 26](#)), there exists a handful of false friends showing *alilo-* with active morphology. *alilyrafō* is ostensibly decomposable as ‘each.other-write’, but has a stress pattern suggesting it is in fact simplex (the penultimate stress of unprefixated verb *γράφο* ‘write’ should be preserved if this were genuine *alilo-* prefixation). *alilepiðrō* ‘interact’ seems to have been back-formed from nominal *alilepiðrasi* ‘interaction’, in turn a morpheme-for-morpheme calque of its translation.

- (111) a. Ton= eksorisa.  
3SG.M.ACC exile.PST.3SG  
'I exiled him.'
- b. Ton= exo eksorisi.  
3SG.M.ACC have.1SG exile.PFV  
'I have exiled him.'
- c. \*exo ton= eksorisi  
have.1SG 3SG.M.ACC exile.PFV
- (112) a. afto- eksorisθika.  
REFL exile.NACT.PST.1SG  
'I self-exiled.'
- b. exo afto- eksorisθi  
have.1SG REFL exile.NACT.PFV  
'I have self-exiled.'
- c. \*afto- exo eksorisθi.  
REFL have.1SG exile.NACT.PFV

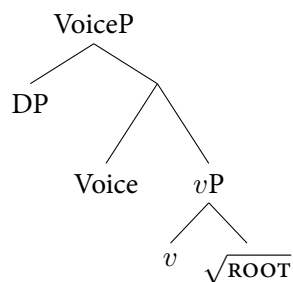
Moreover, pronominal clitics are mobile: normally proclitic (113a-b), they surface as enclitics in situations where the verb is syntactically high, such as imperatives (113); *afto-* again behaves as more closely integrated with the verb (114).

- (113) a. Eksorise =ton!  
exile.IMP.2SG 3SG.M.ACC  
'Exile him!'
- b. \*ton= eksorise!  
3SG.M.ACC exile.IMP.2SG
- (114) a. afto- eksorisu!  
REFL exile.NACT.2SG  
'Self-exile!'
- b. \*eksorisu- afto!  
exile.NACT.2SG REFL

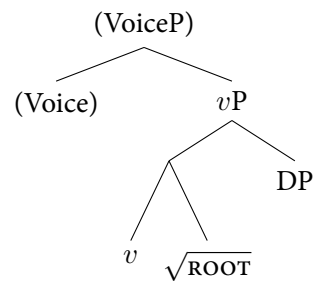
### 3.3 DIAGNOSING UNACCUSATIVE SYNTAX

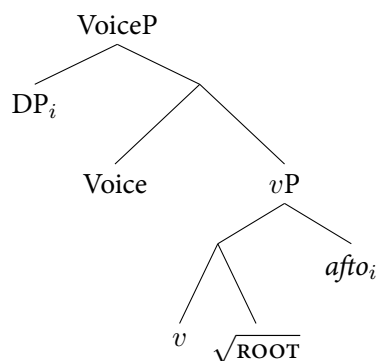
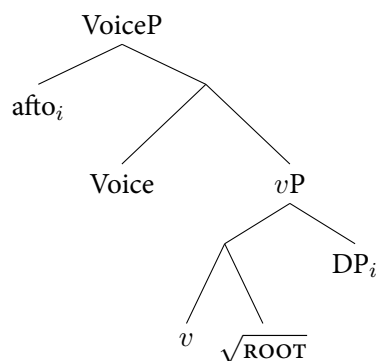
Verbal reflexives in Greek are descriptively intransitive verbs, with their sole argument behaving for all intents and purposes as a surface subject. The major challenge for any account of such verbs is to specify how reflexivity arises, that is, how the apparently single nominal is interpretively linked to two argument positions. This goal is attainable via a broad range of structures, with the main options schematically illustrated below.

(115) *Unergative*



(116) *Unaccusative*



(117) *Transitive type A*(118) *Transitive type B*

(115) illustrates an unergative structure whereby the single argument of a reflexive verb originates in the external argument position, and must somehow be linked to a lower position for the purposes of interpretation. This type of approach has been proposed for a variety of languages (e.g. Bruening 2006a; Chierchia 2004; Jo 2019; Labelle 2008; Reinhart & Siloni 2004, 2005), including Greek (Papangeli 2004; Tsimpli 1989).

The mirror-image of the unergative analysis is illustrated in (116), where the single argument is taken to be internal. This unaccusative analysis of reflexives has been widely conjectured (but not explicitly defended) for Greek (Alexiadou 2014c; Embick 2004b; Spathas et al. 2015; cf. Alexiadou and Schäfer 2014 and Alexiadou, Schäfer, and Spathas 2014 on NRVs, where only a tentative conclusion is drawn).

The fact that Greek has been argued to instantiate both the unergative and the unaccusative analysis reflects a significant amount of difficulty with the relevant diagnostics. Within the unaccusative camp, the presence of nonactive morphology is often given as the main argument for an unaccusative analysis, without additional syntactic diagnostics (Embick 2004a; Spathas et al. 2015); a notable exception is Alexiadou and Schäfer (2014) for Greek natural reflexives, where the diagnostics used are however admitted to be problematic. Within the unergative camp, syntactic tests either are either not deployed in the first place (Papangeli 2004: p. 59 for NRVs), or can be shown to be unreliable (Tsimpli 1989).<sup>30</sup>

Additionally, whereas compositional semantic analyses for the unergative approach have been explicitly proposed for other languages (see references above), the same is not true of either camp in the case of Greek (with the clear exception of Spathas et al. 2015, on which see section 3.5.2). Previous work on Greek reflexives thus leaves much room both for empirical argumentation aimed at distinguishing between (115) and (116), and for discussion of how the appropriate structure would actually derive reflexivity in the semantics.

The task is further compounded by the availability of at least two more structures to consider, schematized

<sup>30</sup>Tsimpli (1989) argues that the unergative analysis is evidenced by (a) the agentive semantics of the subject of reflexives and (b) the ability of these subjects to control into purpose clauses. The former is a non-argument, since it is not clear *a priori* that competing analyses cannot assign agentive semantics to the single argument of reflexives; the latter diagnostic is not sensitive to the difference between deep and surface subjecthood (or indeed to syntactic projection of the relevant argument; see Biggs and Embick 2020: pp. 28–29 for brief recent discussion and references).

in (117) and (118). Both structures treat reflexives as ‘secret transitives’, such that the single overt DP is one primary argument, and what appears to be a reflexivizing morpheme is in fact also an argument itself, one that is coindexed with the overt DP. Under this type of thinking, *afto-* can in principle be taken to be either the internal (117) or the external (118) argument. (118) is in fact the structure sometimes referred to as the unaccusative analysis of reflexives in the literature on Romance, as discussed in section 3.1.2, and has sometimes extended to Greek *afto-* (e.g. Embick 2004b). (117) inverts the argument relations, with the reflexivizing element being the *internal* argument; this is the situation explicitly denied by some authors for Romance (see section 3.1.2 above), but proposed for other languages (e.g. Wood 2014, 2015 for Icelandic figure reflexives; cf. Key to appear for Turkish), including Greek (with subsequent ‘incorporation’ of the internal argument, in Rivero (1992); cf. Embick 1997: 38ff).

In what follows, I argue that Greek *afto-* verbs instantiate an unaccusative structure, with the final analysis combining aspects of (116) and (118): the single argument of these verbs is internal, and *afto-* originates in a high position in the verbal shell. Departing from (118), I will take this position to be not an argument position, but rather the Voice head itself.

The argumentation of this section thus proceeds in two stages. First, in section 3.3.1, I provide syntactic and interpretive diagnostics suggesting that *afto-* verbs are syntactically intransitive in the deep sense, thereby arguing against (117) and (118): *afto-* verbs have a single argument, the surface subject. Subsequently, in section 3.3.2, I provide a range of diagnostics suggesting that this single argument originates as a deep object, thereby deciding in favor of (116) over (115).

### 3.3.1 INTRANSITIVITY

At first glance, the intransitivity of *afto-* verbs need not be explicitly argued for; after all, nothing in the surface facts seems to cast doubt on the conclusion that these verbs have just one argument nominal.

But the surface facts may well be deceptive, witness the availability of analyses of the ‘secret transitive’ type (117) and (118), widely adopted for reflexives in other languages, especially Romance. Broadly, this type of analysis is guided by the intuition that reflexive interpretations in the case of ostensibly intransitive reflexives come about in just the same way as they do when transitive verbs take pronominal anaphoric arguments, namely, via anaphoric binding. As such, the element that ostensibly ‘carries’ the reflexive interpretation (*se/si* in Romance) is often analyzed as a more-or-less garden variety anaphor in need of binding to satisfy Condition A of the Binding Theory (Chomsky 1980, 1981). Such a treatment is certainly worth considering for Greek, particularly in light of the fact that *afto-* seems to overlap morphologically with the nominal contained in the *bona fide* reflexive pronoun, as seen in (98a), repeated here as (119):<sup>31</sup>

<sup>31</sup>Note, however, that the same phonological sequence realizes non-reflexive elements, notably demonstratives (i). Demonstratives, reflexive pronouns and *afto-* are clearly related diachronically, but it is unclear how much of a premium should be placed on this case of shared realization from the point of view of the synchronic grammar. See section 3.6.1 for more discussion on this point.



- (119) I        Maria    katiyori- s-        e ton    **afto**    tis        sto    ðikastirio.  
 the.NOM Mary.NOM  $\sqrt{\text{ACCUSE PFV.ACT}}$  3SG the.ACC self.ACC 3SG.F.GEN in.the court  
 ‘Mary accused herself in court.’

The following diagnostics highlight numerous differences between *afto-* and the Greek reflexive pronoun. It is well known that argumental reflexive pronouns show properties different to those of both natural and affixally derived verbal reflexives across different languages (see Reuland 2018 for recent summary; cf. Dimitriadis and Everaert 2014; Jackendoff 1992; Labelle 2008; Lidz 2001; Marelj and Reuland 2016; Reuland 2001; Reuland and Winter 2009; Safir 2004; Sells 1987). Bringing together these (often individually discussed) points of possible divergence between pronominal and verbal reflexives, I show that *afto-* verbs in Greek pattern differently from the full-blown reflexive pronoun, and with natural reflexives like *shave* in Greek. I take these wide-ranging differences as grounds to avoid treating *afto-* as an anaphoric argument.

The rest of this section first identifies six corners of the Greek grammar where pronominal and verbal reflexives come apart. I then make precise what exact aspect of the structure these diagnostics are predicated of, in section 3.3.1.7.

### 3.3.1.1 Proxy readings

A first set of contrasts comes from so-called proxy interpretations. As Jackendoff (1992) highlighted (building on observations in Fauconnier 1985; cf. Nunberg 1979, and see also Abusch 1989), the interpretive identity between a reflexive pronoun and its antecedent need not be total. In a sentence like (120a), the reflexive can refer not just to the antecedent proper, but also to a contextually salient, metonymically designated proxy for the antecedent; in this case, a statue portraying the antecedent. Importantly, as later literature notes extensively, the same effect does not arise when reflexive readings arise without the use of a reflexive pronoun (see especially Lidz 2001; Raghotham 2022b; Reuland and Winter 2009; Safir 2004; Sells, Zaenen, and Zec 1987). As a case in point, the natural reflexive *wash* in (120b) does not felicitously yield the proxy reading. Such verbs are thus infelicitous in a proxy-favoring context (121).

- (120) On a visit to Madame Tussaud’s wax museum...
- a. Ringo washed himself. ✓person ✓statue
- b. Ringo washed. ✓person ✗statue
- (121) On a visit to Madame Tussaud’s, Ringo decided that the beard on the statue depicting him was a little shabby. So, armed with a razor...
- a. Ringo shaved himself.

- 
- (i) *afto to vivlio*  
 DEM.N the.N book  
 ‘this book’

- b. #Ringo shaved.

Greek shows the same basic asymmetry. In the proxy-favoring context in (122), the object reflexive pronoun is felicitous, but the natural reflexive *shave* in the nonactive is not:

- (122) Ringo Starr dislikes the beard on the statue depicting him. Armed with a razor...
- a. O Ringo arçise na ksiriz- i ton eafto tu.  
 the.NOM Ringo.NOM begin.PST.3SG COMP  $\sqrt{\text{SHAVE}}$  3SG.ACT the.ACC self.ACC 3SG.M.GEN  
 ‘Ringo started shaving himself.’
- b. #O Ringo arçise na ksiriz- etc.  
 the.NOM Ringo.NOM begin.PST.3SG COMP  $\sqrt{\text{SHAVE}}$  3SG.NACT  
 ‘Ringo started shaving.’

Crucially, as noted also in Oikonomou (2014), *afto-* verbs pattern with the natural reflexives here. In (123), the only appropriate rendering of the human-photographs-statue situation utilizes the full reflexive pronoun, and the *afto-* verb is infelicitous.

- (123) [*Pleased with his statue, Ringo decides to take a photographic souvenir.*]
- a. O Ringo fotoyraf- s- e ton eafto tu.  
 the.NOM Ringo.NOM  $\sqrt{\text{PHOTOGRAPH}}$  PFV.ACT 3SG the.ACC self.ACC 3SG.M.GEN  
 ‘Ringo took a picture of himself.’
- b. #O Ringo afto- fotoyraf-  $\theta$ - ik- e.  
 the.NOM Ringo.NOM self  $\sqrt{\text{PHOTOGRAPH}}$  PFV.NACT PST.NACT 3SG  
 ‘Ringo self-photographed.’

If *afto-* were itself an anaphor, its inability to license proxy interpretations would seem mysterious, all things being equal (see section 3.3.1.7). This argument is based on the assumption that the licensing of proxy readings is a hallmark of argument anaphors; though widely held and borne out by data in different languages, this assumption must be made precise. To this end, see section 3.5.3, which takes preliminary steps towards a theory of proxy readings.

### 3.3.1.2 Gapping

Different ellipses provide additional evidence that *afto-* verbs are intransitive. Though comparative ellipsis is standardly employed to this end (see section 3.3.1.3 below), gapping can also be employed.

To see the rationale of the test, consider first English. In (124a), where *shave* is clearly transitive and takes a reflexive object, the gapped follow-up *and Bill Fred* is licensed. But the same is not true in (124b), with the naturally reflexive use of *shave*.

- (124) a. John shaved himself, and Bill Fred.

- b. \*John shaved, and Bill Fred.

The ungrammaticality of (124b) is unexpected if this instance of *shave* is transitive, taking, say, a null object. Part of what licenses nonpronunciation of the verb in (124a) is arguably the fact that both the antecedent and the elided verb are transitive; if the pronounced verb in (124b) is syntactically intransitive, it will fail to license nonpronunciation of the transitive verb whose object is *Fred*, by whatever identity conditions govern gapping.

Note that the deviance of (124b) cannot straightforwardly be attributed to a surface-oriented parallelism requiring that the object in the antecedent clause be pronounced.<sup>32</sup> Syntactically projected but silent elements arguably do license gapping, as in Greek subject *pro*-drop (125) and nominal ellipsis (126), where strikethrough indicates non-pronunciation (and cf. Merchant 2018; Paparounas 2019).

- (125) Q: Eftase i Maria?  
arrive.PST.3SG the.NOM Mary.NOM  
'Did Mary arrive?'
- A: Ne. *pro* efere fajito, ke o Janis efere pota.  
yes bring.PST.3SG food.ACC and the.NOM John.NOM bring.PST.3SG drink.ACC.PL  
'Yes. She brought food, and John drinks.'
- (126) Q: Efaje i Maria mila?  
eat.PST.3SG the.NOM Mary.NOM apple.ACC.PL  
'Did Mary eat apples?'
- A: Efaje ~~mila~~, ke o Janis efaje kerasça.  
eat.PST.3SG apple.ACC.PL and the.NOM John.NOM eat.PST.3SG cherry.ACC.PL  
'She did – and John cherries.'

Turning to Greek reflexives, consider first (127), suggesting that Greek natural reflexives behave on a par with their English counterparts in (124).

- (127) a. O Janis ksiri- s- e ton eafto tu, ke o Vasilis  
the.NOM John.NOM  $\sqrt{\text{SHAVE}}$  PFV.ACT 3SG the.ACC self.ACC 3SG.M.GEN and the.NOM Bill.NOM  
ton Kosta.  
the.ACC Kostas.ACC  
'John shaved himself, and Bill Kostas.'
- b. \*O Janis ksiris-  $\theta$ - ik- e, ke o Vasilis ton  
the.NOM John.NOM  $\sqrt{\text{SHAVE}}$  PFV.NACT PST.NACT 3SG and the.NOM Bill.NOM the.ACC  
Kosta.  
Kostas.ACC  
'John shaved, and Bill Kostas.'

<sup>32</sup>Thanks to Dominique Sportiche (p.c.) for alerting me to this possible confound.



in other words, because the antecedent sentence is transitive, the identity condition on ellipsis makes it possible to reconstruct a transitive verb in the ellipsis site, and *John* can be identified as the object of this elided verb. Consider now the natural reflexive counterpart (129b). This example differs from (129a) in two ways. Firstly, it lacks the object comparison reading. If the antecedent clause *John washed* is truly intransitive, this observation follows straightforwardly: there is simply no object DP in the antecedent clause, and therefore, by the identity condition, no two distinct transitive fragments to be reconstructed in the ellipsis site. Once again, if *John washed* is secretly transitive, the facts seem mysterious. Secondly, (129b) also lacks the strict subject reading, suggesting that strict/sloppy ambiguities do not arise in this case; this fact also follows if, in interpreting an ellipsis anteceded by a verb like *wash*, we are simply not reconstructing a reflexive pronoun at all, and thus no ambiguity arises.

Greek natural reflexives again behave on a par with their English counterparts: the object comparison reading disappears, and we only find one subject comparison reading. As we will see in the next section, this lack of strict/sloppy ambiguities, ensuring that only one subject comparison reading is present, can be diagnosed independently of the comparative facts discussed here.

- (130) a. Aftos o kureas ksiriz- i ton eafto tu pio γριyora apo  
 this.NOM the.NOM barber.NOM  $\sqrt{\text{SHAVE}}$  3SG the.ACC self.ACC 3SG.M.GEN more fast from  
 to Jani.  
 the John.ACC  
 ‘This barber shaves himself faster than John.’ ✓object ✓subject-sloppy ✓subject-strict
- b. Aftos o kureas ksiriz- ete pio γριyora apo to Jani.  
 this.NOM the.NOM barber.NOM  $\sqrt{\text{SHAVE}}$  3SG.NACT more fast from the John.ACC  
 ‘This barber shaves faster than John.’ ✗object ✓subject-sloppy ✗subject-strict

Crucially, *afto-* reflexives once again parallel exactly the behavior of the above reliably intransitive reflexives. (131b) lacks the object comparison reading; the example can only mean that the football player advertises himself more than the sponsor advertises itself. For reasons familiar by now, the contrast between (131a) and (131b) favors an intransitive analysis of *afto-* verbs.

- (131) a. Aftos o podosferistis ðiafimiz- i ton eafto tu  
 this.NOM the.NOM footballer.NOM  $\sqrt{\text{ADVERTISE}}$  3SG.ACT the.ACC self.ACC 3SG.M.GEN  
 perisotero apo ton xoriyo tu.  
 more from the sponsor.ACC 3SG.M.GEN  
 ‘This football player advertises himself more than his sponsor.’  
 ✓object ✓subject-sloppy ✓subject-strict
- b. Aftos o podosferistis afto- ðiafimiz- ete perisotero apo ton  
 this.NOM the.NOM footballer.NOM REFL  $\sqrt{\text{ADVERTISE}}$  3SG.NACT more from the

xoriyo tu.  
 sponsor.ACC his  
 ‘This football player self-advertises more than his sponsor.’

✗object ✓subject-sloppy ✓subject-strict

The contrast between pronominal reflexives and *afto-* carries over nicely to the domain of reciprocals (note that the root  $\sqrt{\text{OIL}}$  can mean ‘bribe’):

(132) a. Sto Gotham City, i ðikastes laðonun o enas ton alo  
 in.the Gotham City the.NOM.PL judge.NOM.PL oil.3PL the.NOM one.NOM the.ACC other.ACC  
 pio sixna apo tus astinomikus.  
 more often from the.PL police.officer.PL  
 ‘In Gotham City, the judges bribe each other more often than the policemen.’

✓object ✓subject-sloppy ✓subject-strict

b. Sto Gotham City, i ðikastes alilo- laðononde pio sixna apo tus  
 in.the Gotham City the.NOM.PL judge.NOM.PL RECIP oil.NACT.3PL more often from  
 astinomikus.  
 the.PL police.officer.PL  
 ‘In Gotham City, the judges bribe each other more often than the policemen.’

✗object ✓subject-sloppy ✗subject-strict

### 3.3.1.4 Focus alternatives

One more way of establishing that verbal reflexives/reciprocals denote monadic predicates, in contrary to their pronominal counterparts, involve strict/sloppy ambiguities. We have already seen this phenomenon illustrated above, where subject comparison was shown to be ambiguous with pronominal, but not verbal reflexives. Here, I show that the differential availability of strict readings between pronominal and verbal reflexives can be glimpsed in yet another domain, diagnosed by means of the different denials available to *only*-focussed assertions. To my knowledge, this diagnostic was first applied to reflexives in Sportiche (2014), dealing with French (cf. Haiden 2019); see also Kobayashi (2021) for Mandarin reciprocals.

To see the reasoning of this test, consider the English (133), which can be felicitously denied in two distinct ways, (133a) and (133b). (133) can be read in two distinct ways, corresponding to distinct association possibilities of *only*. Thus, (133) is ambiguous between ‘John is the only  $x$  such that  $x$  shaved John’, or ‘John is the only  $x$  such that  $x$  shaved  $x$ ’. Each of the denials targets one of these two distinct construals; thus, (133a) denies the free variable reading by asserting that there exists some other individual alongside John for whom it is true that that individual shaved John, whereas (133b) denies the bound reading by asserting that there is some other individual who also engaged in the relevant self-action.<sup>33</sup>

<sup>33</sup>A third conceivable construal, along the lines of *No, John shaved me too*, would be expected if *only* were able to associate just with the theme, producing the assertion that John shaved only himself. This denial is infelicitous throughout the following examples,

- (133) Only John<sub>i</sub> shaved himself.  
 a. No, Bill<sub>j</sub> shaved him<sub>i</sub> too.  
 b. No, Bill<sub>j</sub> shaved himself<sub>j</sub> too.

That both denials can be used felicitously in (133) suggests that the basic example is ambiguous, supporting both free and bound readings. This is not so for the English intransitive reflexive, however; (134) is judged to only support one denial, (134a), with (134b) being judged as strongly infelicitous. The infelicity of (134a) suggests the absence of a free reading, paralleling the results from comparative ellipsis in the previous section.

- (134) Only John<sub>i</sub> shaved.  
 a. #No, Bill<sub>j</sub> shaved him<sub>i</sub> too.  
 b. No, Bill<sub>j</sub> shaved too.

In Greek, we find the same basic divergence between pronominal and natural reflexives. The pronominal reflexive in (135) licenses both denials; in (136), however, the natural reflexive is only compatible with the denial in (135b), suggesting that it can only be interpreted under the bound variable reading.

- (135) Mono o Janis ksirise ton eafto tu.  
 only the.NOM John.NOM shave.PST.3SG the.ACC self.ACC 3SG.M.GEN  
 ‘Only John shaved himself.’  
 a. Oçi, ke o Vasilis ton ksirise.  
 no and the.NOM Bill.NOM 3SG.M.ACC shave.PST.3SG  
 ‘No, Bill shaved him too.’  
 b. Oçi, ke o Vasilis ksirise ton eafto tu.  
 no and the.NOM Bill.NOM shave.PST.3SG the.ACC self.ACC 3SG.M.GEN  
 ‘No, Bill shaved himself too.’
- (136) Mono o Janis ksiris- θ- ik- e.  
 only the.NOM John.NOM  $\sqrt{\text{SHAVE}}$  PFV.NACT PST 3SG  
 ‘Only John shaved.’  
 a. #Oçi, ke o Vasilis ton ksirise.  
 no and the.NOM Bill.NOM 3SG.M.ACC shave.PST.3SG  
 ‘No, Bill shaved him too.’  
 b. Oçi, ke o Vasilis ksiris- θ- ik- e.  
 no and the.NOM Bill.NOM  $\sqrt{\text{SHAVE}}$  PFV.NACT PST 3SG  
 ‘No, Bill shaved too.’

---

as it is in French (see Sportiche 2014). It is possible, partly following Sportiche, to interpret the unavailability of such a denial as evidence against a ‘hidden transitive’ analysis of verbal reflexives: if there is a second argument, why can *only* not independently associate with it? This reasoning goes through only to the extent that *only* should be able to associate with a low constituent from a given position; compare *John shaved only himself*. I thus consider this type of argument against the intransitive analyses inconclusive.

Crucially, in Greek *afto-* reflexives, we also only ever find exactly one felicitous denial.

- (137) Mono o Janis afto- katiyori- θ- ik- e.  
 only the.NOM John.NOM REFL  $\sqrt{\text{ACCUSE}}$  PFV.NACT PST 3SG  
 ‘Only John self-accused.’
- a. #Oçi, ke o Vasilis ton katiyorise.  
 no and the.NOM Bill.NOM 3SG.M.ACC accuse.PST.3SG  
 ‘No, Bill accused him too.’
- b. Oçi, ke i Maria afto- katiyori- θ- ik- e.  
 no and the.NOM Mary.NOM REFL  $\sqrt{\text{ACCUSE}}$  PFV.NACT PST 3SG  
 ‘No, Mary self-accused also.’

Reciprocals, both verbal and affixal, pattern the same way. The pronominal reciprocal furnishes both free and bound readings (139), but the free reading is not available in the case of *alilo-* reciprocals (139) or natural reciprocals (140)

- (138) Mono o Janis ke i Maria katiyorisan o enas ton  
 only the.NOM John.NOM and the.NOM Mary.NOM accuse.PST.3PL the.NOM one.NOM the.ACC  
 alo.  
 other.ACC  
 ‘Only John and Mary accused each other.’
- a. Oçi, katiyorise ton kaθena tus ke o Nikos.  
 no accuse.PST.3SG the.ACC each.ACC 3PL.GEN and the.NOM Nick.NOM  
 ‘No, Nick accused each of them too.’
- b. Oçi, ke o Nikos ke i Anna katiyorisan o enas  
 no and the.NOM Nick.NOM and the.NOM Anna.NOM accuse.PST.3PL the.NOM one.NOM  
 ton alo.  
 the.ACC other.ACC  
 ‘No, Nick and Anna accused each other too.’
- (139) Mono o Janis ke i Maria alilo- katiyoriθikan.  
 only the.NOM John.NOM and the.NOM Mary.NOM RECIP accuse.NACT.PST.3PL  
 ‘Only John and Mary hugged.’
- a. #Oçi, katiyorise ton kaθena tus ke o Nikos.  
 no accuse.PST.3SG the.ACC each.ACC 3PL.GEN and the.NOM Nick.NOM  
 ‘No, Nick accused each of them too.’
- b. Oçi, ke o Nikos ke i Anna alilo- katiyoriθikan.  
 no and the.NOM Nick.NOM and the.NOM Anna.NOM RECIP accuse.NACT.PST.3PL  
 ‘No, Nick and Anna accused each other too.’
- (140) Mono o Janis ke i Maria angaliastikan.  
 only the.NOM John.NOM and the.NOM Mary.NOM hug.NACT.PST.3PL



‘Only John and Mary hugged.’

- a. #Oçi, aŋgaliase ton kaθena tus ke o Nikos.  
 no hug.PST.3SG the.ACC each.ACC 3PL.GEN and the.NOM Nick.NOM  
 ‘No, Nick hugged each of them too.’
- b. Oçi, ke o Nikos ke i Anna aŋgaliastikan.  
 no and the.NOM Nick.NOM and the.NOM Anna.NOM hug.NACT.PST.3PL  
 ‘No, Nick and Anna hugged as well.’

The upshot of these facts should be clear: if prefixal reflexives/reciprocals were secretly transitive, then we would owe an explanation of why they are systematically interpreted differently from *bona fide* transitives, contributing monadic rather than dyadic predicates and thus not yielding free/bound ambiguities.

### 3.3.1.5 Reciprocal scope

Additional diagnostics are provided by facets of the interpretation of reciprocals.<sup>34</sup> Consider in particular the scope-taking possibilities of the reciprocal prefix. The foundation of the test is provided by a well-known ambiguity in the interpretation of reciprocals, illustrated here with English (141) (see Heim, Lasnik, and May 1991: p. 65 and references therein). The example can describe two distinct sorts of saying events. Under one reading (call it *collective reporting*), John and Mary both told Sue the same thing, namely, that John loves Mary and Mary loves John. Under a different reading (call it *distributed reporting*), John and Mary told Sue distinct things: John said that he loves Mary, and Mary said that she loves John, but neither of them necessarily said that the other person loves them. As Heim et al. 1991 assume following previous literature, this ambiguity can be understood with reference to the different scope-taking possibilities of the distributor *each*. When *each* scopes narrowly, we obtain the collective action reading; but *each* can also scope widely, distributing over the antecedent and yielding the reading paraphrasable as *Each of John and Mary told Sue that they like the other person*.

(141) John and Mary told Sue that they love each other.

<sup>34</sup>There are other interpretive aspects of reciprocals that may travel together with the scope diagnostic employed in this section. One such diagnostic that is, like the scope test, particular to reciprocals involves the behavior of reciprocals under negation, building on Kobayashi (2021), where this test is applied to Mandarin reciprocals. The basic contrast is in (i).

- (i) a. O Janis ke i Maria ðe laðosan o enas ton alo – #mono  
 the.NOM John.NOM and the.NOM Mary.NOM NEG bribe.PST.3PL the.NOM one.NOM the.ACC other.ACC only  
 i Maria laðose to Jani.  
 the.NOM Mary.NOM bribe.PST.3SG the.ACC John.ACC  
 ‘John and Mary didn’t bribe each other – it was only the case that Mary bribed John.’
- b. O Janis ke i Maria ðen alilo- laðoθikan – mono i Maria  
 the.NOM John.NOM and the.NOM Mary.NOM NEG RECIP bribe.NACT.PST.3PL only the.NOM Mary.NOM  
 laðose to Jani.  
 bribe.PST.3SG the.ACC John.ACC  
 ‘John and Mary didn’t bribe each other – it was only the case that Mary bribed John.’

The Greek reciprocal pronoun (142) exhibits the same ambiguity. The aim here, then, is to compare the full reciprocal pronoun with its prefixal counterpart.

- (142) O Janis ke i Maria ipan tis Anas oti ayapun  
 the.NOM John.NOM and the.NOM Mary.NOM say.PST.3PL the.GEN Anna.GEN COMP love.3PL  
 o enas ton alo.  
 the.NOM one.NOM the.ACC other.ACC  
 ‘John and Mary told Anna that they love each other.’

Consider first a context favoring the collective action reading such as the one in (143). As expected, the full reciprocal can felicitously in (143a) describe the relevant situation, where both Mary and John testify that reciprocal bribing took place; unsurprisingly, so can the affixal reciprocal in (143b). This is nothing out of the ordinary: both the reciprocal pronoun and the prefixal reciprocal can take scope in their surface position.

- (143) *[John and Mary are under investigation for a bribery scandal. The truth is that John bribed Mary, and later Mary bribed John. When testifying separately in court, each of them admits to the full extent of their wrongdoing: John admits that he bribed and got bribed by Mary, and Mary admits that she bribed and got bribed by John.]*

- a. O Janis ke i Maria ipan ksexorista oti laðosan  
 the.NOM John.NOM and the.NOM Mary.NOM say.PST.3SG separately COMP oil.PST.3PL  
 o enas ton alo.  
 the.NOM one.NOM the.ACC other.ACC  
 ‘John and Mary separately said that they bribed each other.’
- b. O Janis ke i Maria ipan ksexorista oti alilo-  
 the.NOM John.NOM and the.NOM Mary.NOM say.PST.3SG separately COMP RECIP  
 laðoθikan.  
 oil.NACT.PST.3PL  
 ‘John and Mary separately said that they bribed each other.’

Importantly, the reciprocal pronoun and *alilo-* diverge when we embed them in a context favoring the wide scope reading of the distributor. In (144), the context points to a distributed reporting reading; here, the reciprocal pronoun continues to be felicitous (144a), but the prefixal reciprocal leads to infelicity (144b).<sup>35</sup>

- (144) *[John and Mary are under investigation for a bribery scandal. The truth is that John bribed Mary, and later Mary bribed John. When testifying separately in court, each of them mentions only their own*

It seems that, whereas the pronominal reciprocal under negation yields assertions that demand, in this case, that neither John nor Mary bribed the other, the negated prefixal reciprocal yields weaker assertions, such that it suffices that one of John and Mary did not bribe the other. I refer the reader to Kobayashi (2021) for the analytical details.

<sup>35</sup>The examples here use *ksexorista* ‘separately’ to avoid a cumulativity-related confound: without the inclusion of this adverb, (144b) could be judged as true in the scenario given, since the testimonies of John and Mary, when put together, lead to the conclusion that the bribing was reciprocal.

*wrongdoing to protect the other person: John says only that he bribed Mary, and Mary says only that she bribed John.]*

- a. O Janis ke i Maria ipan ksexorista oti laḏosan  
 the.NOM John.NOM and the.NOM Mary.NOM say.PST.3SG separately COMP oil.PST.3PL  
 o enas ton alo.  
 the.NOM one.NOM the.ACC other.ACC  
 ‘John and Mary separately said that they bribed each other.’
- b. #O Janis ke i Maria ipan ksexorista oti alilo-  
 the.NOM John.NOM and the.NOM Mary.NOM say.PST.3SG separately COMP RECIP  
 laḏoθikan.  
 oil.NACT.PST.3PL  
 ‘John and Mary said separately that they bribed each other.’

The same facts emerge when we embed the different reciprocals below an attitude description verb. In (145), where the context favors a collective belief interpretation whereby both John and Mary believe that reciprocal bribing took place, both the reciprocal pronoun and *alilo-* are felicitous. But the same is not true in (146), where only the reciprocal pronoun can describe John and Mary’s different recollections of the situation:

(145) *[John and Mary routinely bribe each other. This time, they exchanged their bribes on a night out while drunk. The next morning, they’re both hazy, but they’re pretty sure that each of them both bribed and got bribed.]*

- a. O Janis ke i Maria nomizun oti laḏosan o enas  
 the.NOM John.NOM and the.NOM Mary.NOM think.3PL COMP oil.PST.3PL the.NOM one.NOM  
 ton alo.  
 the.ACC other.ACC  
 ‘John and Mary think that they bribed each other.’
- b. O Janis ke i Maria nomizun oti alilo- laḏoθikan.  
 the.NOM John.NOM and the.NOM Mary.NOM think.3PL COMP each.other oil.NACT.PST.3PL  
 ‘John and Mary think that they bribed each other.’

(146) *[John and Mary are routinely bribe each other. This time, they exchanged their bribes on a night out while drunk. The next morning, both think they’ve been tricked: John is pretty sure he remembers bribing Mary, but doesn’t recall receiving his own bribe; similarly, Mary is pretty sure she recalls bribing John, but doesn’t recall receiving her own bribe.]*

- a. O Janis ke i Maria nomizun oti laḏosan o enas  
 the.NOM John.NOM and the.NOM Mary.NOM think.3PL COMP oil.PST.3PL the.NOM one.NOM  
 ton alo.  
 the.ACC other.ACC  
 ‘John and Mary said that they bribed each other.’

- b. #O Janis ke i Maria nomizun oti alilo- laðoθikan.  
 the.NOM John.NOM and the.NOM Mary.NOM think.3PL COMP RECIP oil.NACT.PST.3PL  
 ‘John and Mary think that they bribed each other.’

The contrast in (145)–(146) suggests that, unlike the reciprocal pronoun, the prefixal reciprocal *alilo-* cannot scope widely (cf. e.g. Dalrymple, Mchombo, and Peters 1994 on Chicheŵa; Kobayashi 2021 on Mandarin). This constitutes yet another observation inconsistent with an analysis whereby *alilo-* is an argument much like the reciprocal pronoun is, all things being equal. More specifically, the contrast in (145)–(146) suggests that the two items must have different phrase-structural properties: whereas (one part of) the reciprocal pronoun is a full phrasal nominal capable of taking wide scope, *alilo-* is not, consistent with the position that *alilo-* is not an argument at all. The facts will then follow on any treatment that takes DP-hood to be an essential precondition for non-surface-true scope-taking, including Quantifier Raising.<sup>36</sup>

### 3.3.1.6 *De re*

The final diagnostic disfavoring an analysis of *afto-* reflexives as ‘hidden transitives’ is inspired by Sportiche’s (2014) discussion of the following type of example, originally from Heim (1994):

- (147) [*Oedipus, raised as King Polybus’s only son, kills someone he does not know, namely Laius, who, unbeknownst to Oedipus, is his real father. The gods send a plague on Thebes, and an oracle reveals that Laius’s killer must be punished to end the plague. Oedipus searches for Laius’s killer, aiming to punish him, placate the gods and end the plague.*]  
 ‘Oedipus<sub>i</sub> wants to PRO<sub>i</sub> punish himself<sub>i</sub>.’ (Sportiche 2022: p. 7)

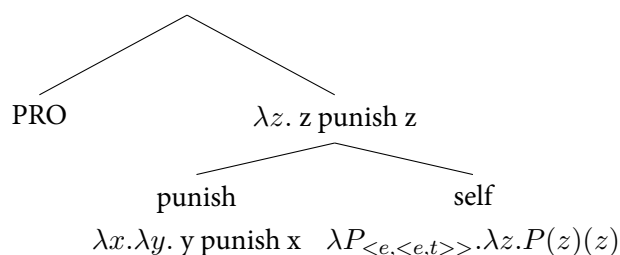
As Heim points out, sentences of this type seem problematic from the point of view of the classical binding theory. In (147), *himself* is naturally read as *de re*, but its local binder *PRO* is *de dicto*, even though both are apparently in the scope of the intensional operator contributed by *want*. In other words, Oedipus wants Oedipus to punish someone who is distinct from Oedipus in Oedipus’ own desire-worlds, but not in the real world. This is a puzzle for the theory of domains supplied by the binding theory: how can it be that, from Oedipus’ point of view, *PRO* is identical to Oedipus, but the reflexive pronoun is not? Sportiche (2020) argues that the tension resolves if (semantic) binding is relativized to attitude holders.

Of more direct interest here is the observation in Sportiche (2022) that the sentence in (147) is incorrectly predicted to be infelicitous under treatments of *himself* as a arity-reducing reflexivizer, as opposed to

<sup>36</sup>In line with the tests discussed immediately above, we expect naturally reciprocal verbs in Greek and English to pattern with *alilo-* verbs with respect to scope. However, this possibility is difficult to test. Since most naturally reciprocal verbs denote inherently symmetric events, the wide-scope reading of the (implicit) distributor is independently implausible: in *John and Mary said that they met*, what would it mean for John to say that he met Mary, but that Mary did not meet him? The confound could perhaps be resolved using verbs such as *hug*, where it is conceivable that Mary hugged John without him hugging her back, at least under one construal of what kinds of situations ‘hug’ can describe.

a variable. As Sportiche notes, if *himself* effects argument identification, such that the embedded clause is essentially of the form  $[\lambda x. \text{punish}(x)(x)](PRO)$ , *PRO* is (ultimately) the only semantic argument of *punish*. In turn, since *PRO* is interpreted *de se*, (147) should only be able to describe situations where Oedipus thinks ‘I will punish myself’, and should thus be infelicitous in the context given.

(148)



We may extend Sportiche’s observation as follows. In sentences like (148), the reflexive is an autonomous syntactic argument, which, as Sportiche notes, must also be interpreted as an autonomous semantic argument. If there exist reflexive elements that do not contribute entity variables (but e.g. merely identify thematic roles), they should pattern distinctly from full reflexive arguments; in particular, they should be infelicitous in the context in (148). Greek offers evidence confirming this hypothesis: whereas the full reflexive pronoun is felicitous in the relevant context, much like English *himself*, *afto-* is much less clearly felicitous:

(149) [Oedipus, raised as King Polybus’s only son, kills someone he does not know, namely Laius, who, unbeknownst to Oedipus, is his real father. The gods send a plague on Thebes, and an oracle reveals that Laius’s killer must be punished to end the plague. Oedipus searches for Laius’s killer, aiming to punish him, placate the gods and end the plague.]

- a. O     Iðipoðas     ðeli     na     timorisi     ton     eafto     tu.  
 the.NOM Oedipus.NOM want.3SG COMP punish.PFV.3SG the.ACC self.ACC 3SG.POSS  
 ‘Oedipus wants to punish himself.’
- b. #O     Iðipoðas     ðeli     na     afto- timoriði.  
 the.NOM Oedipus.NOM want.3SG COMP REFL punish.NACT.PFV.3SG  
 ‘Oedipus wants to self-punish.’

In this respect, *afto-* again patterns with natural reflexives. The following examples demonstrate using a context from Sportiche (2022), in turn borrowed from Charlow (2010).<sup>37</sup>

(150) [John, the community’s high priest, must once a year ceremonially shave the oldest member of the community. He hasn’t realized that, as of this year, he himself is the oldest member. On the day, he announces: ‘I must now shave the oldest member of the community!’.]

<sup>37</sup>Reciprocal verbs pattern identically as well; see the examples involving attitude verbs in section 3.3.1.5, which are effectively *de re* contexts.

- a. John wants to shave himself.
- b. #John wants to shave.
- c. O Janis θeli na ksirisi ton eafto tu.  
the.NOM John.NOM want.3SG COMP shave.PFV.3SG the.ACC self.ACC 3SG.POSS  
'Oedipus wants to shave himself.'
- d. #O Janis θeli na ksirisθi.  
the.NOM John.NOM want.3SG COMP shave.NACT.PFV.3SG  
'John wants to shave.'

Thus, as both Heim (1994) and Sportiche (2022) observe, argumental reflexives dissociate from reflexivized verbs in *de re*-favoring contexts. The full significance of this observation for our purposes becomes clear in light of Sportiche's original argument regarding how (147) bears on the semantics of reflexivization: unlike verbs that take a pronominal reflexive argument, reflexivized verbs must be treated as semantically monadic.

### 3.3.1.7 Summary and discussion: Approaching intransitive reflexives

This section has aimed to argue that *afto*- reflexives (and their *alilo*-prefixed reciprocal counterparts) are syntactically intransitive, thus patterning on a par with natural reflexives in Greek (and English), and distinctly from anaphoric-argument-taking transitive verbs. Table 4 summarizes the diagnostics that motivate this conclusion.

Diagnostic	Anaphoric pronoun	<i>afto</i> -/ <i>alilo</i> -	Natural reflexives
Proxy readings	✓	✗	✗
Gapping	✓	✗	✗
Object comparatives	✓	✗	✗
Object focus alternatives	✓	✗	✗
Wide scope	✓	✗	✗
<i>De re</i> readings	✓	✗	✗

Table 4: Summary of transitivity diagnostics.

At this juncture, it is important to become precise on the point of what exactly these diagnostics are testing. For many of the tests employed thus far, the crucial dimension differentiating pronominal from verbal reflexives seems to be the number of interpretively represented participants in the reflexive events. To see what is at stake, consider the two different reflexive denotations in (151).

- (151) a. *Dyadic reflexive*  
 $\lambda y \lambda x. Verb(e) \wedge Agent(e) = x \wedge Theme(e) = y \wedge x = y$
- b. *Monadic reflexive*  
 $\lambda x. Verb(e) \wedge Participant(e) = x \wedge Reflexive(e)$

(151a) is dyadic, in the sense that the denotation involves two distinct entity-denoting variables,  $x$  and  $y$ ; reflexivity arises because these variables have been identified. In a standard analysis of, for example, the semantics of reflexive pronouns (e.g. Heim & Kratzer 1998), this type of identification comes about through semantic binding, with two syntactically independent elements being linked through indexation and binding. This is the type of analysis that (151a) is meant to instantiate: technically,  $x$  and  $y$  would not be distinct variables, as shown in (151a) for ease of exposition, but rather, one would be the output of some assignment function for the index associated with the other.

(151b), by contrast, is monadic: there is but a single individual variable  $x$ , associated with some role linked to the event (here neutrally labeled ‘Participant’). The information that the event is reflexive is supplied by means that do not directly involved this individual variable, for instance by some relation Reflexive in (151b).

The denotations in (151) are not provided as actual possible analyses of the data at hand, but rather as illustrations of the idea that aspects of the interpretation of reflexives can be sensitive to the number of event participants. In particular, (151a) furnishes one individual variable more relative to (151b); the idea is that, for the purposes of the tests adduced so far in this section, this variable can be manipulated in different ways. For instance, the extra variable present in (151a), but not (151b), can be treated as a proxy of its binder, giving rise to proxy readings; subjected to coreference instead of local binding, giving rise to ambiguities in the contexts provided by ellipsis and focus; or be assigned wide scope relative to an intensional operator, allowing the exceptional readings discussed in 3.3.1.6. (151b), being semantically monadic, fails to provide these options: it involves just one individual variable, and hence fails to provide a second entity capable of being proxy-shifted, interpreted under co-reference, and so forth (see esp. Labelle 2008 for a similar view of some of the relevant diagnostics). I make this idea precise, with proxy readings as a case study, in section 3.5.3.

A denotation of the type seen in (151a) corresponds to the kind of denotation we expect to arise from a structure bearing two syntactic arguments (see e.g. the semantics of anaphoric binding in Heim and Kratzer 1998, and cf. arity-reducing analyses like Bach and Partee 1980); (151b) is naturally compatible with a syntax bearing one argument and a reflexivizer of some kind (see e.g. Büring 2005: 40ff, Labelle 2008). The analysis to be proposed for the interpretation of *afto*- will indeed be of the latter type, specifically taking the shape in (152). On the question of whether this single-argument interpretation could arise, in the case of *afto*-, from a two-argument syntax, see section 3.6.1.

- (152)  $\lambda P. \lambda x. \lambda e. P(e) \wedge Theme(e) = x \wedge Agent(e) = Theme(e)$

### 3.3.2 UNACCUSATIVITY

Having ruled out the ‘hidden transitive’ analyses of reflexives, we are now left to decide between the unergative and unaccusative analyses. It must be noted at the outset that the issue of unaccusativity diagnostics is a notoriously thorny one for Greek: the language seemingly supplies few tests for unaccusativity (see Alexiadou and Anagnostopoulou 1999), and deployment of these tests is often tentative in practice. Here, I propose a novel unaccusativity diagnostic applicable to Greek reflexives, and refine existing diagnostics to extend them to the case at hand.

Four arguments support an unaccusative analysis of Greek reflexives.<sup>38</sup> With respect to these tests, *afto*-verbs never pattern with unergative verbs, but rather with structures that involve an underlying internal argument (transitives, passives, and unaccusatives). More precisely, *afto*- reflexives pattern consistently only with unaccusatives/passives; where they pattern with transitive structures, their sole argument can be shown to behave on a par with the internal, not the external, argument of those structures.

#### 3.3.2.1 Predicative complements

A robust test for unaccusativity in many languages comes from resultative secondary predication. A classic paradigm from English is given in (153); here, the predicate can successfully combine with an active transitive (153a), an unaccusative (153b), and a passive (153c); but the unergative (153d) lacks a resultative reading (compare (153e)). The correct partition between the examples can be made by assuming that the resultative predicate is deep-object-oriented, with all examples but the unergative (153d) involving a deep object. This pattern, familiar since Simpson (1983), is sometimes referred to under the rubric of the *Direct Object Restriction* of Levin and Rappaport Hovav (1995).

- (153) a. The wind froze the metal solid.  
 b. The metal froze solid.  
 c. The metal was frozen solid.  
 d. \*John ran tired. (fine only on depictive reading)  
 e. John ran himself tired/ragged.

<sup>38</sup>Other unaccusativity tests previously proposed for Greek do not behave reliably for the reflexive data. Modification with *by itself* yields infelicity, but this is fully expected: if *by itself* denotes the non-existence of an agent/causer (see Chierchia 2004; see also Alexiadou et al. 2006 and references therein), then it will be incompatible with reflexives, which, unlike unaccusatives, show agentivity. Possessor sub-extraction yields unclear results: all my consultants fail to detect a strong unaccusative/unergative split here, and it is debatable whether Greek shows the necessary subject/object extraction asymmetry in the first place (for conflicting reports from transitives, compare Vassilios Spyropoulos and Philippaki-Warbuton 2001: p. 164, Kotzoglou 2007 and Vassillios Spyropoulos and Stamatogiannis 2011 with Lekakou 2005: pp. 19–21 and Alexiadou and Anagnostopoulou 1999; Alexiadou, Anagnostopoulou, and Everaert 2004, with the last work conceding that the alleged contrast is not strong). Postverbal bare plurals (Alexiadou et al. 2004) yield similarly inconclusive results. Finally, participle formation (Alexiadou & Anagnostopoulou 1999) is subject to additional (and hitherto underdiscussed) constraints on the combination of *afto*- with participial structures; see section 4.6.1.



Because Greek lacks resultative predication (Giannakidou & Merchant 1999), previous literature has not attempted to extend this test to the language. But on closer inspection, Greek does make available a parallel structure, in the form of *predicative complements* licensed by verbs like *declare*, *characterize*, *call/name* and *appoint*.

In simple transitives, the predicate appears in the accusative, thereby matching the case of the object:

- (154) a. O papas anakirikse ton Karlomagno **vasilia**.  
 the.NOM pope.NOM declare.PST.3SG the.ACC Charlemagne.ACC king.ACC  
 ‘The pope declared Charlemagne king.’
- b. I prothipuryos ðiorise ti Maria **ipuryo**  
 the.NOM prime.minister.NOM appoint.PST.3SG the.ACC Mary.ACC minister.ACC  
**peðias**.  
 education.GEN  
 ‘The prime minister appointed Mary minister of education.’
- c. I prothipuryos apokalse ton aktivisti **faro elpiðas**.  
 the.NOM prime.minister.NOM call.PST.3SG the.ACC activist.ACC beacon.ACC hope.GEN  
 ‘The prime minister called the activist a beacon of hope.’
- d. I Maria xarakterise to Jani **vlaka**.  
 the.NOM Mary.NOM characterize.PST.3SG the.ACC John.ACC idiot.ACC  
 ‘Mary branded John an idiot.’

When transitives are passivized, with the underlying object now receiving nominative, the predicate continues to track the case of the promoted object, becoming nominative itself:

- (155) a. O Karlomagnos anakirixthike **vasilias** (apo ton papa).  
 the .NOM Charlemagne.NOM declare.NACT.PST.3SG king.NOM from the pope  
 ‘Charlemagne was declared king (by the pope).’
- b. I Maria ðioristike **ipuryos peðias** (apo tin  
 the.NOM Mary.NOM appoint.NACT.PST.3SG minister.NOM education.GEN from the  
 prothipuryo).  
 prime.minister  
 ‘Mary was appointed minister of education (by the prime minister).’
- c. O Janis xarakteristike **vlakas** (apo polus ðimosioygrafus).  
 the.NOM John.NOM characterize.NACT.PST.3SG idiot.NOM from many journalist.PL  
 ‘John was branded an idiot (by many journalists).’
- d. Pjos aktivistis apokalestike **faros elpiðas** apo tin prothipuryo?  
 which.NOM activist.NOM call.NACT.PST.3SG beacon.NOM hope.GEN from the prime.minister  
 ‘Which activist was called a beacon of hope by the prime minister?’

The predicate can never fail to case-match the object:

- (156) a. I Maria xarakterise to Jani **vlaka** / \***vlakas**.  
 the.NOM Mary.NOM characterize.PST.3SG the John.ACC idiot.ACC idiot.NOM  
 ‘Mary branded John an idiot.’
- b. O Janis xarakteristike **vlakas** / \***vlaka**.  
 the.NOM John.NOM characterize.NACT.PST.3SG idiot.NOM idiot.ACC  
 ‘John was branded an idiot.’

There are reasons to believe that the predicative complement and the object form a constituent underlyingly. Firstly, no material can intervene between the two.<sup>39</sup>

- (157) a. (epiyondos) i proθipuryos (epiyondos) sinandise (epiyondos) ton  
 urgently the.NOM prime.minister.NOM meet.PST.3SG the.ACC  
 Vretano omoloγo tis (epiyondos).  
 British.ACC counterpart.ACC her  
 ‘The prime minister urgently met her British counterpart.’
- b. (epiyondos) i proθipuryos (epiyondos) ðiorise (epiyondos) ti  
 urgently the.NOM prime.minister.NOM appoint.PST.3SG the  
 Maria (?\*epiyondos) **stratiyo** (epiyondos)  
 Mary.ACC general.ACC  
 ‘The prime minister urgently appointed Mary as general.’

Additionally, it can be shown that the predicate is low in the structure, as required by the analysis whereby it attaches to the internal argument. In (158a), a reflexive embedded within the predicative complement is successfully bound by the object, suggesting that the former is c-commanded by the latter. As expected, this is not symmetric c-command: in (158b), the object anaphor cannot be bound by the nominal embedded within the predicative complement.

- (158) a. O vasilias anakirikse ton lao<sub>i</sub> kiriarxo tu eaftu tu<sub>i</sub>.  
 the.NOM king.NOM declare.PST.3SG the.ACC public.ACC master.ACC the.GEN self.GEN his  
 ‘The king declared the people masters of themselves.’
- b. \*O vasilias anakirikse ton eafto tu<sub>i</sub> kiriarxo tu lau<sub>i</sub>.  
 the king.NOM declare.PST.3SG the.ACC self.ACC his master.ACC the.GEN public.GEN  
 ‘The king declared the people masters of themselves.’

All considerations adduced thus far suggest that predicative complements of *declare*-class verbs attach to the internal argument of such verbs. Importantly, to my knowledge, no unergative verb in the language forms predicative complements; that is, we do not find any examples of the kind in (159), taking ‘run’ as a placeholder for any *bona fide* unergative verb.

<sup>39</sup>The final attachment site of *urgently* in (157b) is possible only if the object is phonologically heavy (e.g. *leader of the armed forces* rather than *general*); even then, a clear pause is required after *urgently*.

- (159) \*O Yanis etrekse olimbionicis.  
 the.NOM John.NOM run.PST.3SG olympic.champion.NOM

The crucial observation, then, is that *afto-* reflexives freely take predicative complements. Examples like those in (154)–(155) are perfectly grammatical once reflexivized, with the predicate’s case tracking the case of the single argument of the reflexive:

- (160) a. O Karlomagynos afto- anakirixθike **vasilias**.  
 the.NOM Charlemagne.NOM self declare.NACT.PST.3SG king.NOM  
 ‘Charlemagne declared himself king.’
- b. I Maria afto- ðioristice **ipuryos peðias**.  
 the.NOM Mary.NOM self appoint.NACT.PST.3SG minister.NOM education.GEN  
 ‘Mary appointed herself minister of education.’
- c. O Yanis afto- xaraktiristike **vlakas**.  
 the.NOM John.NOM self characterize.NACT.PST.3SG idiot.NOM  
 ‘John branded himself an idiot.’
- d. O aktivistis afto- apokalestike **faros elpiðas**.  
 the.NOM activist.NOM self call.NACT.PST.3SG beacon.NOM hope.GEN  
 ‘The activist called himself a beacon of hope.’

For completeness, note that it is also perfectly possible to achieve a reflexive interpretation with the same class of verbs by combining the predicate with the reflexive pronoun:

- (161) O Karlomagynos anakrikse ton eafto tu **vasilia**.  
 the.NOM Charlemagne.NOM declare.PST.3SG the.ACC self.ACC 3SG.M.GEN king.ACC  
 ‘Charlemagne declared himself king.’

The argument is clear: since predicative complements require an underlying object to attach to, and *afto-* reflexives freely take predicative complements, then the single argument of *afto-* reflexives must be internal. From this perspective, the derivation of examples like (160) must closely parallel that of the passive examples in (155), with the internal argument vacating the constituent it shares with the predicate to become the surface subject.

The unergative analysis of reflexives, whereby the only argument of the reflexive is an external one, cannot account for this data, unlike the unaccusative analysis. But it seems at first glance that the ‘transitive’ analyses in (117) and (118) also fare well here, insofar as these structures do supply an internal argument for the predicate to attach to. But the case matching aspect of (160) supplies a straightforward argument against at least (117): if *afto-* were the internal argument participating in predicate formation, it seems unexpected that the predicate should track the case of a wholly different element, namely, the nominal that, under (117), would occupy the external argument position.<sup>40</sup>

<sup>40</sup>For a parallel case, see the argument against the unergative analysis of reflexives from reflexivization of ECM verbs in Icelandic

### 3.3.2.2 Event nominals

A further diagnostic for unaccusativity is provided by the formation of event nominals.<sup>41</sup> Alexiadou (2001: pp. 41–42) states the relevant generalization in the most general way possible: Greek unaccusatives readily form event nouns, whereas unergatives do not.

Ascertaining whether this generalization holds across the board is a task that remains to be undertaken; Alexiadou provides a few illustrative examples, but without systematically controlling for the nominalizer used. What seems clear for our purposes is that the generalization does seem to hold for event nominals formed with the nominalizer *-si*.

With roots commonly forming transitives (162) and unaccusatives (163), affixation of *-si* freely yields event nominals, using standard tests from Grimshaw (1990): the eventiveness of the nominals is diagnosed by the availability of aspectual modifiers, the obligatoriness of internal arguments are obligatory, and modification by *frequent* without plural marking on the noun.

- (162) a. I ekserevni- si tu spileu (apo eθelondes) epi ðio evdomaðes  
 the.NOM  $\sqrt{\text{EXPLORE}}$  NMLZ.NOM the.GEN cave.GEN from volunteer.PL for two week.PL  
 prokalese ðieθni θavmazmo.  
 cause.PST.3SG international.ACC admiration.ACC  
 ‘The exploration of the cave by volunteers for two weeks was the cause of international admira-  
 tion.’
- b. I (sineçis) ekserevni- si \*(tu spileu) apeti ipomoni ke  
 the.NOM constant  $\sqrt{\text{EXPLORE}}$  NMLZ.NOM the.GEN cave.GEN require.3SG patience.ACC and  
 kalo eksoplizmo.  
 good.ACC equipment.ACC  
 ‘The (constant) exploration of the cave requires patience and good equipment.’
- (163) a. I pto- si ton timon epi tris evðomaðes ekplisi polus  
 the.NOM  $\sqrt{\text{FALL}}$  NMLZ.NOM the.PL.GEN price.PL.GEN for three week.PL surprise.3SG many  
 ikonomologyus.  
 economist.PL.ACC  
 ‘The fall of prices for three weeks surprises many economists.’
- b. I (sineçis) pto- si \*(ton timon) sxetizete  
 the.NOM constant.NOM  $\sqrt{\text{FALL}}$  NMLZ.NOM the.GEN.PL price.PL.GEN correlate.NACT.3SG  
 me apoplithorizmo.  
 with deflation  
 ‘The (constant) fall of prices is correlated with deflation.’

(Marantz 1984: pp. 164–165).

<sup>41</sup>Here I use the term ‘event nominal’ to correspond to the presence of argument structure; in the terminology introduced in Grimshaw (1990), the relevant class are *complex* event nominals (cf. Alexiadou 2010; Borer 2003, who use the term *argument structure nominals*).

Note in the examples above that the internal argument surfaces in the genitive, with the transitive (162a) permitting the external argument to be expressed as a *by*-phrase.

Unlike the transitive- and unaccusative-forming Roots just surveyed, unergative-forming Roots never combine with *-si* on the event nominal reading. Two observations support this generalization. Some roots typically forming unergatives do combine with *-si*, but in so doing form nominals that do not tolerate any overt argument structure. In (164a), the *-si* nominal has a generic reading, which is incompatible with an overtly expressed argument and with aspectual modification (164b)/modification by *frequent* (164c):

- (164) a. I kolimvi- si kani kalo.  
 the.NOM  $\sqrt{\text{SWIM}}$  NMLZ.NOM do.3SG good.ACC  
 ‘Swimming is good for you.’
- b. \*I kolimvi- si tis Marias (epi ðio ores) metaðoθike  
 the.NOM  $\sqrt{\text{SWIM}}$  NMLZ.NOM the.GEN Mary.GEN for two hour.PL broadcast.NACT.PST.3SG  
 zondana se pende kanalja.  
 live in five channel.PL  
 ‘Mary’s swimming for two hours was broadcast live on five channels.’
- c. \*I (sichni / sineçis) kolimvi- si tis Marias tin  
 the.NOM frequent constant  $\sqrt{\text{SWIM}}$  NMLZ.NOM the.GEN Mary.GEN 3SG.F.ACC  
 proetimase kala ja to protaθlima.  
 prepare.PST.3SG well for the championship  
 ‘Mary’s (frequent) swimming prepared her well for the championship.’

A second type of Root does allow (what looks like) the external argument to be overtly expressed, but does not tolerate aspectual modification or *frequent*,<sup>42</sup> suggesting that the relevant nominals are of the result type (note also that the ‘external argument’ is a genitive here, though it can also be a *by*-phrase, and the two must not be on a par):

- (165) a. I epemva- si ton Amerikanon (\*epi tria xronia)  
 the.NOM  $\sqrt{\text{INTERVENE}}$  NMLZ.NOM the.GEN.PL American.PL.GEN for three year.PL  
 alakse ja panda tis jeopolitices isoropies tis perioçis.  
 change.PST.3SG for always the geopolitical balance.PL.ACC the.GEN region.GEN  
 ‘The intervention by the Americans (for three years) forever changed the geopolitical balances of the region.’

<sup>42</sup>As expected for result nominals, this type of modification becomes possible if the noun is pluralized:

- (i) I (sineçis / sikhnes) epemva- si- s ton Amerikanon alaksan ja panda  
 the.PL.NOM constant.PL frequent.PL  $\sqrt{\text{INTERVENE}}$  NMLZ.NOM PL the.GEN.PL American.PL.GEN change.PST.3PL for always  
 tis jeopolitices isoropies tis perioçis.  
 the geopolitical balance.PL.ACC the.GEN region.GEN  
 ‘The frequent/constant interventions by the Americans forever changed the geopolitical balances of the region.’

- b. I (\*sineçis / \*sihni) epemva- si ton Amerikanon  
 the.NOM constant frequent  $\sqrt{\text{INTERVENE}}$  NMLZ.NOM the.GEN.PL American.PL.GEN  
 alakse ja panda tis jeopolitices isoropies tis perioçis.  
 change.PST.3SG for always the geopolitical balance.PL.ACC the.GEN region.GEN  
 ‘The frequent/constant intervention by the Americans forever changed the geopolitical bal-  
 ances of the region.’

Crucially, *afto-* reflexives freely form *-si* nominals, again patterning with transitives and unaccusatives and unlike unergatives.

- (166) a. I **afto-** anakri- si tis Marias epi mia ora sto one man  
 the.NOM REFL  $\sqrt{\text{INTERROGATE}}$  NMLZ.NOM the.GEN Mary.GEN for one hour in.the one man  
 show apespase to sxoliko vradio ipokritikis.  
 show glean.PST.3SG the.ACC school prize.ACC acting.GEN  
 ‘Mary’s interrogating herself for one hour in the one man show won the school acting prize.’
- b. I sihni **afto-** ðiafimi- si tu Jani tu apoferi  
 the.NOM frequent REFL  $\sqrt{\text{ADVERTISE}}$  NMLZ.NOM the.GEN John.GEN 3SG.M.GEN yield.3SG  
 polus neus followers sto Instagram.  
 many new followers on.the instagram  
 ‘John’s frequent advertizing himself yields him many new followers on Instagram.’
- c. I **afto-** anakirik- si tu stratiyu os ðiktatora epi teseris ores  
 the.NOM REFL  $\sqrt{\text{PROCLAIM}}$  NMLZ.NOM the.GEN general.GEN as dictator for four hour.PL  
 eðose to xrono stis kavernitikes ðinamis na ton anatrepsun  
 give.PST.3SG the time.ACC to.the governmental force.PL COMP 3SG.ACC overturn.3PL  
 proora.  
 prematurely  
 ‘The general’s proclamation of himself as dictator for four hours gave government forces the  
 time to overturn him prematurely.’

Note that the single argument of the reflexives in (166) is expressed as a genitive; it thereby patterns with the internal argument of nominalized transitives, and not with their external argument, which in event nominals can be expressed only as a *by*-phrase in the presence of a genitive theme (162a); see (Horrocks & Stavrou 1987); cf. (Alexiadou 2001: 79ff).

### 3.3.2.3 Agent nominals

A further diagnostic is given by agent nominals in *-tis* (cf. English *-er*), which are freely formed only from underlyingly agentive verbs: Roots building prototypical unergatives and transitives thus freely form agent nominals, but the same is not true of unaccusatives (Alexiadou & Schäfer 2014: pp. 4–5).

- (167) a. { trayudis , xoref , kolimv , kaθaris , apelefθero , ðioryano } -tis  
 $\sqrt{\text{SING}}$   $\sqrt{\text{DANCE}}$   $\sqrt{\text{SWIM}}$   $\sqrt{\text{CLEAN}}$   $\sqrt{\text{LIBERATE}}$   $\sqrt{\text{ORGANIZE}}$  NMLZ  
 ‘singer, dancer, swimmer, janitor, liberator, organizer’
- b. \*{ pef , peθan , ftan } -tis  
 $\sqrt{\text{FALL}}$   $\sqrt{\text{DIE}}$   $\sqrt{\text{ARRIVE}}$  NMLZ  
 ‘\*faller, \*dier, \*arriver’

Similarly to English (168a), grammatical *-tis* nominals often have a prototypical occupational reading (169a); this reading is not a necessity, however, and a simple agent nominal interpretation emerges once we supply an overt complement (168b), (169b).

- (168) a. John is a builder. *interpreted occupationally by default*  
 b. John is a careful builder of Jenga towers.
- (169) a. O Janis ine xtis- tis.  
 the.NOM John.NOM be.3SG  $\sqrt{\text{BUILD}}$  NMLZ.NOM  
 ‘John is a builder.’
- b. O xtis- tis tu jefirju itan o Kostas Bekas.  
 the.NOM  $\sqrt{\text{BUILD}}$  NMLZ.NOM the.GEN bridge.NOM be.PST.3SG the.NOM  
 ‘The builder of the bridge was Kostas Bekas.’ (attested, <https://tinyurl.com/2cv53u3t>)

Importantly, *afto-* reflexives do not form good *-tis* nominals (see also e.g. Dalrymple et al. 1994: p. 154). Prefixing an existing *-tis* nominal with the reflexivizer systematically yields unacceptable forms (170). Note that this unacceptability cannot be attributed to the absence of a name-worthy occupational reading for the relevant forms. Any confounds arising from such readings should be ruled out by the provision of a complement in the first place (cf. (168b)–(169b)), and (171) clarifies that a reflexive pronoun complement indeed felicitously yields a non-occupational agent noun.

- (170) a. (\*afto-) ðiafimis- tis  
 REFL  $\sqrt{\text{ADVERTISE}}$  NMLZ
- b. (\*afto-) ekðo- tis  
 REFL  $\sqrt{\text{PUBLISH}}$  NMLZ
- c. (\*afto-) anali- tis  
 REFL  $\sqrt{\text{ANALYZE}}$  NMLZ
- d. (\*afto-) epikri- tis  
 REFL  $\sqrt{\text{CRITICIZE}}$  NMLZ
- (171) O Janis ine o pio skliros epikri- tis tu eaftu  
 the.NOM John.NOM be.3SG the.NOM most harsh.NOM  $\sqrt{\text{CRITICIZE}}$  NMLZ.NOM the.GEN self.GEN  
 tu.  
 3SG.M.GEN

‘John is his own harshest critic.’

(adapted from <https://tinyurl.com/3n7pjnt9>)

This dissociation between transitives and unergatives on the one hand, and reflexives on the other, lends some insight into the inner workings of this diagnostic. (170) is *prima facie* surprising: since reflexives are, in one sense, agentive verbs, it may be unexpected that they do not form agent nominals. It must be the case, then, that the formation of agent nominals requires ‘deep’ agentivity,<sup>43</sup> of the kind borne by unergatives and transitives but not by reflexives derived via an unaccusative syntax. This observation may also help make sense of the restriction of agent nouns to Roots that form agentive verbs in the deep sense: recall from section 2.3.2 that there are no agent nominalizations of subject experiencer verbs, for instance.<sup>44</sup>

### 3.3.2.4 Ethical genitives

A final diagnostic for unaccusativity comes from ethical genitives.<sup>45</sup> These elements take the general form in (174), where the genitive indexes an entity somehow negatively affected by the event.

<sup>44</sup>Alexiadou and Schäfer (2014) urge caution in interpreting the output of this diagnostic for NRVs, based on the observation that Greek agent nominals formed from NRVs (e.g. the counterpart of *shaver*) are ungrammatical not just on the reflexive reading (‘self-shaver’), but also on the transitive reading which the relevant roots otherwise accommodate (‘shaver of someone else’). But making more precise the nature of the issue here is a non-trivial task. To begin with, the mere fact that speakers hesitate to accept the counterpart of ‘shaver’ does not necessarily indicate that it is not generated by their grammar, as judgments are likely to be influenced by formally unrelated but pragmatically competing forms, especially on the occupational reading (e.g. ‘barber’). This mitigating factor is reinforced by the fact that, in Greek, even the unacceptable formations mentioned in Alexiadou and Schäfer (2014) improve somewhat with the addition of an overt object for the agent nominal (cf. Embick and Marantz 2005: 14ff for English *stealer* versus *base-stealer*), see (i):

- (172) O Janis ðen ine aplos kureas. Ine o ??ksiris- tis tu vasilja.  
 the.NOM John.NOM NEG be.3SG simple.NOM barber.NOM be.3SG the.NOM √SHAVE NMLZ.NOM the.GEN king.GEN  
 ‘John isn’t just a barber; he shaves the king.’

Moreover, certain roots that form NRVs in fact do apparently form *-tis* nominals, with only the transitive reading; body-action verbs like *proponume* ‘train’ and *jimnazome* ‘exercise’ below are a case in point.

- (173) a. O Janis jimnazi oles tis miikes omaðes eksisu.  
 the.NOM John.NOM exercise.3SG all.ACC the.PL.ACC muscle group.ACC equally  
 ‘John trains all muscle groups equally.’  
 b. O Janis jimnazete sixna.  
 the.NOM John.NOM exercise.NACT.3SG often  
 ‘John exercises often.’  
 c. O Janis ine jimnas- tis.  
 the.NOM John.NOM be.3SG √EXERCISE NMLZ.NOM  
 ✓ ‘John is a fitness coach.’  
 ✗ ‘John trains himself.’

Paradigms like (173) may tentatively mitigate the concern in Alexiadou and Schäfer (2014); however, the details admittedly require caution in their own right. It would need to be shown, for example, that verbs like that in (173b) are indeed NRVs, not simple unaccusatives, and any confounds regarding possible differences between agent nouns more generally, and occupational nouns like that in (173c) specifically, would need to be taken into account.

<sup>45</sup>Note that dative and genitive systematically syncretize in (standard) Modern Greek; see Anagnostopoulou and Sevdali (2020) for recent discussion.



- (174) **Mu** efije to peði.  
 1SG.GEN leave.PST.3SG the child.NOM  
 ‘The child left on me. (i.e. to my detriment)’

That these elements may provide an unaccusativity diagnostic is conjectured by Alexiadou et al. (2004), where they are labeled possessor clitics following Borer and Grodzinsky (1986) (cf. e.g. Michelioudakis and Kapogianni 2013). In Greek at least, there is a clear adversity reading dissociable from possession, as demonstrated by the following example, where the possessor of the object is explicitly distinguished from the maleficiary (see also Michelioudakis 2012; Michelioudakis and Kapogianni 2013; cf. Cuervo 2003 on Spanish):<sup>46</sup>

- (175) [I have been tasked with watching Mary’s child at the park. I discover that, while I had my back turned, the child ran away.]
- Mu** efije to peði tis Marias.  
 1SG.GEN leave.PST.3SG the.NOM child.NOM the.GEN Mary.GEN  
 ‘Mary’s child left on me.’

Ethical genitives can generally be built from transitives and unaccusatives, but not from unergatives (Alexiadou & Anagnostopoulou 2004):<sup>47</sup>

<sup>46</sup>In the absence of explicit disambiguation of the kind in (175), (174) is of course compatible with a reading where it is the speaker’s child that left; this is presumably why the term ‘possessor clitic’ has often been given to these structures. See Pytkkänen (2008: p. 68) for similar effects in Japanese adversity passives.

<sup>47</sup>See Michelioudakis (2012: ch. 4) for refinements to this simple picture: broadly speaking, the degree of participation of the dative in the event arguably modulates the extent to which it can combine with unergative structures. The generalizations are complex, however, and the judgments subtle. For instance, Michelioudakis (2012: p. 182) argues that benefactives can be built from unergatives; but the relevant examples either have an overt result (see main text below), or are of the following form:

- (i) I Maria tu jelase tu Tasu.  
 the.NOM Mary.NOM 3SG.M.GEN laugh.PST.3SG the.GEN Tasos.GEN  
 ‘Mary laughed for Tasos.’

Closer inspection suggests that the genitive here denotes not a beneficiary, but a direction/goal for the laughing event (cf. English *smile at Mary* versus *smile for Mary*). The following example makes this point:

- (ii) [Mary’s first show as a screenwriter is premiering on TV, and the network will gauge whether to fund a second episode from the ratings of the laugh-o-meters installed in select viewers’ TV sets. The more laughter the laugh-o-meter registers per viewer, the more likely the network is to retain Mary’s show. She implores her friend:]
- #Se parakalo, jelase mu otan ðis to show apopse!  
 2SG.ACC implore.1SG laugh.IMP.2SG 1SG.GEN tonight when watch.2SG the.ACC show.ACC  
 Intended: ‘Please laugh for my benefit when you watch the show tonight!’

In (ii), it is understood that Mary cannot directly witness the laughing event, not being present for her friend’s watching session; but she would benefit from the laughing event. Nevertheless, the genitive is decidedly odd here, suggesting that, whatever the role of the entity it denotes, it must be more closely involved in the event than simply benefitting from it. Since sorting out the complexities here, let alone comparing benefactives and malefatives, would take us far afield, I put these questions to the side for now.

- (176) a. Mu evrise to peđi tis Marias.  
 1SG.GEN curse.PST.3SG the.ACC child.ACC the.GEN Mary.GEN  
 ‘S/he cursed Mary’s child on me.’
- b. Mu efije to peđi tis Marias.  
 1SG.GEN leave.PST.3SG the.NOM child.NOM the.GEN Mary.GEN  
 ‘Mary’s child left on me.’
- c. \*Mu etrekse to peđi tis Marias.  
 1SG.GEN run.PST.3SG the.NOM child.NOM the.GEN Mary.GEN  
 ‘Mary’s child ran to the cliff.’

Some unergative examples improve with the provision of a path/result, as in (177); as Elena Anagnostopoulou (p.c.) points out, this addition plausibly facilitates coercion into an unaccusative structure:

- (177) ?Mu etrekse to peđi tis Marias os to gremo.  
 1SG.GEN run.PST.3SG the.NOM child.NOM the.GEN Mary.GEN until the cliff  
 ‘Mary’s child ran to the cliff on me.’

The impossibility of malefactives with unergatives finds an explanation in a system such as Pykkänen (2008): if Greek malefactives are introduced by Low Appl, with this head combining with the internal argument before it meets the event, then (177c) will be ungrammatical for the same reason that *\*I ran them* is in English: Appl has nowhere to attach.<sup>48</sup>

Crucially, ethical genitives can be build from *afto-* reflexives perfectly easily:

- (178) a. Mu afto- katastrafike to điastimoplio.  
 1SG.GEN REFL destroy.NACT.PST.3SG the.NOM spaceship.NOM  
 ‘The spaceship self-destructed on me.’
- b. [A lawyer prepares his client for testimony in court.]  
 Mi mu afto- katiyoriθis avrio sto đikastirio!  
 NEG 1SG.GEN REFL accuse.NACT.2SG tomorrow in.the court  
 ‘Don’t accuse yourself on me tomorrow in court!’

Once again, *afto-* reflexives pattern with structures involving an internal argument, and distinctly from unergatives.

### 3.3.2.5 Summary of lower origin diagnostics

As shown in Table 5, *afto-* reflexives pattern with unaccusatives (or passives, in the case of the predicative complements diagnostic) with respect to all four tests. They never pattern with unergatives, and do not pattern

<sup>48</sup> An issue that deserves more attention here concerns the semantic composition, insofar as, in Pykkänen (2008), malefactives are typically introduced by *High* Appl. Cf. Michelioudakis and Kapogianni 2013, who take ethical datives to originate in *High* Appl, a move that leaves the restriction to deep object-taking predicates unexplained.

Diagnostic	Active transitive	Unergative	Unaccusative/Passive	<i>afto-</i> reflexive	Passing the test indicates
Predicative complements	✓	✗	✓	✓	Presence of thematic object
Event nominals	✓	✗	✓	✓	Presence of thematic object
Agent nominals	✓	✓	✗	✗	Presence of agentive subject
Ethical genitives	✓	✗	✓	✓	Presence of thematic object

Table 5: Summary of unaccusativity diagnostics.

with transitives consistently. Importantly, when reflexives do pattern with transitives, their single argument parallels the behavior of the internal, not the external, argument of the transitives, as in the case of event nominal formation discussed above.

Crucially, the arguments in this section are not merely correlational: instead, it is possible to argue, in each case, that the diagnostics used above group structures together based on thematic properties. Because reflexives and unaccusatives both fulfill this criterion, they are capable of hosting predicative complements and ethical genitives (both built on internal arguments), and to form event nominals (whose formation arguably requires an internal argument; see e.g. Borer 2003). Because they lack an underlying Agent, both unaccusatives and reflexives fail to form agent nominals – even though the internal argument of reflexives does end up acquiring agentive semantics, as Section 3.5 details.

### 3.3.2.6 Prefixal reciprocals and natural reflexives are unaccusative, too

For completeness, consider that verbs reciprocalized by means of *alilo-*, as well as naturally reflexive and reciprocal verbs, also pass low origin diagnostics for their single argument (cf. Alexiadou and Schäfer 2014 for natural reflexives). For example, natural reflexives and reciprocals freely form ethical genitives:<sup>49</sup>

- (179) [John and his friend are running late, but the friend has decided to shower first; John tries to dissuade his friend.]

<sup>49</sup>Some of the other diagnostics of Table 5 unfortunately do not straightforwardly extend to these verbs. Since inherent reflexives/reciprocals are not part of the *declare* class, predicative complements cannot be tested; for agent nominal formation with natural reflexives, see footnote 44. Encouragingly, inherent reflexives and reciprocals apparently do form event nominals, albeit not with the nominalizer *-si*:

- (i) a. To pli -simo tu Jani epi tris ores eknevrise tus singatikus  
 the.NOM √WASH NMLZ.NOM the.GEN John.GEN for three hour.PL annoy.PST.3SG the.PL.ACC roommate.PL.ACC  
 tu.  
 3SG.M.GEN  
 ‘John’s washing for three hours annoyed his roommates.’  
 b. To sineçes fili- ma tu Jani ke tis Marias ejine ðema  
 the.NOM constant.NOM √KISS NMLZ the.GEN John.GEN and the.GEN Mary.GEN become.PST.3SG subject.NOM  
 kutsombolju.  
 gossip.GEN  
 ‘John and Mary’s constant kissing became the subject of gossip.’

Mi mu plenese tora!  
 NEG 1SG.GEN wash.IMP.2SG NOW  
 ‘Don’t wash to my detriment now!’

- (180) [While the gang is being chased by a skeleton, Fred and Daphne decide to stop and kiss. Dismayed, Scooby Doo says:]

Tora vrikate eferia na mu filiθite?  
 now find.PST.2PL opportunity.ACC COMP 1SG.GEN kiss.2PL  
 ‘Now you find the opportunity to kiss to my detriment?’

As for *alilo-* prefixed reciprocals, these parallel *afto-* reflexives in hosting predicative complements and ethical genitives (181a)-(181b), and building event (181c), but not agent (181d), nominals (see also Siloni 2012: 295ff for the event nominal diagnostic applied to Hebrew):

- (181) a. O Janis ke o Joryos alilo- ðioristikan  
 the.NOM John.NOM and the.NOM George.NOM RECIP appoint.NACT.PST.3PL  
 simbroeðri.  
 co-president.PL.NOM  
 ‘John and George appointed each other co-president.’
- b. [In a court case, John and Mary are both witnesses called by the defense, but they are also enemies prone to accusing each other. The defense lawyer urges them to play nice:]  
 Mi mu alilo- katiyoriθite avrio!  
 NEG 1SG.GEN RECIP accuse.NACT.PST.2PL tomorrow  
 ‘Don’t accuse each other to my detriment tomorrow!’
- c. I sineçis alilo- anakri- si ton ðio detectives  
 the.NOM constant.NOM RECIP  $\sqrt{\text{INTERROGATE}}$  NMLZ.NOM the.GEN two detectives.GEN  
 krata staθeri tin endasi sto kalitero astinomiko θriler tis  
 keep.3SG steady.ACC the.ACC tension.ACC in.the best police thriller the.GEN  
 xronjas.  
 year.GEN  
 ‘The two detectives’ constant interrogation of each other keeps the tension steady in the year’s best crime thriller.’
- d. (i) O Janis ke i Maria ine i çiroteri  
 the.NOM John.NOM and the.NOM Mary.NOM be.3PL the.NOM.PL worst.NOM.PL  
 epikrites o enas tu alu.  
 criticizer.NOM.PL the.NOM one.NOM the.GEN other.GEN  
 ‘John and Mary are each other’s worst critics.’

- (ii) \*O Janis ke i Maria ine (i çiroteri) alilo-  
 the.NOM John.NOM and the.NOM Mary.NOM be.3PL the.NOM.PL worst.NOM.PL RECIP  
 epikrites.  
 criticizer.NOM.PL

### 3.4 THE BASIC PROPOSAL: REFLEXIVE VOICE

*afto-* reflexives and their reciprocal counterparts have been shown to have three core properties. Firstly, they are truly syntactically intransitive; that is, the syntactic argument structure involves just one nominal, and *afto-/alilo-* itself realizes a reflexivizing morpheme. Secondly, *afto-* reflexives and *alilo-* reciprocals only appear with NACT morphology; and thirdly, they trigger a passive-like syntax, with only a single argument present, in the internal argument position.

Any adequate account of this type of reflexivization must do justice to the correlation of these three properties; in other words, it must specify why reflexivization in Greek-type languages goes hand-in-hand with an intransitive syntax, and moreover, why this intransitive syntax is of the unaccusative/passive type.

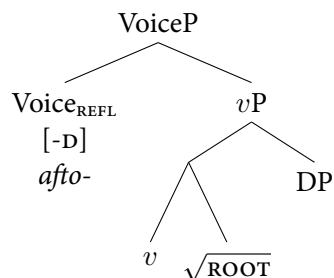
I propose that this correlation can be insightfully accounted for by tying reflexivization directly to the domain responsible for (external) argument introduction. I thus build on the intuition that Voice, the projection responsible for the introduction of the external argument, can be the locus of reflexivization (with Bruening 2006a; Labelle 2008; McGinnis 2022; Raghoeam 2022b; cf. Alexiadou 2014c; Spathas et al. 2015; and for related ideas in anaphor binding, see e.g. B. T. Ahn 2015; Kratzer 2009; Paparounas and Akkuş 2023, and cf. Baker 2022). From this perspective, in Greek-type languages, verbal reflexivization involves a particular type of argument structure configuration, and goes hand-in-hand with a particular type of voice morphology, because verbal reflexivization *is* a type of Voice syntax.

In particular, I will propose that *afto-* realizes a particular type of Voice head, Voice<sub>REFLEXIVE</sub> (Labelle 2008; McGinnis 2022), from whose presence follows the passive-like syntax of intransitive reflexives; their obligatory co-occurrence with nonactive morphology; and their reflexive semantics.<sup>50</sup>

Syntactically, I take Voice<sub>REFL</sub> to be a specifier-less head, giving rise to the unaccusative-like syntax of Greek reflexives. Since Voice<sub>REFL</sub> does not introduce a syntactic argument, structures built by combining this head with a transitive *vP* will have a single core argument introduced in the *vP* itself, that is, an internal argument. We moreover expect the absence of a Voice specifier to correlate with A-movement of the internal argument (Burzio 1986, though the exact nature of this correlation is the topic of recent debate, see e.g. Šereikaitė 2021).

<sup>50</sup>The claim here is that Greek(-type voice systems) derive verbal reflexives by means of Voice; not that this is the only way to derive verbal reflexives. Alexiadou et al. (2014) argue against a reflexive Voice analysis of English naturally reflexive verbs. Similarly, Spathas et al. 2015 argue against an analysis of this type, but their examples only involve natural reflexives; in this case, issues may arise with the nature of the arguments, as the facts are taken to show that nonactive forms are not ambiguous between passive and reflexive readings, but the tests employed to this end normally test for *lexical* ambiguities, and it is unclear whether they should extend to the case at hand in the first place).

(182)



Being specifier-less by virtue of  $[-D]$ , the  $\text{Voice}_{\text{REFL}}$  head will receive the feature  $[\text{NACT}]$  at PF, guaranteeing that structures built with this head will be systematically realized with nonactive morphology.

This type of analysis straightforwardly accounts for the crucial facts on the distribution of *afto-* verbs. These reflexives are voice-selective, appearing only with nonactive morphology; have the syntax of passives/unaccusatives; and they introduce an agent and identify it with the theme (see next section). The claim here is that these properties – agent introduction and Voice selectivity – follow straightforwardly if the locus of reflexivity is Voice, the head responsible for agent introduction and for the determination of voice morphology.

### 3.5 REFLEXIVE SEMANTICS

In terms of its semantic contribution, I will assign to  $\text{Voice}_{\text{REFLEXIVE}}$  the denotation in (183), also proposed in passing for *afto-* in Oikonomou and Alexiadou (2022) (whose main focus is not on reflexive verbs, and whose overall solution differs somewhat from the one proposed here; see footnote 53).

$$(183) \quad \llbracket \text{Voice}_{\text{REFLEXIVE}} \rrbracket = \lambda f_{\langle s,t \rangle} . \lambda e . f(e) \wedge AG(e) = TH(e)$$

(183) has two important properties. Firstly, reflexive Voice introduces an agent role, but no variable saturating this role; this aspect of the denotation is argued to capture the monadicity of verbal reflexives in section 3.5.3. Secondly, (183) effects role identification: where (one version of) passive Voice would existentially close this role, reflexive Voice identifies it with the theme role, both being tied to the event variable.

In this section, I motivate different aspects of this denotation in turn.

The reference that (183) makes to particular thematic roles predicts that reflexives built with this head will be severely thematically restricted; in the next subsection, I argue that this prediction is crucially borne out.

Subsequently, I reaffirm the conclusion that a reflexive semantics is indeed what we need, and in particular, that *afto-* cannot be understood as a non-reflexive element whose non-reflexive semantics happens to conspire with a passive-like denotation to derive reflexivity.

Finally, I tackle the monadicity that (183) entails, with a special focus on proxy readings.

### 3.5.1 THEMATIC RESTRICTIONS ON REFLEXIVIZATION

Crucial support for the linking of reflexivity to Voice in Greek comes from two thematic restrictions on reflexivization. In exhibiting such restrictions, Greek resembles other languages with verbal reflexives; see Reuland (2018: 101ff) for a recent summary.

The first observation, made already in Alexiadou (2014c), is that *afto*- reflexivization is necessarily agent-oriented. There are various corners of the Greek grammar where this restriction comes to light.

Firstly, *afto*- never combines with unaccusatives, either unmarked (184) or marked (185):

- (184) O Janis (\*afto-) peθane.  
 the.NOM John.NOM REFL die.PST.3SG  
 'John died.'
- (185) a. I supa kaike (apo moni tis).  
 the.NOM soup.NOM burn.NACT.3SG from alone 3SG.F.GEN  
 'The soup burned (by itself).'
- b. I supa (\*afto-) kaike.  
 the.NOM soup.NOM REFL burn.NACT.3SG  
 'The soup burned (\*itself).'
- c. O Janis (\*afto-) kaike.  
 the.NOM John.NOM REFL burn.NACT.3SG  
 'John burned himself.'

On an *afto*-as-Voice analysis, these distributional restrictions follow straightforwardly from the complementarity of Voice heads. For example, if, as assumed in Alexiadou et al. (2015), unaccusatives are built either without a Voice head to begin with (yielding unmarked unaccusatives) or with a specifier-less and semantically vacuous expletive Voice head (yielding marked unaccusatives), then there will simply be no way to generate a reflexivized unaccusative if the reflexivizer is itself a different Voice head.<sup>51</sup>

The second corner of the Greek grammar demonstrating the close link between agentivity and *afto*- reflexivization comes from subject experiencer and deponent verbs (Alexiadou 2014c; Spathas et al. 2015). Recall from Chapter 2 the crucial properties suggesting that these verbs have non-canonical subjects, distinct

<sup>51</sup> At a superficial level, the explanation here is a mechanical one: choosing one Voice head when building a given structure entails not choosing a different one, *modulo* the possibility of Voice stacking. On a deeper level, we expect a full explanation to arise from considering both the semantics that each type of Voice head introduces, and restrictions on the functional environment in which Roots may appear. Taking unaccusatives as an example, it is clear that a structure cannot have both no agentive semantics (arguably the hallmark of unaccusativity) and an agent slot identified with the theme (arguably the hallmark of reflexivity); for roots like  $\sqrt{\text{DIE}}$  in (184), which are never agentive, this much will suffice. But an additional ingredient is required to guarantee that (185b)-(185c) are ungrammatical altogether, i.e. that they cannot even be read as reflexivized transitives. For  $\sqrt{\text{BURN}}$ , this must connect to the fact that this root can build transitives and unaccusatives, but not passives; (Alexiadou 2014a: p. 66) in fact conjectures that this link between passivizability and the ability to be reflexivized by *afto*- holds more generally.

from *bona fide* agents: they always surface with nonactive morphology and do not passivize or undergo agent nominalization (this final diagnostic being admittedly somewhat controversial for deponent verbs).

I illustrate here as a reminder these crucial facts. Firstly, consider the behavior of experiencer verbs, illustrated with  $\sqrt{\text{FEAR}}$  and  $\sqrt{\text{DESPISE}}$ .

- (186) a. O Janis fova- te { to skotađi / ti Maria }.  
 the.NOM John.NOM  $\sqrt{\text{FEAR}}$  3SG.NACT the.ACC dark.ACC the.ACC Mary.ACC  
 ‘John is afraid of the dark/of Mary.’
- b. \*O Janis fova- i { to skotađi / ti Maria }.  
 the.NOM John.NOM  $\sqrt{\text{FEAR}}$  3SG.ACT the.ACC dark.ACC the.ACC Mary.ACC
- c. \*{ To skotađi / i Maria } fova- te apo ton Jani.  
 the.NOM dark.NOM the.NOM Mary.NOM  $\sqrt{\text{FEAR}}$  3SG.NACT from the John  
 ‘\*The dark/Mary is feared by John.’
- d. \*fovi- tis (tu skotađju)  
 $\sqrt{\text{FEAR}}$  NMLZ the.GEN dark.GEN  
 ‘fearer (of the dark)’
- (187) a. O Janis apexθan- ete { to skotađi / ti Maria }.  
 the.NOM John.NOM  $\sqrt{\text{DESPISE}}$  3SG.NACT the.ACC dark.ACC the.ACC Mary.ACC  
 ‘John despises the dark/Mary.’
- b. \*O Janis apexθan- i { to skotađi / ti Maria }.  
 the.NOM John.NOM  $\sqrt{\text{DESPISE}}$  3SG.ACT the.ACC dark.ACC the.ACC Mary.ACC
- c. \*{ To skotađi / i Maria } apexθan- ete apo ton Jani.  
 the.NOM dark.NOM the.NOM Mary.NOM  $\sqrt{\text{DESPISE}}$  3SG.NACT from the John  
 ‘\*The dark/Mary is despised by John.’
- d. \*apexθan- tis (ton endomon)  
 $\sqrt{\text{DESPISE}}$  NMLZ the.GEN.PL insect.GEN.PL  
 ‘despiser (of insects)’

Deponent verbs pattern similarly overall (though recall from [Chapter 2](#) that there are outstanding questions here):

- (188) a. Panda metaçiriz- **ome** me prosoçi politima andikimena.  
 always  $\sqrt{\text{HANDLE}}$  1SG.NACT with care precious.ACC= objects.ACC  
 ‘I always handle precious artifacts with care.’
- b. \*Panda metaçiriz- **o** me prosoçi politima andikimena.  
 always  $\sqrt{\text{HANDLE}}$  1SG.ACT with care precious.ACC= objects.ACC  
 ‘I always handle precious artifacts with care.’
- c. \*Ta politima andikimena prepi na metaçiriz- onde me prosoçi.  
 the.NOM precious.NOM object.PL.NOM must.3SG COMP  $\sqrt{\text{TREAT}}$  3PL.NACT with care  
 ‘Precious artifacts should be treated with care.’



- d. ?\*metaçiris- tis (politimon andikimenon)  
 $\sqrt{\text{HANDLE NMLZ}}$  precious.GEN.PL object.GEN.PL  
 ‘handler (of precious objects)’
- (189) a. I andayonistes tis kataras-  $\theta$ - ik- an ti Maria.  
 the.NOM.PL competitor.NOM.PL her  $\sqrt{\text{CURSE PFV.NACT PST 3PL}}$  the.ACC Mary.ACC  
 ‘Her competitors cursed Mary.’
- b. \*I andayonistes tis kataras- an ti Maria.  
 the.NOM competitor.PL.NOM 3SG.F.GEN  $\sqrt{\text{CURSE 3PL.ACT}}$  the.ACC Mary.ACC  
 ‘Her competitors cursed Mary.’
- c. \*I Maria kataras-  $\theta$ - ik- e (apo polus andayonistes tis).  
 the.NOM Mary.NOM  $\sqrt{\text{CURSE PFV.NACT PST 3SG}}$  from many competitors her  
 ‘Mary was cursed (by many of her competitors).’
- d. \*kataras- tis (ton andayoniston)  
 $\sqrt{\text{CURSE NMLZ}}$  the.GEN.PL competitor.GEN.PL  
 ‘handler (of competitors)’

Crucially, neither experiencer nor deponent verbs can be reflexivized by means of *afto-* in Greek (Alexiadou 2014c; Spathas et al. 2015). In (190a)/(191a), an experiencer verb is shown to be freely reflexivized by means of the pronominal anaphor; but prefixing the same verb with *afto-* leads to ungrammaticality (190b)-(191b).

- (190) a. Ke pços ðe fova- te ton eafto tu?  
 and who.NOM NEG  $\sqrt{\text{FEAR 3SG.NACT}}$  the.ACC self.ACC 3SG.M.GEN  
 ‘Who ISN’T afraid of themselves?’
- b. \*Ke pços ðen afto- fova- te?  
 and who.NOM NEG REFL  $\sqrt{\text{FEAR 3SG.NACT}}$
- (191) a. O Janis apexðan- ete ton eafto tu.  
 the.NOM John.NOM  $\sqrt{\text{DESPISE 3SG.NACT}}$  the.ACC self.ACC 3SG.M.GEN  
 ‘John despises himself.’
- b. \*O Janis afto- apexðan- ete.  
 the.NOM John.NOM REFL  $\sqrt{\text{DESPISE 3SG.NACT}}$

Similar observations can be made for the deponents, which are perfectly grammatical with the pronominal anaphor, but generally not so with the prefixal reflexive:

- (192) a. Meta to atiçima, i Maria metaçiriz- ete ton eafto tis me  
 after the accident the.NOM Mary.NOM  $\sqrt{\text{TREAT 3SG.NACT}}$  the.ACC self.ACC 3SG.F.GEN with  
 prosoçi.  
 care  
 ‘After the accident, Mary is treating herself carefully.’

- b. \*Meta to atiçima, i Maria afto- metaçiriz- ete me prosoçi.  
 after the accident the.NOM Mary.NOM REFL  $\sqrt{\text{TREAT}}$  3SG.NACT with care
- (193) a. Metanionondas ja ta laði tis, i Maria kataras-  $\theta$ - ik- e ton  
 regretting for the errors her the.NOM Mary.NOM  $\sqrt{\text{CURSE}}$  PFV.NACT PST 3SG the.ACC  
 eafto tis.  
 self.ACC 3SG.F.GEN  
 ‘Regretting her mistakes, Mary cursed herself.’
- b. \*Metanionondas ja ta laði tis, i Maria afto- kataras-  $\theta$ - ik- e.  
 regretting for the errors her the.NOM Mary.NOM REFL  $\sqrt{\text{CURSE}}$  PFV.NACT PST 3SG

The generalization in Greek is then straightforward: like passivization,<sup>52</sup> reflexivization is only possible with verbs with canonical external arguments, specifically agents, lending strong support to the tying together of reflexivization to the agent-introducing head.<sup>53</sup>

Moreover, reflexivization of verbs with non-canonical external arguments is another instance where *afto*- reflexives dissociate from pronominal anaphors. The facts just discussed are of immediate interest because they provide yet another argument against fully assimilating *afto*- to overt anaphors.

Note finally that the semantics proposed for *afto*- involves explicit reference not only to the agent, but also to the theme role. This latter component is justified by two observations.

Firstly, consider ditransitive verbs. (194a) shows that a Greek ditransitive can be reflexivized with the pronominal anaphor as an indirect object, either as a genitive/dative goal<sup>54</sup> or as a prepositional goal. Importantly, this type of reflexivization can never be achieved by means of *afto*- (194b) (see also Papangeli 2004: p. 79).

<sup>52</sup> Angelopoulos et al. (2020) argue that Greek passives accommodate a broad range of thematic roles, but the interesting observations they adduce are plausibly reducible to those motivating the postulation of an *initiator* role in works such as Bruening (2013), Ramchand (2008), where the exact interpretation of this role in the passive depends, in a contextual fashion, on the *vP* (Marantz 1984). Crucially, Angelopoulos (2019) do not take into account the impossibility of passivizing subject experiencer (and deponent) verbs, in examples such as those provided in the main text; this state of affairs would of course be wholly unexpected if passivization in Greek were thematically unrestricted. See Chapter 4 for further arguments against the view in Angelopoulos et al. (2020).

<sup>53</sup> Note that this generalization indirectly militates against analyses where reflexivization takes place low in the structure, e.g. by adjunction of *afto*- to the Root (Embick 2004b). To capture the agent orientation facts, this type of analysis would, in one way or another, be forced to introduce agentive semantics in the low position in question; though this is of course not mechanically impossible, it seems less preferable to the Voice-level analysis, at least to the extent to which it is judged desirable to confine agent introduction to the same head/portion of the structure. An alternative would be to assume that *afto*- is merged low, and stands in some sort of dependency with an agent-introducing Voice head: see e.g. Oikonomou and Alexiadou 2022 for a conditioned allosemy approach where Voice<sub>-D</sub> takes on a reflexive denotation in the context of an *afto*-prefixed *vP*; this type of approach will require some sort of selectional relationship to ensure that *afto*- is only present in structures with Voice<sub>-D</sub>.

<sup>54</sup> Indirect object anaphors have been reported to be marked in Greek (Anagnostopoulou & Everaert 1999); the native speaker author and the core consultants do not share this intuition. See also Angelopoulos and Sportiche (2022) for evidence that indirect object anaphors are acceptable for many speakers.

- (194) a. O Janis estile tu eafu tu / ston eafu tu  
 the.NOM John.NOM 3SG.M.GEN send.PST.3SG the.GEN self.GEN 3SG.M.GEN to.the self  
 to paceto.  
 3SG.M.GEN the.ACC package.ACC  
 ‘John sent himself the package.’
- b. \*O Janis (to) afto- stalθike to paceto.  
 the.NOM John.NOM 3SG.N.ACC REFL send.NACT.PST.3SG the.ACC package.ACC  
 Intended: ‘John was self-sent the package.’

The impossibility of (194b), for any ditransitive verb in the language, follows straightforwardly if *afto-* is only capable of linking agents to themes, and not beneficiaries or other types of goals. Note in this connection that reflexivization of the agent and theme *across* a goal is absolutely possible:

- (195) *pro* tis afto- parusiasθike os ðikiyoros  
 3SG.F.GEN REFL present.NACT.PST.3SG as lawyer.NOM  
 ‘S/he presented him/herself to her as a lawyer.’

Secondly, ECM predicates can be reflexivized by means of the pronominal reflexive, but not by means of *afto-*, as in (196). Once again, the impossibility of (196b) is expected if *afto-* must link the agent to the theme; note that *afto-* is not generally impossible with secondary predicates, see [section 3.3.2.1](#).

- (196) a. O Janis θeori ton eafu tu iðiko sti ylosolojia.  
 the.NOM John.NOM consider.3SG the.ACC self.ACC 3SG.M.GEN expert.ACC to.the linguistics  
 ‘John considers himself an expert in linguistics.’
- b. ?\*O Janis afto- teorite iðikos sti ylosolojia.  
 the.NOM John.NOM REFL consider.NACT.3SG expert.NOM to.the linguistics

In summary, *afto-* reflexives effect a type of reflexivization that is, from a thematic standpoint, severely restricted: only agents can be the target of reflexivization, and they may be identified only with themes, and not more peripheral arguments. Reifying these restrictions in the interpretation of  $\text{Voice}_{\text{REFLEXIVE}}$  in (183), repeated here as (197), is thus empirically well-motivated. As I will argue in [section 3.5.3](#) below, the view in (197) also allows us to make sense of the interpretive monadicity of these verbs.

- (197)  $\llbracket \text{Voice}_{\text{REFLEXIVE}} \rrbracket = \lambda f_{\langle s,t \rangle} . \lambda e . f(e) \wedge AG(e) = TH(e)$

It is important to be precise on the extent to which (197) is explanatory. The irreducible aspect of (197) is the agent orientation it enforces; this is a feature that seems to recur in verbal reflexives cross-linguistically (see [section 3.8](#) below), and the explanatory core of the view advanced here is thus that such cases crucially speak in favor of allowing Voice to have a reflexivizing flavor.

But (197) also has the potentially questionable property of being a Voice head that ‘knows’ about the

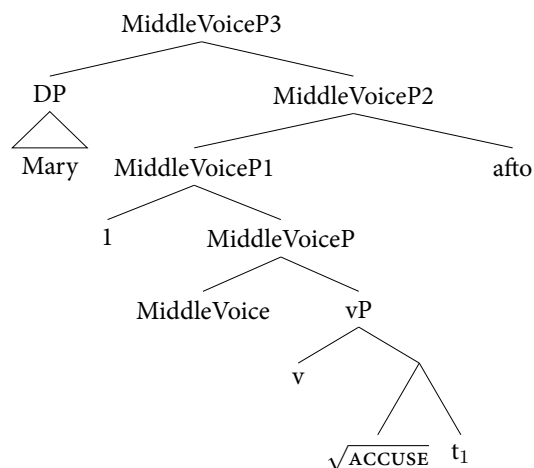
theme role; we have seen that this part of the analysis in fact buys us empirical facts itself, but it seems reasonable to wonder whether, from a theoretical standpoint, this particular aspect of (197) could be reduced to an independent factor. The answer is not fully clear to me at present; one relevant consideration, though, is that, while verbal reflexives in other languages are agent-oriented, they are not always also theme-restricted. For instance, Raghotham (2022a, 2022b) shows that, while Telugu verbal reflexives are agent-oriented, they are not selective with respect to which role they identify with the agent, thus permitting not only agent-theme reflexivity but also agent-beneficiary/goal/location reflexivity. From the perspective of a Voice-based theory of reflexivity, such differences between languages are not surprising: as just discussed, tying reflexivity to Voice makes reference to agents unavoidable, but leaves other options open. In particular, we might expect parameterization involving which role or range of roles is linked to the agent role, but not with respect to the fact that it is the agent role that is linked to. The question of why Greek chooses to be as selective as (197) entails is, perhaps, not easily answerable; whether it can be linked to the more general fact about the language that non-core arguments are syntactically inert (for e.g. A-movement) is left open.

### 3.5.2 AGAINST ANTI-ASSISTIVITY

Reflexive interpretations can be derived without a dedicated reflexivizer; let us subsume analyses of this type, where reflexive semantics emerge from the composition of individually non-reflexive pieces, under the name *emergent reflexivity* (see e.g. Kastner 2017; Spathas et al. 2015; Wood 2014). In what follows, I argue against the emergent reflexivity account of Spathas et al. (2015) (foreshadowed in Alexiadou 2014c), whereby *afto-* is treated not as a reflexivizing morpheme, but rather as an anti-assistive intensifier.

Syntactically, the analysis in Spathas et al. (2015) resembles the structures argued for here: Spathas et al. (2015) assume (but do not argue) that *afto-* is a Voice-level adjunct embedding a passive-like syntax (198), where the sole argument DP is internal and the agent is existentially closed (199).

(198)



$$(199) \quad \llbracket \text{MiddleVoiceP} \rrbracket = \lambda e \exists x. \text{accuse}(e) \wedge TH(e) = g(1) \wedge AG(e) = x$$

The semantics assigned to *afto*-, however, differs. At the core of the proposal is the attempt to assimilate *afto*- to anti-assistive modifiers such as *herself* in (200). This type of modifier frequently syncretizes with anaphors cross-linguistically (see Charnavel and Sportiche 2021 for recent discussion); in (200), *herself* seems to assert that Mary painted the walls without assistance and without delegating this task to another party.

(200) Mary painted the walls herself.

The anti-assistive semantics assigned to *afto*- in Spathas et al. (2015) is (201). This denotation takes as its first argument a function of type  $\langle e, \langle s, t \rangle \rangle$  and states that all subevents of the overall event have as their agent the agent of the overall event; in other words, there is only a single agent throughout the unfolding of the matrix event, identified with the variable  $y$  in (201). That a single agent persists throughout the entirety of the event is intended to be the representation of anti-assistivity.

$$(201) \quad \llbracket \text{afto-} \rrbracket = \lambda f_{\langle e, \langle s, t \rangle \rangle} \lambda y \lambda e. f(y)(e) \wedge \forall e' \forall x. (e' \leq e \wedge AG(e') = x) \rightarrow x = y$$

In (198), the index adjoined to MiddleVoiceP will lift the type of (200) to  $\langle e, \langle s, t \rangle \rangle$  by Predicate Abstraction (Heim & Kratzer 1998); *afto*- can now take MiddleVoiceP1 as an argument, enabled by the (spurious) index discussed below. The result is (202), which can combine with *Mary*.

$$(202) \quad \llbracket \text{MiddleVoiceP2} \rrbracket = \lambda y. \lambda e. \exists x. \text{accuse}(e) \wedge TH(e) = y \wedge AG(e) = x \wedge \forall e' \forall x. (e' \leq e \wedge AG(e') = x) \rightarrow x = y$$

The insight of this derivation, Spathas et al. (2015) argue, is that (202) is a reflexive derivation<sup>55</sup> derived without a dedicated reflexivizer.

As is evident, this proposal shares much with the one presented in the present paper in terms of the syntax of *afto*-. More broadly, the proposal advanced here very much builds on the insight of Spathas et al. (2015) that *afto*- is best understood as a Voice-related functional element, as opposed to a core argument of the verb. But the view adopted in Spathas et al. (2015) on the interpretive properties of this element is crucially different. In what follows, I provide five arguments against this semantics for *afto*-.

Firstly, under the analysis in Spathas et al. (2015), the obligatory co-occurrence of *afto*- with nonactive morphology must be stipulated. If *afto*- is an independent modifier, it should in principle be able to combine with different Voice heads. But recall that *afto*- is systematically ungrammatical with active morphology; this was shown in (101), repeated here as (203). All things being equal, an anti-assistive *afto*- should make this example grammatical on the reading ‘Mary advertised herself/John without help’.

<sup>55</sup>That (201) is meant to be reflexive is obscured by the fact that, in this formula, the matrix agent is the existentially closed variable  $x$ , whereas the agent of all subevents is the variable  $y$ , ultimately identified with Mary. At a minimum, an assumption of agent cumulativity must be required here. Thanks to Alex Kalomoiros for discussion on this point.

- (203) \*I Maria *afto-* *katiyori-* *s-* e (ton *eafto* tis / ton Jani).  
 the.NOM Mary.NOM REFL  $\sqrt{\text{ACCUSE}}$  PFV.ACT 3SG the.ACC self.ACC 3SG.F.GEN the.ACC John.ACC  
 ‘Mary self-accused<sub>ACTIVE</sub> herself/John.’

Spathas et al. (2015: p. 1334) ‘attribute the ungrammaticality of [(203)] to brute-force c-selection; *afto-* c-selects for an unsaturated projection of Middle Voice’. But this approach clearly amounts to treating as accidental the robustly systematic connection between *afto-*, nonactive morphology, and unaccusative syntax. Under this account, *afto-*, although properly independent of Voice itself, happens to be able to occur only with the type of Voice that causes the internal argument to raise (thereby enabling saturation of the single argument slot in the semantics, under this analysis), does not project an external argument, and triggers the insertion of nonactive morphology at PF. Though it is perfectly possible to stipulate this connection, what seems preferable is an account that does justice to both the systematicity of this connection (all Greek reflexives and reciprocals show these properties, including NRVs) and its obvious link to the rest of the Greek voice system (*afto-* reflexives are just one of a few classes of verbs participating in Voice syncretism, all sharing the same structural property).

To make matters worse, as Spathas et al. (2015) point out, Greek does have a free anti-assistive modifier; crucially, however, this element shows no Voice-related restrictions whatsoever, freely occurring with active Voice. There is thus no full parallelism between the *bona fide* intensifier and *afto-*.<sup>56</sup>

- (204) I Maria *katiyori-* *s-* e to Yiani moni tis.  
 the.NOM Mary.NOM  $\sqrt{\text{ACCUSE}}$  ACT 3SG the.ACC John.ACC alone.NOM 3SG.F.GEN  
 ‘Mary accused John herself’

A comparative view is also instructive here. Parallel to the Greek *bona fide* anti-assistive is the French cognate of *afto-*, *auto-*, recently discussed in Labelle (2022). Unlike Greek *afto-* but like the Greek anti-assistive intensifier, French *auto-* is fully compatible with non-passive verbs, and it can in fact co-occur with the French reflexive clitic. Though it is in principle possible to assert that Greek *afto-* is just like French *auto-* plus a selectional restriction, this move seems to be missing certain generalizations.<sup>57</sup>

<sup>56</sup>Parallels noted by Spathas et al. (2015) include the following. *afto-* does not co-occur with the *bona fide* anti-assistive; but the relevant example (their (42)) is perfectly acceptable for this author and three more native speakers consulted. *afto-* generally does not combine with states and achievements, much like the anti-assistive; but these restrictions are also observed in non-anti-assistive structures, namely in noun incorporation (e.g. Basilico 2016), suggesting that the Aktionsart restriction diagnoses not anti-assistivity but rather (the semantic consequences of) prefixation/incorporation structures. Note also that the incompatibility of *afto-* with states would arguably follow from the thematic restrictions predicted under a Voice-level treatment, see section 3.5.1. Spathas et al. (2015) also point out that *afto-* licenses degree modification; the authors argue that this observation shows that *afto-* is not an identity intensifier, but crucially, it does not show that *afto-* is not a reflexivizer. What is left is an argument from focus alternatives (Spathas et al. 2015: pp. 1307–1311), which however does not yield a fully internally consistent picture (Spathas et al. 2015: p. 1336).

<sup>57</sup>Labelle (2022) in fact argues for an agent-focusing, not exactly anti-assistive, version of French *auto*. At issue here is the comparison between French and Greek, and not the proper treatment of French *auto-*, which, on either an anti-assistive or an agent-focusing treatment, patterns differently to Greek *afto-*.

- (205) a. Les patients auto- gèrent leur diabète.  
 the.NOM.PL patient.NOM.PL auto manage.3PL 3PL.POSS diabetes  
 ‘The patients manage their diabetes by themselves/without help.’
- b. Donald s= auto- congratule.  
 Donald REFL auto congratulate.3SG  
 ‘Donald congratulates himself without help.’

Secondly, no aspect of the anti-assistive analysis of *afto-* predicts its complementarity with NRVs. On this type of analysis, (106), repeated below as (206), should be fully acceptable on the meaning ‘Mary washed without help’. That such examples are decidedly infelicitous without contrastive focus suggests that *afto-* and ‘inherent’ reflexivity are, in some sense, carrying out the same function, and thus lead to an effect of redundancy unless the context demands that the reflexivity of the event be focalized. These observations will thus not follow if *afto-* is unrelated to reflexivity. Once again, the true anti-assistive behaves differently (207), further casting doubt on the link between *afto-* and anti-assistive modification.

- (206) #I Maria **afto-** pli- **θ-** ik- e.  
 the Mary.NOM REFL  $\sqrt{\text{WASH}}$  PFV.NACT PST 3SG  
 ‘Mary self-washed.’
- (207) I Maria pli- **θ-** ik- e (moni tis).  
 the Mary  $\sqrt{\text{WASH}}$  NACT PST 3SG alone her  
 ‘Mary washed (without help).’

Moreover, if *afto-* asserted the lack of delegation of assistance, it should produce a contradiction when combined with elements that overtly denote delegation or assistance. This is true of the *bona fide* Greek anti-assistive modifier:<sup>58</sup>

- (208) #Me ti voiθia tis Marias, o Janis dieynos- e ton eafto tu monos tu.  
 with the help the.GEN Mary.GEN the John.NOM  $\sqrt{\text{DIAGNOSE}}$  3SG the self.ACC his alone his  
 ‘#With Mary’s help, John diagnosed himself himself.’

The same prediction, however, is not borne out for *afto-*, which is fully compatible with assistive PPs.

- (209) [John and Mary are doctors. John has been suffering from an unknown disease. Together, they come up with the diagnosis.]
- Me ti voiθia tis Marias, o Janis **afto-** diaynos- **θ-** ik- e.  
 with the help the.GEN Mary.GEN the.NOM John.NOM REFL  $\sqrt{\text{DIAGNOSE}}$  NACT PST 3SG  
 ‘With Mary’s help, John diagnosed himself.’

<sup>58</sup>This observation, and the observation on the lack of reflexivization of active predicates, are also made in Sportiche (2022) in considering a Spathas et al. (2015)-style approach to French *auto-* and English *self-*.

Lastly, recall from the end of [section 3.2](#) that Greek has a reciprocal prefix *alilo-*, whose distribution fully parallels *afto-*: it is compatible only with nonactive verbs, and appears in complementary distribution with naturally reciprocal verbs. The parallel distribution of *afto-* and *alilo-* clarifies that the phenomenon at hand picks out anaphor-like elements; crucially, it is difficult to conceive of an anti-assistive semantics for *alilo-* that would emergently yield reciprocity, in the same way that *afto-* purportedly yields emergent reflexivity.

For these reasons, I forgo an analysis of *afto-* as anti-assistive; the parallels between anti-assistives and reflexives noted by Spathas et al. (2015) do not warrant a reduction of the latter to the former, as they are eventually outweighed by pervasive differences between them, at least for Greek. Spathas et al. (2015) rightly point out that the parallels that do exist deserve an explanation; for the parallels that do run deep (cf. [foot-note 56](#)), it is worth considering a meaning-oriented explanation. As Dominique Sportiche (p.c.) points out, a reflexive sentence such as *Mary self-washed* may generate an implicature, especially under focus, that *Mary* is the *sole* agent involved in the event; but I lack the space to explore such possibilities further, and refer the reader to Charnavel and Sportiche (2021) and Labelle (2022) for related considerations.

At the same time, many of the insights of Spathas et al. (2015) will be retained here. Firstly, we will see that Greek *afto-*, or a homophonous morpheme, may have restricted anti-assistive denotations, but only outside the verbal domain; see [section 3.7](#) for this generalization regarding nominals, and cf. [section 4.6.1.1](#) on participles. Secondly, the understanding of *afto-* as an anti-assistive adverbial, though seemingly not fully on the right track in its strictest sense, can be seen as a recasting of the intuition in Embick (2004b) that *afto-* might be assimilated, somehow, to the so-called incorporated adverbs of Greek (see Rivero 1992 and [section 3.6.1](#) below):

- (210) a. (i) Fayame kala ke simera.  
eat.PST.1PL well and today  
'We ate well again today.'
- (ii) Kalo- fayame ke simera.  
well eat.PST.1PL and today
- b. (i) Trayuđao siyana.  
sing.1SG silently  
'I sing silently.'
- (ii) siyo- trayuđo  
silent sing.1SG

An assimilation of *afto-* to the pattern in (210) cannot be complete, for reasons discussed in [section 3.6.1](#); however, the semantics proposed here, where *afto-* effects reflexivization via the event variable, might be seen as positing an indirect link between this element and (210): whereas incorporated adverbs specify that an event occurred silently, for example, there is a sense in which *afto-* specifies that the event occurred reflexively.



### 3.5.3 AGAINST IDENTIFYING VARIABLES: THE IMPORTANCE OF PROXIES

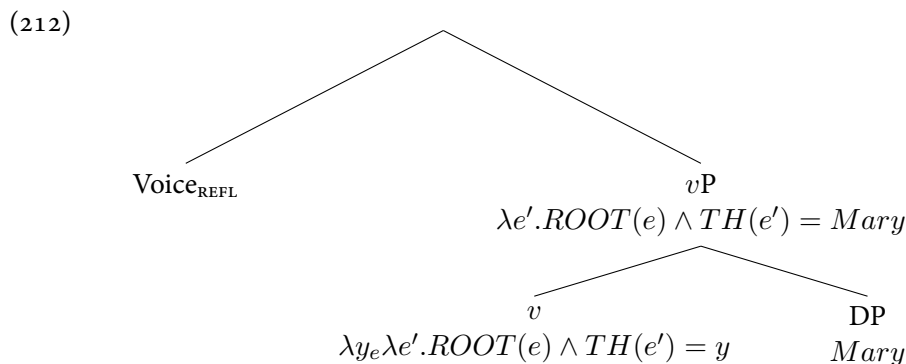
Section 3.3.1 noted a range of interpretive contrasts between *afto*- reflexives and full-blown pronominal anaphors: notably, only the latter can license proxy readings, comparative ellipsis, object alternatives under focus, and wide-scope readings. In this section, I use these striking interpretive contrasts as a guide towards the proper semantic treatment of *afto*- reflexives. In particular, I argue that the interpretive contrasts just enumerated, although seemingly diverse, uniformly track a single property of the denotation, namely, the number of event participants at Logical Form. In particular, the right cut between pronominal and *afto*- reflexives can be made by taking the latter, but not the former, to involve just a single semantic event participant. The upshot of this move is that pronominal and verbal reflexives turn out to be distinct at LF as well: anaphoric binding and Voice-level reflexivization have different semantic profiles.

More specifically, I will draw a crucial distinction between two kinds of semantic identification of participants, showing that *afto*- demands a semantics that does not make use of semantic binding of a variable, but rather identifies thematic roles.

To begin, consider what goes wrong if we postulate a semantics of the type in (211), a first pass at a standard semantics for a Voice-level reflexivizer (cf. Labelle 2008; Spathas et al. 2015):

$$(211) \quad \text{Denotation for } \textit{afto}\text{- (first pass)} \\ \llbracket \text{Voice}_{\text{REFL}} \rrbracket = \lambda f_{\langle e, \langle s, t \rangle \rangle} \lambda x_e \lambda e_s. f(x)(e) \wedge AG(e) = x$$

Effectively, (211) takes as its first argument a function of type  $\langle e, \langle s, t \rangle \rangle$  and introduces an agent identified with the unsaturated entity argument of this function. On its own, (211) will fail to give the right result for an unaccusative reflexive structure; to see why, consider (212).



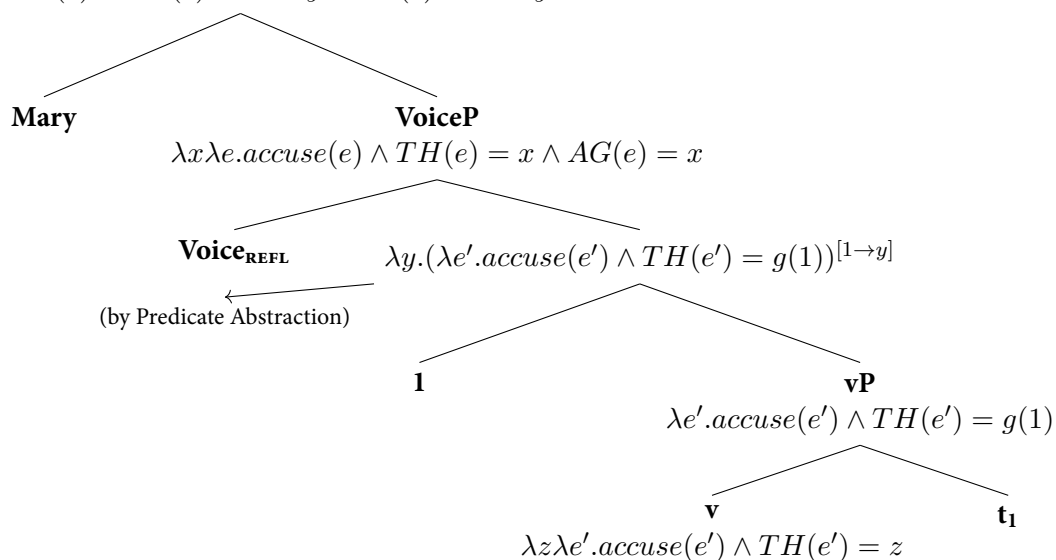
The issue in (212) is clear:  $v\text{P}$  and  $\text{Voice}_{\text{REFL}}$  cannot combine by function application, since neither can take the other as an argument. Notice that simply changing the type of the argument called by the first lambda in (211) to  $\langle s, t \rangle$  will not help: though the type mismatch would now be resolved, the denotation in (211)

would lead to unwanted results, introducing as the agent a variable distinct from the theme, with the agent needing to be either saturated (yielding a transitive denotation) or existentially closed (yielding a passive). In short, it is crucial to (211) that the function that  $\text{Voice}_{\text{REFL}}$  combines with have an unsaturated argument. If this is not the case,  $\text{Voice}_{\text{REFL}}$  will not be able to perform argument identification: if the argument of the  $v\text{P}$  is saturated, there is no way to identify it with the agent that  $\text{Voice}_{\text{REFL}}$  introduces.<sup>59</sup>

What (211) requires, then, is a means of effectively keeping the theme slot ‘open’ for  $\text{Voice}_{\text{REFL}}$  to identify it with the Agent. One way of achieving this goal (see e.g. Spathas et al. (2015) is to raise the theme and place an appropriate index between Voice and the (moving) theme itself, as in (213). The index will trigger Predicate Abstraction, creating the  $\langle e, \langle s, t \rangle \rangle$  function that  $\text{Voice}_{\text{REFL}}$  requires; this head will place the same variable in both the Agent and Theme slots, with *Mary* saturating the single argument slot in its landing site.

(213) *afto- reflexive with variable identification*

$$\lambda e. \text{accuse}(e) \wedge TH(e) = \text{Mary} \wedge AG(e) = \text{Mary}$$



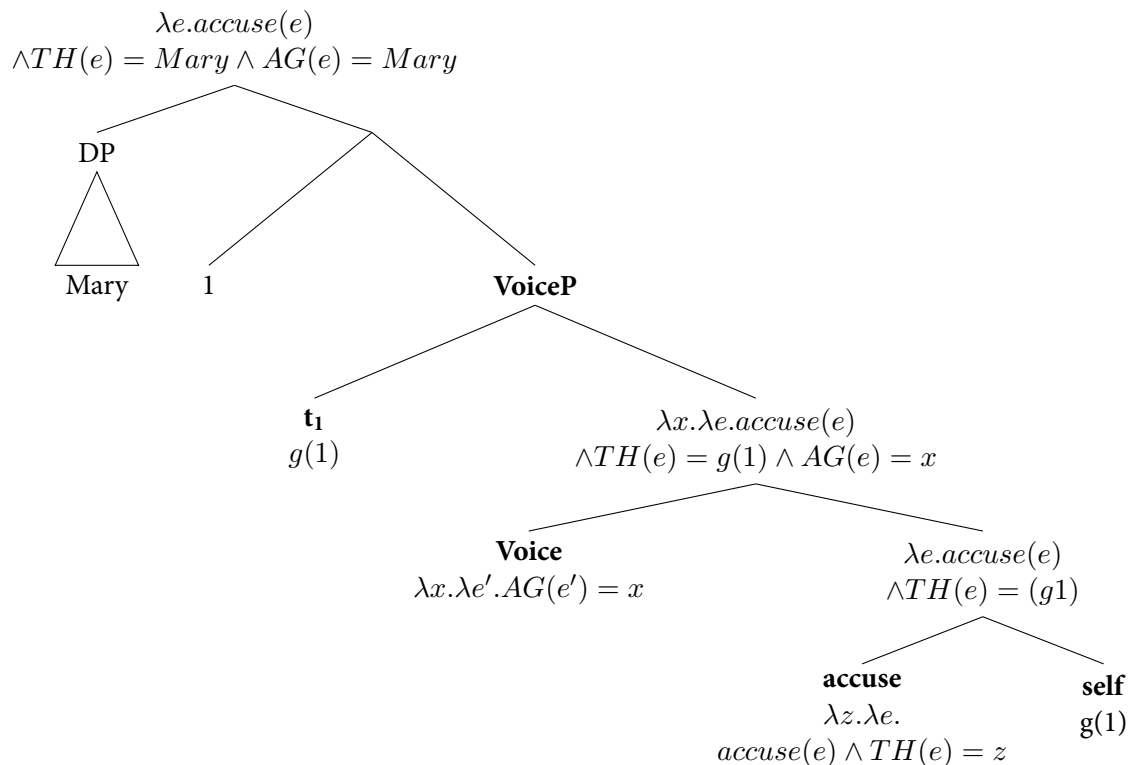
Note in passing that the details of (213) are not unproblematic. At a minimum, an analysis of this type owes an account of the index ends up separated from its host, with  $\text{Voice}_{\text{REFL}}$  mediating between the two; this particular structure is crucial since, on a more conventional structure where the index-bearing DP immediately dominates the sprouted index, *Mary* would immediately saturate the newly created open argument, destroying the conditions for composition of the  $v\text{P}$  with  $\text{Voice}_{\text{REFL}}$ . Spathas et al. (2015) note that (213) resembles

<sup>59</sup>Note incidentally that the unergative analysis of reflexives does not face the same issue: under such an analysis a Voice-level reflexivizer can easily combine with a  $v\text{P}$  with an open theme, to which it can easily add an agent identified with the open variable. It is thus likely no coincidence that the unergative analysis of reflexives comes packaged with a compositional semantics (e.g. Labelle 2008) seemingly more often than the unaccusative analysis.

the structures needed for the licensing of parasitic gaps and depictives in Nissenbaum (2000) and Pylkkänen (2008), respectively; but in these works movement of a second element is crucial in deriving the position of the index. Perhaps movement will help; this type of account has been pursued in Lechner (2012) (cf. Barker 2007), aimed at the analysis of pronominal reflexives. However, it is crucial in Lechner's account that the reflexive element moves from the internal argument position to tuck in below the external argument, with the mechanism of index placement guaranteeing that the reflexive ends up between the external argument and a lambda abstract. Crucially, this analysis requires the reflexive to be an internal argument itself, one which undergoes movement; recall from section 3.3.2 that this option is not available for Greek.

The aim here is not to resolve the issue of index placement in (213), as spurious-index-free alternatives do exist.<sup>60</sup> Rather, the point of interest is that, regardless of how the *v*P and VoiceP combine in (213), the internal argument is interpreted above its base position, yielding a situation with two event participants, namely, *Mary* and the lower copy. This type of analysis arguably fully assimilates the semantics of *afto*- reflexives to those of argumental reflexives, as shown in (214).

(214) *Pronominal reflexive with variable identification*



<sup>60</sup>For instance, one could invoke Function Composition (Kobele 2010: see e.g.) to combine the *v*P and VoiceP without postulating a curiously placed index.

In the rest of this section, I argue that this assimilation is on the wrong track; although anaphoric binding is compatible with a semantics involving semantic binding, as in (214), the same is not true of *afto*- reflexives, which will instead be shown to involve identification of thematic roles. I focus the exposition on the case of proxy readings, though similar conclusions could be reached for the rest of the monadicity diagnostics presented in section 3.3.1.

Let us assume a relation that provides contextually appropriate proxies for entities in the world; call this relation PR, for Proxy Relation. PR takes an entity and, in any given context, returns the contextually appropriate proxy for that entity, as schematized in (215). Clearly, this is a coarse level of detail, but will suffice for our purposes.

- (215) a.  $\llbracket PR(Ringo) \rrbracket^{c_1} = \text{painting of Ringo}$   
 b.  $\llbracket PR(Ringo) \rrbracket^{c_2} = \text{Ringo's car}$   
 c.  $\llbracket PR(Ringo) \rrbracket^{c_3} = \text{Ringo's statue}$

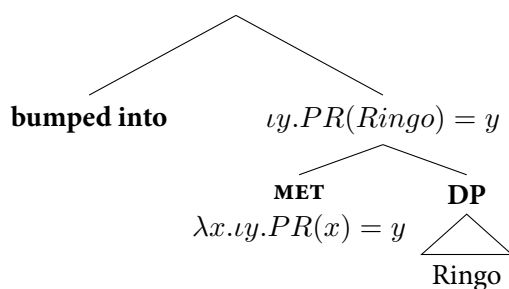
For concreteness,<sup>61</sup> we may take PR to be contributed by an LF metonymy operator MET as in (216). MET takes an entity and feeds it to PR, which returns some unique  $y$ , the contextually appropriate proxy (for related ideas, see Abusch 1989, and Lidz 2001: fn. 9).

- (216)  $\llbracket MET \rrbracket = \lambda x. \iota y. PR(x) = y$

When MET combines with a referring nominal, it yields the contextually salient proxy for that entity without affecting the overall composition, as shown in (217).

- (217) a. Pulling out of the driveway, I scratched Ringo. (by context, 'Ringo' read as 'Ringo's car')

b.

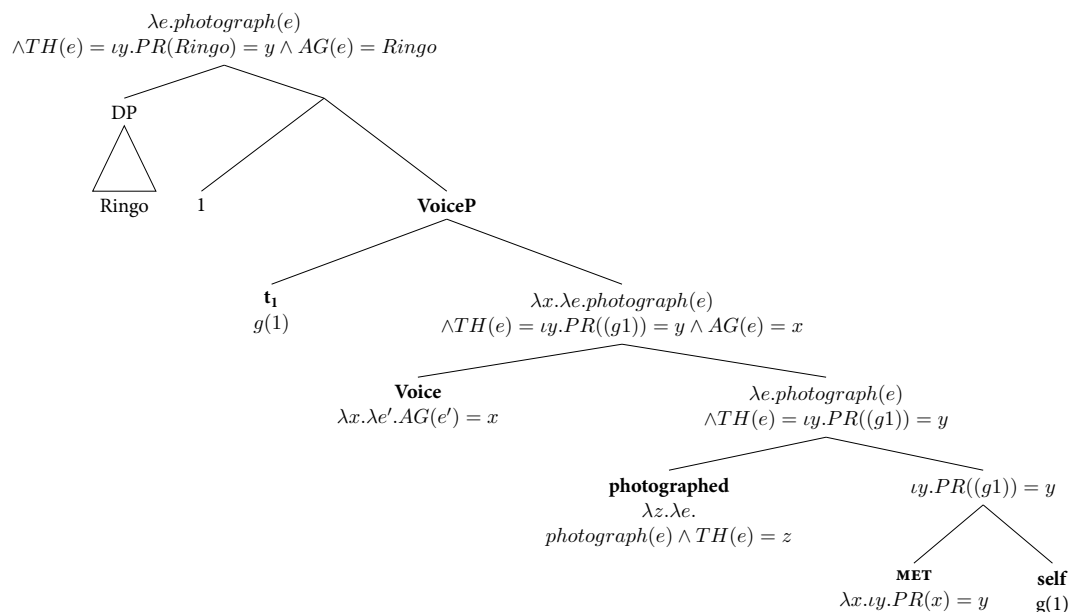


When combining with a reflexive pronoun, MET shifts it to the proxy interpretation to yield the prototypical proxy sentences, namely, those where the reflexive is read as a proxy while the antecedent is not. For (218a),

<sup>61</sup>In relevant philosophical literature, it is in fact widely debated whether grammaticalizing metonymy in this way is sensible; see e.g. Stern (2000, 2006) versus Hall (2008, 2013). As far as I can tell, the argument to be developed remains unaffected if metonymy is a purely pragmatic process, as long as it retains some grammatical underpinnings (namely, as long as it is constrained by the (number of) event participants that the LF provides).

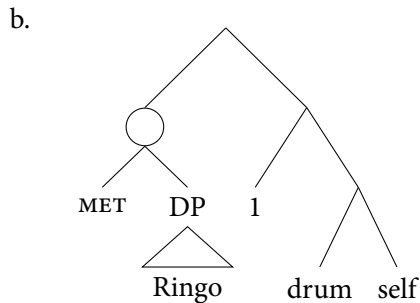
for instance, we obtain the human-photographs-wax-statue reading from the structure in (218b).

- (218) a. Ringo photographed himself.  
b.



As an aside, note that this approach to metonymy has some independent merits with respect to the range of readings derived. Alongside proxy-shifting just the reflexive, as in (218), it is possible to proxy-shift both the reflexive and the antecedent simply by applying MET to the antecedent. Thus, in (219), we derive the contextually enabled statue-acts-on-statue reading by the interaction of MET with standard anaphoric binding: at the circled node in (219b), the antecedent of the reflexive has been shifted to Ringo's proxy; it is thus Ringo's proxy that can fill the single lambda-abstract at the point of the index.

- (219) *[The new mechanical wax statue of Ringo at Madame Tussaud's is programmed to enthusiastically hit the drumkit in front of it. One night, its software malfunctions, causing the statue to spend the night hitting itself vigorously with a drumstick to the point of utter destruction.]*
- a. Looks like Ringo drummed himself to pieces.<sup>62</sup>



What cannot be derived is a reading where the antecedent is shifted, but the reflexive is not: in (219), the reflexive is necessarily shifted once the antecedent is, and there is no placement of *MET* or the index that would guarantee that only the antecedent is shifted. This is arguably a welcome prediction in light of Jackendoff's (1992) observation that sentences like (220) cannot receive the 'statue falls on person' reading (but see Reuland and Winter (2009)).<sup>63</sup>

(220) Ringo fell on himself.

To return to reflexives, recall the generalization that we aim to capture: argumental reflexives can yield proxy readings, but *afto*- reflexives cannot. But the LF for *afto*- proposed in (213) will fail to guarantee this dissociation. Just as in the LF for the argument reflexive in (214), (213) involves semantic binding; in both representations, we get two event participants, namely, the antecedent DP and a variable contributed either by the reflexive pronoun or the trace of the antecedent DP. As such, we expect *MET* to be able to apply to just the variable; this move will correctly derive the human-acts-on-statue reading for argumental reflexives, as in (218b). But it will also incorrectly derive the same reading for *afto*- reflexives: we should be able to apply *MET* to the variable in object position in (213) as well, erroneously predicting the availability of a human-acts-on-statue reading for *afto*-.

Note that this problem is not specific to the particular implementation of variable identification shown in (213); rather, any LF that represents *afto*- verbs as involving two semantic participants will predict, all things being equal, that *MET* should apply to the lower one. More widely, the generalization regarding proxy readings seems to be that human-acts-on-statue readings are available in intransitive reflexives precisely because they are intransitive: unlike argumental reflexives, which allow proxy-shifting of just one of their two participants, intransitive reflexives provide just one participant, and the only kind of proxy-shifting possible will yield the

<sup>62</sup>Interestingly, some speakers seem to require the reflexive to be marked neuter in this type of reading:

(i) (The) Ringo drummed itself to pieces. (Dave Embick and Julie Legate, *p.c.*)

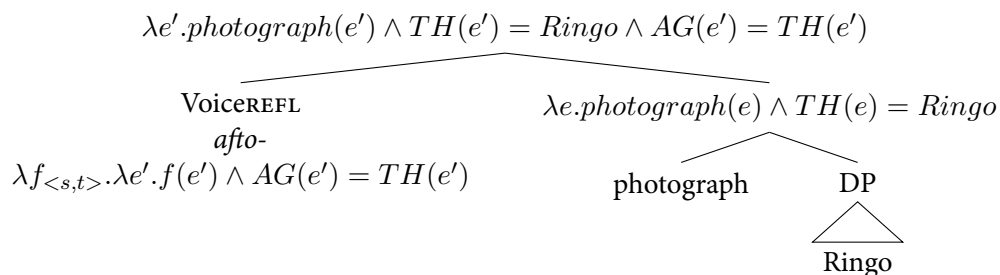
<sup>63</sup>We might wonder what happens if *MET* applies to both the antecedent and the reflexive. The resulting denotation will be one where the proxy of an individual acts on a proxy of said proxy; I leave it open whether such readings are possible, given that, at a minimum, one would require a context where it is sensible for, say, Ringo's statue to act on a representation of itself. The obvious confound regards distinctness: a proxy of a proxy presumably remains a proxy of the original person.

statue-acts-on-statue reading (as in (219)). But assimilating intransitive reflexives to anaphoric binding fails to capture this intuition: in (213), *afto*- reflexives are effectively ‘transitive at LF’, and it is this aspect of the analysis that overgenerates.

I consider this problem to be fatal for any approach to *afto*- reflexives that delivers reflexivity by means of semantic binding, since the presence of two distinct LF participants that end up identified will erroneously predict that just one of them will be able to undergo proxy-shifting.

Instead, I propose to represent the semantics of *afto*- reflexives by means of *thematic role identification*, as in the LF in (221):

(221)



(221) has two crucial properties. Firstly,  $\text{Voice}_{\text{REFL}}$  performs identification of thematic roles tied to the event variable, not identification of entity variables (see also Oikonomou and Alexiadou 2022, who independently propose this type of denotation but in the context of a rather different analysis of verbal reflexives from the one proposed here). As such, the internal argument saturates just the theme role. It thus does not occupy a high position at LF from which to bind a variable; in effect, (221) amounts to the claim that reflexivity is encoded differently in *afto*- reflexives compared to argumental ones.

With respect to proxy-shifting, (221) will yield just the right set of interpretations. If we choose to merge MET in the structure, there is just one entity-type element to which it can attach, namely, the internal argument. If MET merges with *Ringo* in (221), the result will be the statue-on-statue reading, which is accessible (222). Crucially, there is simply no way to derive the mismatched reading: since there is just one event participant for MET to operate on, the human-acts-on-statue reading is correctly predicted to be unavailable.

(222) [The statue of Ringo at Madame Tussaud’s has secretly been being used as a container for state secrets. Foreign spies invade the museum attempting to steal them, but the museum director manages to engage the self-destruct function of the statue before the spies get to it.]

- a. O Ringo *afto*- *katastraf*- *ik*- e.  
 the.NOM Ringo.NOM self  $\sqrt{\text{DESTROY}}$  PST.NACT 3SG  
 ‘Ringo self-destroyed.’

Note that the availability of (222) speaks against a Lidz (2001)-style lexical prespecification analysis of proxy-shifting, at least for the Greek cases. Discussing proxy readings in Kannada, Lidz (2001: p. 130) remarks that ‘individual anaphors are lexically specified with respect to whether they introduce the near-reflexive function or not’. (222) suggests that this cannot hold for Greek. It is not the case that *afto*- reflexives cannot accommodate proxy readings altogether; they clearly do in the statue-acts-on-statue reading in (222). What distinguishes them from argumental reflexives is that they cannot accommodate human-acts-on-statue readings specifically. As such, the behavior of *afto*- verbs concerning proxy-shifting cannot be reduced to a lexical property, and a structural explanation must be given. In particular, *afto*- verbs furnish just one event participant, and their behavior is thus all-or-nothing: either we get no proxy-shifting, or proxy-shifting of the single participant which acts on itself, but we do not derive the intermediate human-acts-on-statue case. This state of affairs is summarized in Table 6.

Reading	Anaphoric pronoun	<i>afto</i> -
Human-on-human	✓	✓
Statue-on-statue	✓	✓
Human-on-statue	✓	✗
Statue-on-human	✗	✗

Table 6: Zooming in on proxy readings.

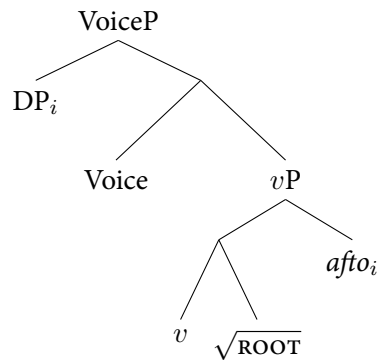
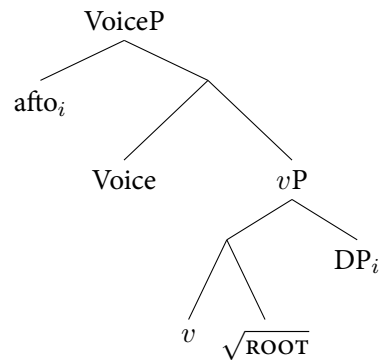
## 3.6 ON TWO ALTERNATIVE ANALYSES

### 3.6.1 ‘INCORPORATION’?

Recall from section 3.3.1 the numerous striking divergences between *afto*- reflexives and the Greek reflexive pronoun. The premise of that section has been simple: if *afto*- is a (semantic or syntactic) argument of the verb (or predicate) to which it attaches, it should share properties with elements independently thought to be arguments, particularly argument anaphors. Since *afto*- and *bona fide* argumental reflexives have been shown to dissociate across a wide range of environments, there seems to be every reason to treat *afto*- reflexives as intransitive.

But it is worth entertaining an alternative interpretation of the facts. It is in principle possible that the interpretive facts concerning *afto*- in fact follow from a transitive syntax, one where one of the arguments is somehow defective. This type of approach is compatible with the ‘hidden transitive’ analyses (117) and (118), repeated here as (223)-(224), with the additional assumption that *afto*- is a ‘defective’ argument, perhaps by virtue of a process of incorporation as proposed in Rivero (1992).



(223) *Transitive type A*(224) *Transitive type B*

Before evaluating the plausibility of this type of analysis for Greek, it is worth specifying exactly what it amounts to. There is a way of construing this type of incorporation analysis that will make it predictively equivalent to that proposed above: if the putative incorporation step ‘types’ the verb as intransitive in the relevant sense, then it is unclear how this analysis differs from the one proposed here. But if the incorporation analysis amounts to the claim that *afto-* verbs in fact display a transitive syntax, but one that cannot be diagnosed as transitive, it seems that the burden of proof lies with this approach. Viewed in this light, the discussion above does little more than draw the most conservative conclusion possible: if *afto-* systematically fails to pattern as an anaphor, it is not an anaphor.<sup>64</sup>

But we can go further than a burden of proof argument, as the incorporation analysis turns out to be heavily disfavored by several empirical considerations in Greek.

Firstly, Greek lacks any process of (pseudo-)incorporation of arguments: there is simply no way of leaving arguments low and caseless in the language, much less a mechanism of incorporating them into the verbal form.

To make matters worse, the one process that the language does avail itself of to yield structures that could, pretheoretically, be called ‘incorporation’ turns out to systematically target non-argumental elements. Greek shows a process of so-called adverb incorporation (Embick 2004b; Rivero 1992), whereby sentences like (225a) alternate with (225b), where the adverb appears to be incorporated into the verb.

- (225) a. *Fayame kala ke simera.*  
 eat.PST.1PL well and today  
 ‘We ate well again today.’  
 b. *Kalo- fayame ke simera.*  
 well eat.PST.1PL and today

<sup>64</sup>The possibilities examined here parallel difficult questions raised in the literature on implicit arguments: when faced with a situation where some argument role is semantically present, not realized overtly, and not active for syntactic processes, it is possible in principle to claim either that the relevant element is syntactically unprojected altogether, or that it is projected but somehow defective relative to other null elements. See e.g. Bhatt and Embick (2017), Landau (2010), Legate (2014), A. Williams (2015).

The analysis of the alternation is not crucial here. Rivero (1992) assumes a syntactic process of incorporation; as Embick (2004b) notes, a compounding analysis seems more likely. What is crucial, however, is the observation that whatever derives (225b) never applies to arguments:

- (226) a. Fayame psari / psarja.  
eat.PST.1PL fish.ACC fish.ACC.PL  
'We ate fish.'
- b. \*psaro- fayame.  
fish eat.PST.1PL

Given the simple fact that Greek lacks argument incorporation, the 'defective *afto*-' approach amounts to a suspicious conjecture: the process of incorporation this approach needs to make the right cut between *afto*- and the reflexive pronoun is a process that only ever targets *afto*- (and perhaps its reciprocal counterpart), but does not extend to any other argument in the language. While storable in prose, such an approach clearly lacks any explanatory potential.

The plausibility of an incorporation analysis diminishes further in light of a second consideration regarding Greek verbal reflexives: as argued in section 3.3.2, the surface subject of these verbs is a deep object. As such, on an incorporation analysis, incorporated *afto*- would have to originate from the *external* argument position. We would have to grant it, then, not only that Greek shows incorporation only of anaphoric elements, but also that the relevant phenomena are instances of *agent* incorporation. Note now that *bona fide* incorporation of agents is typically ruled out (Baker 1988), with languages that apparently allow it in fact showing pseudo-incorporation (Massam 2001) of agents (see e.g. Öztürk 2009 on Turkish). In turn, agent pseudo-incorporation is not only another process which Greek generally lacks, but also one that is typically restricted, in the relevant languages, to noun-verb combinations that are judged to be sufficiently *name-worthy* (see Chung and Ladusaw 2020: fn. 10), such as *bee-stinging* or *dog-biting*; needless to say that Greek *afto*- reflexivization exhibits no such effect, with not obviously name-worthy events such as *self-accusing* being freely expressible.

The incorporation view thus exhibits dim prospects for Greek. It would amount to positing a process of agent incorporation for a language that otherwise lacks one; this process would crucially have to be syntactic, to guarantee that the putatively incorporating element, *afto*-, not be interpreted as an argument (see section 3.3.1). For these reasons, I put the possibility of such an analysis to the side.

Moreover, it is worth noting that there is no compelling morphological grounds on which to favor an incorporation analysis. At first sight, *afto*- as in (227) seems to (partially, but not totally) resemble the noun making up the Greek reflexive pronoun (227).

- (227) O Janis afto- ðiafimiz -ete.  
the.NOM John.NOM REFL advertise 3SG.NACT  
'John promotes himself.'

- (228) O Janis ðiafimiz- i ton eafto tu.  
 the.NOM John.NOM advertise 3SG the.ACC self.ACC 3SG.M.GEN  
 ‘John promotes himself.’

This instance of formal overlap, however, is not probative, at least not synchronically, as already hinted at in [footnote 31](#).

Firstly, the same phonological sequence is found on synchronically unrelated elements, in particular the language’s demonstrative (229).<sup>65</sup> Secondly, the overlap between verbal morpheme and anaphoric pronominal is even more imperfect in the case of reciprocals (230), where the reciprocal counterpart of *afto-*, *alilo-*, is simply no longer identical to the relevant component of the Greek reciprocal construction, *alo*. In short, the (highly imperfect) overlap between anaphoric pronouns and the corresponding verbal prefixes in Greek is contentful only diachronically, with *afto-* and *alilo-* clearly having once corresponded to incorporated pronouns.

- (229) afto to vivlio  
 this.NOM the.NOM book.NOM  
 ‘This book.’

- (230) a. O Janis ke i Maria alilo- ðiorθon- onde sineça.  
 the.NOM John.NOM and the.NOM Mary.NOM RECIP correct 3PL.NACT constantly  
 ‘John and Mary correct each other all the time.’  
 b. O Janis ke i Maria ðiorθonun o enas ton alo  
 the.NOM John.NOM and the.NOM Mary.NOM correct.3PL the.NOM one.NOM the.ACC other.ACC  
 sineça.  
 constantly  
 ‘John and Mary correct each other all the time.’

Finally, it is possible to point to a broader issue with the ‘incorporation’ approach. This type of approach would be premised on the assumption that *afto-* and *alilo-* can be reduced to the language’s pronominal reflexive and reciprocal, respectively. As just discussed, there seems to be little compelling morphological evidence to do so; but this reduction would be ill-fated for deeper reasons, too, related to the distribution of anaphoric elements.

Reflexive and reciprocal pronouns in Greek are not fully on a par with each other. Important differences exist along dimensions not fully relevant here.<sup>66</sup> But one divergence does turn out to be potentially informative as to the viability of an ‘incorporation’ solution: Greek reciprocal and reflexive pronouns do not show the same locality properties. Reflexives are standard Condition A anaphors once possible non-reflexive construals are controlled for (see Angelopoulos & Sportiche 2022); but, as argued in Pappas and Salzmann [accepted](#), reciprocals obey laxer locality Conditions. In particular, the reciprocator ‘the other’ can occur in

<sup>65</sup>Note that it is possible to draw interpretive connections between demonstratives and anaphoric elements *sensu lato* (see e.g. D. Ahn 2020); but such connections hold between demonstratives and anaphoricity broadly construed, not reflexivization in particular, and are in any case not necessarily probative as to the syntax.

embedded subject positions, such as the subject of an embedded clause, or a relative clause, as shown in (231a); the distribution of this element is crucially still subject to locality conditions in that placing the reciprocator in the embedded *object* position is still banned (231b).

- (231) a. I monaçi θa fane o enas [to fajito pu  
 the.NOM.PL monk.NOM.PL FUT eat.3PL the.M.NOM one.M.NOM the.ACC food.ACC that  
 eçi ftiaksi o alos].  
 have.3SG make.PFV the.M.NOM other.M.NOM  
 ‘The monks<sub>i</sub> will eat the food that each other<sub>i</sub> has made.’
- b. \*I monaçi çeretisan o enas [tin kaloyria pu  
 the.NOM.PL monk.NOM.PL greet.PST.3PL the.M.NOM one.M.NOM the.ACC nun.ACC that  
 ayapai ton alo].  
 love.3SG the.M.ACC other.M.ACC  
 ‘The monks<sub>i</sub> greeted the nun that loves each other<sub>i</sub>.’ (Paparounas & Salzmänn in press: ex.  
 (11))

Unlike the reciprocator, the reflexive pronoun is banned from all embedded positions (232); crucially, the impossibility of (232a) is not reducible to a blanket ban on agreeing or nominative anaphors, which are otherwise possible in Greek (233).

- (232) a. \*O monaxos θa fai [to fajito pu eçi ftiaksi o  
 the.NOM monk.NOM FUT eat.3SG the.ACC food.ACC that have.3SG make.PFV the.NOM  
 eaftos tu].  
 self.NOM 3SG.M.GEN  
 ‘The monk will eat the food that himself has made.’
- b. \*O monaxos çeretise [tin kaloyria pu ayapai ton eafto  
 the.NOM monk.NOM greet.PST.3SG the.ACC nun.ACC that love.3SG the.ACC self.ACC  
 tu].  
 3SG.M.GEN  
 ‘The monk greeted the nun that loves himself.’
- (233) Mu aresi o eaftos mu.  
 1SG.GEN please.3SG the.NOM self.NOM 1SG.GEN  
 ‘I like myself.’

Such differences in locality between reciprocals and reflexives are far from unheard of cross-linguistically (see e.g. Bruening 2006b; Lebeaux 1983), and are thus of crucial binding-theoretic interest. Here, these differ-

<sup>66</sup>Such differences include the bipartite (and quantificational) nature of reciprocals, and the existence of non-reflexive constructions for the reflexive where no comparable readings exist for the reciprocal. See Paparounas and Salzmänn in press, accepted for discussion.

ences can be illuminating in a different respect: since Greek reciprocal pronouns are subject to laxer locality conditions than reflexives, an incorporation approach may predict that these locality differences will carry over to the putative incorporated counterparts of these pronouns. In other words, treating *alilo-* as an incorporated reciprocal pronoun and *afto-* as an incorporated reflexive pronoun may lead us to expect that the two elements should differ in terms of their locality properties.

This expectation is simply not borne out. It was noted repeatedly above that *afto-* and *alilo-* pattern together in virtually every conceivable respect, and their locality properties are no exception. In particular, it is not possible to construct a grammatical *alilo-* counterpart of (231a); one attempt to this end is shown in (234), but such examples are unsalvageable.

- (234) \*I            monaçi        tha fane [to        fajito        pu { eçi        / exun        } alilo-  
                  the.NOM.PL monk.NOM.PL FUT eat.3PL the.ACC food.ACC that have.3SG have.3PL RECIP  
                  ftiaxti].  
                  make.NACT.PFV

The impossibility of (234) seems trivial on the analysis of *alilo-* as a verbal reciprocalizer, but the approach that takes *alilo-* to be an incorporated reciprocator has much to answer for here. The input structure for the putative incorporation step is freely available, (231a); moreover, it will not help to assume that incorporation is impossible from the external argument position, insofar as, as discussed immediately above, the incorporation analysis will need to countenance incorporation of exactly this type in the first place if it is to capture the basic facts on the syntax of *afto-/alilo-* verbs. It is thus not immediately apparent, on this type of analysis, why examples of the type in (234) should be ruled out. It is of course possible to salvage the analysis by conceding that there must be some further constraint on incorporation that will effectively rule out (231a) as a possible input; but any retreat of this type will bring the eventual solution further away from a proper incorporation analysis, and closer to the analysis proposed in this chapter, where *alilo-* is simply in no direct relation at all to the pronominal reciprocal.

In summary, there is little reason to pursue an incorporation analysis of *afto-* or *alilo-*.

### 3.6.2 EXPLETIVE ANALYSIS?

It is instructive to briefly consider a distinct analytical possibility, drawn from Jim Wood's work on Icelandic reflexives (see in particular Wood 2014 and Wood 2015: ch.4). One part of Wood's discussion focusses on Icelandic figure reflexives, exemplified in (235).

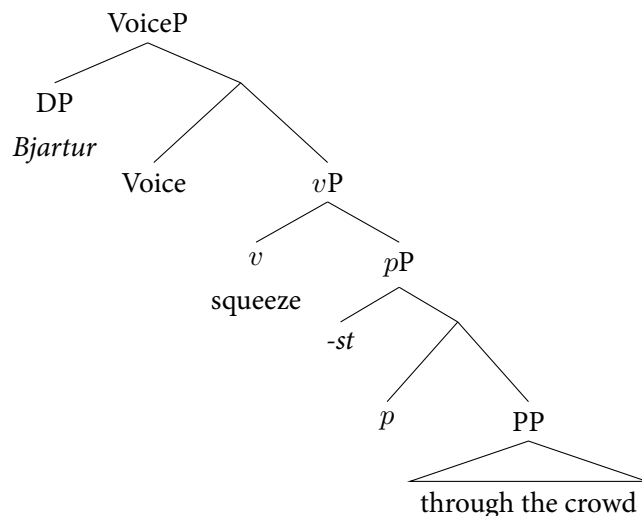
- (235) Bjartur        tróð-st            gegnum mannþröngina.  
                  Bjartur.NOM squeezed-REFL through crowd.the.ACC  
                  'Bjartur squeezed himself through the crowd.'

*Icelandic*; (Wood 2015: p. 174)

Wood shows that examples of this type involve situations where a single nominal, here *Bjartur*, becomes associated with both the agent role and the figure role associated with the prepositional phrase headed by *gegnum* ‘through’. (235) thus denotes sets of events where *Bjartur* was both the agent of the squeezing event and the figure undergoing motion through the crowd. The clitic *-st* seems to be crucially implicated in this instance of reflexivization; as Wood shows, the same element is involved in other aspects of the language’s argument structure (notably, in anticausatives).

The analysis proposed by Wood for (235) is reproduced in (236): the surface subject of the figure reflexive originates in the external argument position,<sup>67</sup> and the reflexivizing element is in spec, *pP*, the position associated with figures of prepositions in Svenonius (2003, 2007).

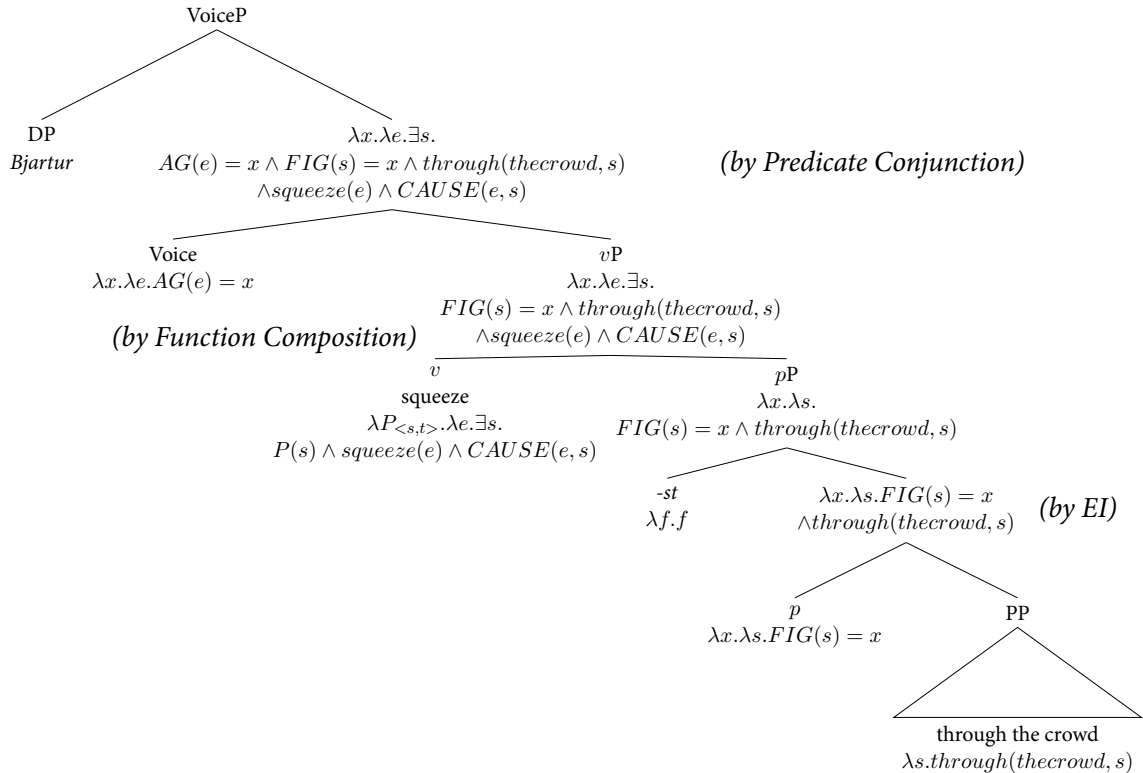
(236) *Syntax of (235)* (Wood 2015: p. 175)



In terms of the interpretation, Wood takes *-st* not to be reflexivizing in any sense; rather, it is argued to be an expletive element, in the sense of being interpreted as the identity function. In a structure like (236), the presence of expletive *-st* in spec, *pP* has the downstream consequence of the figure role introduced by *p* being ‘passed up’ the tree, and eventually being saturated by the same DP that saturates the agent role, namely *Bjartur*. This is thus an instance of delayed saturation (see also Myler 2016), one whereby a reflexive denotation emerges without a dedicated reflexivizing morpheme.

<sup>67</sup>It is worth noting that Wood does not offer positional diagnostics for the surface subject; he documents extensively that it is associated with the agent entailment, but does not explicitly test for a possible low origin of this argument. This issue is largely orthogonal to the discussion here, but it does raise the question whether Icelandic and Greek could, in fact, turn out to be more alike than (236) suggests, with *-st* marking the absence of a DP in spec, VoiceP (in figure reflexives as well as anticausatives) in a way perhaps parallel to Greek nonactive morphology (cf. Marantz 1984: 157ff). This question is left open.

(237) Interpretation of (236) (adapted from Wood 2015: p. 185)



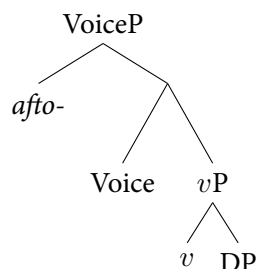
It is worth asking whether Wood's analysis of Icelandic *-st* could be extended to Greek *afto-*. There are really two separate questions here. A first question asks whether the analysis as given in (236)-(237) for Icelandic can apply to Greek straightforwardly, given potential differences in the syntax of reflexives between the two languages. A second, broader, and perhaps more interesting question concerns whether the spirit of the analysis in (236)-(237) may extend to cover the Greek facts.

Clearly, Wood's analysis of Icelandic should not be expected to extend piecemeal to Greek. Greek lacks figure reflexives of the Icelandic type altogether, and we thus do not expect to find the exact counterpart of (236) to begin with; once we consider the type of verbal reflexive that Greek does have, we find that its syntax will not straightforwardly combine with (237). The semantic derivation in (237) results from a syntax of the kind labelled *Transitive Type A* in section 3.3.1, whereby the surface subject of reflexives is an external argument, and the reflexivizing element originates low. We have seen above that this type of syntax is not evidenced in Greek, which is thus unlike Icelandic (at least presumably; see footnote 67).

This difference in argument structure has downstream consequences for the viability of an expletive analysis for Greek. Consider what happens if we extend the analysis of Icelandic to Greek by choosing to respect

the lower origin diagnostics of [section 3.3.2](#) while taking *afto-* to be an expletive element in spec, VoiceP:

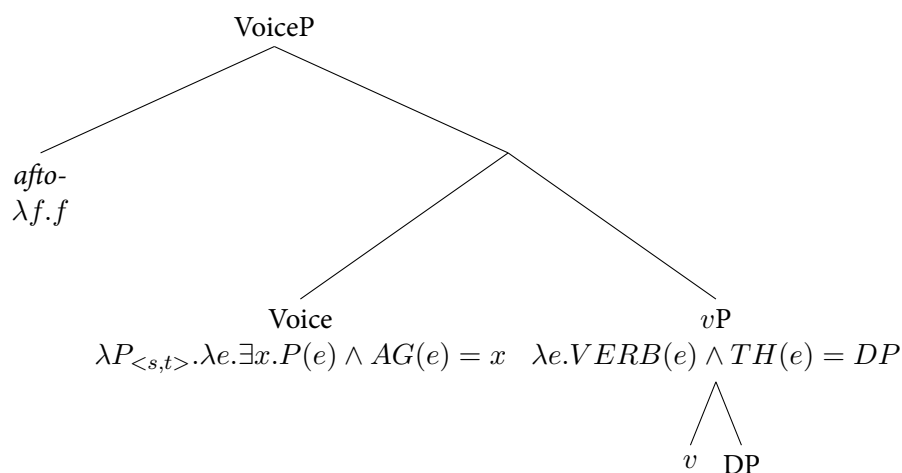
(238)



(238) is effectively a *Transitive Type B* analysis of the Greek reflexives in terms of the syntax. Assume now that we take *afto-* to be an expletive element; how a reflexive denotation should be taken to emerge in this case will depend greatly on what we take the interpretation of Voice to be.

Assume, firstly, that we take Voice in (238) to have a passive interpretation, whereby the agent is introduced and existentially closed (see e.g. Legate 2014; Legate et al. 2020). In this case, a reflexive interpretation will not emerge easily, as shown in (239): if the agent is existentially closed by Voice, and *afto-* simply passes up the resulting denotation, it is unclear what will yield reflexivity, and we instead predict a passive-type denotation, all things being equal.

(239) *Attempt 1: Expletive afto- and passive Voice*



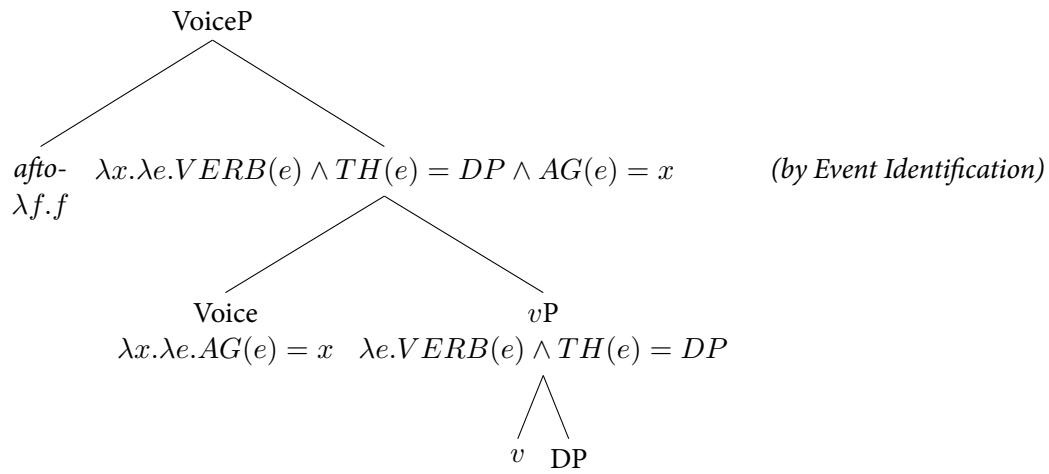
Let us thus instead take Voice in (238) to have a denotation where an agent variable is introduced and left open for saturation; and let us for the sake of argument further put to the side the question of how plausible this ‘active’ denotation seems in light of the by now familiar basic facts surrounding *afto-* reflexives (namely,



their passive syntax and obligatory inflection with nonactive morphology).

A first attempt is shown in (240): it fares better insofar as the agent variable is still available for further operations, but, without an extra step, it is again unclear how a reflexive denotation will emerge if *afto-* is an expletive.

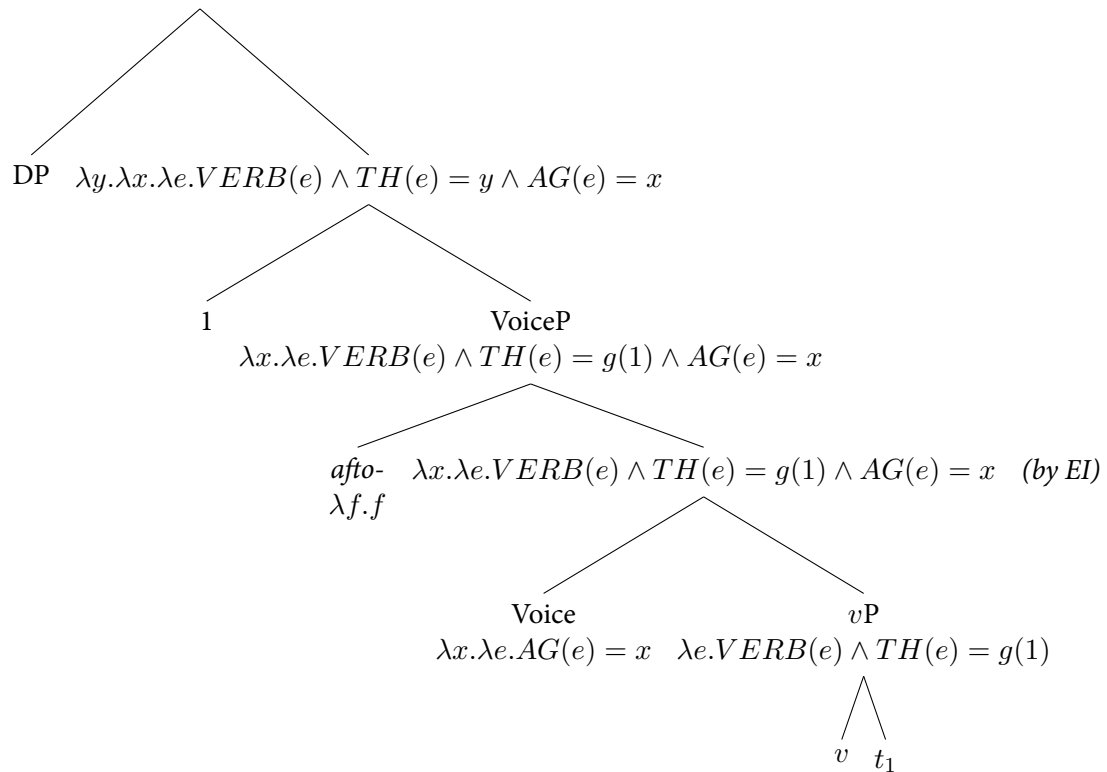
(240) *Attempt 2: Expletive afto- and 'active' Voice*



Note that moving the DP above *afto-* will not help, having instead the effect of still leaving the agent role open, as shown in (241).<sup>68</sup>

<sup>68</sup>See section 3.5 for discussion of this type of derivation without expletive *afto-*, where it is shown that a movement-based derivation will only succeed if *i*) there is a reflexivizing element in Voice, and *ii*) movement of the internal argument is allowed to ‘tuck in’ such that the reflexivizer ends up between the index of movement and the DP itself. This type of derivation faces issues surrounding both the conditions under which *ii*) is allowed, and the monadicity diagnostics of section 3.3.1, as argued in section 3.5.

One way of salvaging (241) would involve amending our assumptions on the interpretation of movement. This seems to be the route taken in Kastner (2017: p. 14), where an analysis of Hebrew verbal reflexives is proposed that resembles (241), but derives a reflexive interpretation by allowing the DP to be interpreted as an entity in both its base position and its landing site. This is thus a (tacit) departure from the variable-binding analysis of movement, assumed in (241), where the lower copy of movement contributes a variable bound by the index contributed by the landing site. Evaluating the plausibility of this non-standard view of movement would take us far afield; clearly, the crucial question concerns whether recasting the interpretation of movement in the way required for the analysis of Hebrew in Kastner (2017) carries a cost elsewhere in the domain of how movement is interpreted.

(241) *Attempt 2': Expletive afto- and 'active' Voice, plus movement*

The issue is clear: the expletive analysis of *-st* derives reflexivity by placing the expletive element below the surface subject, but, since the surface subject in Greek originates low, there is no way to effect identification in this way. To put it simply, the expletive analysis is designed to pass a thematic role up the tree, but in Greek we need a thematic role to effectively be passed down, namely, to the deep object. This is no sense an argument against the expletive analysis in general, but simply a demonstration that this type of analysis cannot easily be extended to Greek.

Perhaps of more interest, however, is the broader question of what patterns of reflexivization the expletive analysis allows compared with the Voice-based analysis advanced for Greek in this chapter. Following are some concluding thoughts to this end, building heavily on the discussion of this issue in McGinnis (2022).

The expletive analysis is designed to treat reflexivity as emergent: in (237), a reflexive denotation emerges from the combination of independent pieces and in the absence of a dedicated reflexivizer (cf. Kastner 2017; Spathas et al. 2015, as well as section 3.5.2). An upshot of this view is that the same pieces could, once rearranged, give rise to different outcomes. Some of these outcomes may be non-reflexive; for instance, Wood (2015) convincingly argues that the expletive analysis of Icelandic *-st* accommodates the ubiquity of this element in seemingly disparate loci of Icelandic morphosyntax, beyond figure reflexives. But the expletive anal-

ysis in fact predicts further types of reflexivity as well. For instance, given the right syntactic configuration, an expletive analysis could yield reflexivization between goals and themes in a ditransitive, by having a *-st*-like element pass up a theme role which is eventually associated with the DP also saturating, say, a beneficiary role.

By contrast, the Voice-based analysis advanced in [section 3.5](#) is thematically more restricted. The specific denotation proposed there in fact permits identification of only kind, namely between agents and themes; more broadly, to the extent that we require the denotations of Voice to make reference to agents, we may allow reflexivizing Voices to be able to identify the agent role, and nothing else, with distinct roles. From this perspective, Greek would represent the strictest case (agents identified just with themes, see [section 3.5.1](#)), but we may expect more lenient systems as well, as argued in [section 3.5](#).

The point is thus the following: to the extent that the expletive analysis allows for thematic flexibility, it will not be applicable to languages where reflexives are thematically restricted. Thus, as McGinnis (2022) argues, the availability of goal-theme reflexivization may turn out to be a useful diagnostic helping us decide for or against the expletive analysis for the case at hand.

### 3.7 AFTO- NOMINALS

So far, we have examined the behavior of the reflexivizer *afto-*, and its reciprocal counterpart *alilo-*, in the verbal domain. The behavior of these elements has been fully systematic, in that *afto-* and *alilo-* always co-occur with nonactive morphology, and always derive reflexive or reciprocal interpretations, respectively. In the verbal domain, there are no true exceptions to this generalization (see [footnote 26](#) for the few fossilized apparent counterexamples).

In this section, I briefly turn to the issue of how these elements behave in the nominal domain. The observations here motivate a generalization strikingly in line with the analysis of *afto-* and *alilo-* as Voice-level elements advanced in this chapter: when *afto-* is found in a nominalization that includes Voice, the resulting nominal behaves as a true nominalized verbal reflexive/reciprocal. But when we find *afto-/alilo-* prefixed to nominals that are clearly smaller in structure, this systematicity disappears, and we find less clearly reflexive meanings emerging.

Let us begin with cases that are already familiar from [section 3.3.2.2](#): there, it was noted that *afto-* freely participates in the formation of complex event nominalizations. Alongside the numerous examples provided there, we can add the ones in (242), all of which can pass diagnostics for complex event nominal-ness. In all cases, *afto-* attached to a complex event nominal yields a reflexive interpretation.

- (242) *afto-* { *xrimatođot-* / *pirpol-* / *eksipiret-* / *điic-* / *điafim-* / *điaçir-* } *isi*  
 self  $\sqrt{\text{FUND}}$   $\sqrt{\text{IMMOLATE}}$   $\sqrt{\text{SERVICE}}$   $\sqrt{\text{GOVERN}}$   $\sqrt{\text{ADVERTISE}}$   $\sqrt{\text{MANAGE}}$  NMLZ  
 ‘self-funding, self-immolation, self-assistance, self-governance, self-advertising, self-management...’

Insofar as complex event nominals instantiate a canonical case of a nominalized structure that inherits the verbal properties of its base (see e.g. Grimshaw 1990),<sup>69</sup> the situation in (242) is expected if these nominals embed a verbal substructure large enough to host *afto-*. In particular, if one type of nominalization includes Voice, then *afto-* should be able to be hosted in that position; note that, crucially, the type of Voice previously argued to be present in such structures has passive-like properties (for discussion with explicit reference to Greek, see 111ff and passim Alexiadou 2001), which is exactly the type of Voice that *afto-* was argued to be associated with above.

But arguably large, deverbal nominalizations are not the only type of nominal where (an element that seems to be) *afto-* is found. Instead, we find formations such as those in (243), each of which, for different reasons, arguably does not correspond to a Voice-inclusive nominalization:

- (243) *afto-* { *skopos* / *đitis* / *đinamia* / *gol* }  
 REFL? purpose diver power goal  
 ‘purpose-in-itself; solo diver; autograph; (parliamentary) majority; own goal’

Each of the nominals in (243) has potentially distinct properties, but they are all united in being *i*) plausibly small nominals, and *ii*) not straightforwardly reflexive. *afto-skopos* signifies something that is an end in itself, the base nominal *skopos* ‘purpose’ arguably being a root nominal, morphological or syntactic evidence for verbal projections in its structure being hard to come by. *afto-đitis* ‘solo diver’ is instructive insofar as it constitutes a surface counterexample to the generalization, advanced in section 3.3.2.3, that *afto-* does not yield agent nominals; but it hardly constitutes a true counterexample since there is no sense in which this is a reflexive nominal, instead having at most an anti-assistive meaning (see section 3.5.2). Similar conclusions can be reached for *afto-đinamia* ‘independence, parliamentary majority’. Finally, *afto-gol* is used to signify an own goal in soccer (and, by extension, any situation where someone shoots themselves in the foot); any notional reflexivity at play here notwithstanding, there is little reason to posit a substantial verbal structure for the borrowed nominal ‘goal’.

It is important to note, however, that it is not the case that one does not find any (apparently) simplex nominals where *afto-* yields a reflexive meaning; these do exist, as in (244). Rather, what seems to be the case is that, in simplex nominals, the presence of *afto-* is not deterministic of a reflexive interpretation, unlike in purely verbal formations and, possibly, Voice-inclusive nominals.

<sup>69</sup>Not absolutely central to the discussion here is the more specific question *how* verbal properties come to be inherited by the nominalization; see the beginning of Chapter 4 for pertinent discussion. A key question, however, is whether the availability of *afto-* in examples like (242) is modulated in any way by whether the nominal is understood as, say, a complex event noun versus a result nominal.

- (244) afto- { pitharçia / ýnosia }  
 REFL? discipline knowledge  
 ‘self-discipline, self-awareness’

The situation in Greek is thus somewhat reminiscent of a set observations in Chomsky (1970) concerning English *self-*, in connection with the issue of the viability of a particular transformational analysis of certain recategorized structures. Some of the relevant examples are reproduced in (245):

- (245) a. John sent a self-addressed envelope.  
 b. This is clearly a self-inflicted wound.  
 c. The prophecy is self-fulfilling.  
 d. John’s actions are self-destructive.

(Chomsky 1970: p. 58)

As Chomsky notes, (245a) does not refer to an envelope that addresses itself, any more than the wound in (245b) inflicts itself or the prophecy in (245c) fulfils itself; similarly, in (245d), John’s actions risk destroying John, not themselves. At least for some of these examples, what seems to be at play is a type of anti-assistive reading of *self-* (cf. section 3.5.2), such that what is asserted in (245c), for example, is that the prophecy will be fulfilled without the intervention of any external cause.

Note that in English, too, *self-* yields unambiguously anti-assistive readings when attaching to a small nominal: thus, the *self-checkout* section of a supermarket is one where one can check out without help.

Greek thus distinguishes itself from English, which lacks a ‘true’ verbal reflexivizer (see also footnote 70); both languages in turn differ from French, which, unlike either Greek or English, seems to employ an anti-assistive modifier on finite verbs, in the form of *auto-* (Labelle 2020), transparently cognate with Greek *afto-*:

- (246) a. Mon portable a autodétruit le disque dur.  
 my laptop have.3SG autodestroyed the disc hard  
 ‘My laptop destroyed the hard disk by itself.’  
 b. Le mail sera autodétruit par le serveur.  
 the email FUT autodestroyed by the server  
 ‘The email will be destroyed by the server itself [sic].’

(Labelle 2020: pp. 4–5)

The generalization that suggests itself, then, is that *afto-* nominals that include Voice resemble *afto-* verbs in being always reflexive, whereas smaller nominals apparently prefixed with *afto-* are less clearly so.<sup>70</sup>

Indirect support for this generalization comes from two observations.

<sup>70</sup>From this perspective, Greek differs from English in having a ‘true’ reflexivizer, that is, a morpheme capable of reflexivizing (finite) verbs: note the ungrammaticality of (i), and compare the instructive (ii), where the morphology suggests that the ostensibly *self-*-prefixed verb may be back-formed from the nominal *self-destruction*:

- (i) \*John self-accused in the courtroom yesterday.

Firstly, consider the behavior of *alilo-*. Recall from [section 3.5.2](#) that, although reflexive and anti-assistive meanings can occasionally be difficult to disentangle, no similar difficulty arises in the cases of reciprocals: it is difficult to imagine a type of relation that is to reciprocity as anti-assistivity is to reflexivity. Importantly, once we examine the behavior of *alilo-* in the nominal domain, we find no clear counterpart of (243): there exist plenty of clearly reciprocal nominals (247), but I have not been able to identify any cases where *alilo-* attaches to a nominal to yield a less-than-clearly-reciprocal interpretation.

- (247) *alilo-* { *katanoisi* / *sevasmos* / *eksipiretisi* / *ðiðaskalia* }  
 RECIP understanding respect assistance teaching  
 ‘mutual understanding/respect/assistance/teaching’

Secondly, the behavior of *afto-* in participles is in line with the generalization advanced here. In [section 4.6.1](#), it is shown that *afto-* never combines with those predicative participles that include Voice (with the stativizer *-men-*); it does, however, attach to structurally smaller participles (formed with the stativizer *-t-*), and in this case yields a particular type of interpretation that again resembles anti-assistivity more than reflexivity. The behavior of *afto-* in nominals and participles is thus unified: a predictable reflexive meaning when Voice is present, and more idiosyncratic and less reflexive meanings when this is not the case.

The upshot of this view is that, whereas the instances of *afto-* in Voice-inclusive nominals must be assimilated to the *afto-* that reflexivizes verbs, the *afto-* found in small, non-reflexive nominals cannot be. I leave it for future work to further elucidate this instance of apparent homophony.

### 3.8 CONCLUDING REMARKS: A ‘LEXICAL’ SOLUTION?

The analysis proposed here has some features in common with early ‘lexical’ analyses of reflexivization (Bouchard 1982; Grimshaw 1982; Wehrli 1986); the analysis has in particular much in common with the analysis of French *se* in Grimshaw (1982), which takes this element to be a marker of the application of a valency-changing lexical rule, not a pronoun (cf. McGinnis 2022 for a modern recasting of this idea for Romance). It is important to ask, then, if there is a sense in which the analysis here is of a ‘lexical’ nature.

Part of the answer depends on how the notion of ‘lexical’ reflexivization is to be understood. If what is intended by the term is the existence of a kind of reflexivity that has very different properties to that derived by the presence of a pronominal anaphor, then the Greek facts, and their Voice-based analysis defended here, very much reinforce this conclusion. In particular, the analysis here eventually resembles the ‘non-clitic’

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(ii) The spaceship self- { *destruxto* / \**destruxto* }.

Greek shows three possible counterparts of English *self-destruct* in the verbal domain, noted by Zombolou (2008). It is telling that *afto-ðiko* ‘take the law into one’s own hands’, *aft-eneryo* ‘act on one’s own’ and *aft-uryo* ‘act on one’s own’ are all *i*) morphologically ‘active’ (cf. [footnote 26](#)), *ii*) archaic and clearly part of the learned vocabulary of only certain speakers, *iii*) plausibly back-formed from the corresponding simplex nominals *aftoðikia*, *aftenerjia* and *afturjia*, and *iv*) clearly anti-assistive as opposed to reflexive.

analysis of reflexives in Marantz (1984: ch. 4), which ‘instead of absorbing the semantic role of the logical object into the verb...absorbs the semantic role of the logical subject— the reflexive affix bears this role and attaches to the verb’ (Marantz 1984: p. 162).

But if the question concerns whether there exists any need to accommodate the Greek facts by reifying a modular distinction, the answer seems to be strongly negative.

What is at stake here is a comparison between a syntactic approach, as assumed and defended here, and an approach availing itself of operations on lexical entries. Two issues with the latter approach arise in the context of the analysis of Greek.

The first issue concerns the thematic restrictions on *afto*- reflexivization discussed in section 3.5.1: as in many other languages, in Greek verbal reflexives are strongly agent-oriented. In theories where verbal reflexivization takes place in the lexicon (Reinhart & Siloni 2004, 2005: e.g.), thematic restrictions must be stated as constraints on the lexical reflexivization operation tasked with presyntactically manipulating thematic roles. Thus, Reuland (2018) formulates the relevant restriction on the lexical operation of bundling thus:

(248) *Restriction on (lexical) bundling*

Bundling is restricted to agent-theme verbs.

(Reuland 2018: p. 102)

(248) raises the question of why thematic roles in the lexicon should be relativized to particular thematic roles. More worryingly, if applied to Greek, (248) would risk missing the clear connection discussed in section 3.5.1 and in Alexiadou (2014c) between reflexivization and passivization: while (248) guarantees that the relevant verbs will not undergo reflexivization, nothing in a system with (248) would guarantee that the same verbs cannot be passivized.

By contrast, a system that locates verbal reflexivization on the functional head Voice seems better suited to give the restriction on non-canonical argument reflexivization a principled treatment. Under this approach, verbal reflexivization involves a particular flavor of Voice, the head normally tasked with introducing canonical external arguments; if the relevant verbs simply do not tolerate canonical external arguments, we correctly predict that they will not be able to undergo the kind of reflexivization that Voice effects. In other words, the restriction against experiencer reflexivization follows from tying reflexivity to Voice; no stand-alone restriction of the type in (248) is needed. Note further that this perspective makes the reflexivizing Voice head minimally different to, say, a passive Voice head: where one existentially closes the agent argument, the other identifies it with another role. The important point is the reference to agents specifically, as opposed to other roles that external arguments could in principle bear.

The second issue concerns how reflexivization relates to other structures that, on a lexical approach, would arise from arity-affecting operations. The lexical treatment of reflexivization in Reinhart and Siloni (2004, 2005), with important antecedents in Chierchia (2004), Reinhart (2016), finds its guiding premise in the idea that both unaccusatives and reflexives are derived from reduction operations applied on a basic transitive

entry. On any such approach, unaccusatives must arise when the external role is reduced; thus, reflexives have to be derived by the reduction of the internal argument, and, as a result, this type of approach is only able to derive unergative reflexives. Despite proponents of this approach being at pains to explain away individual instances of unaccusative reflexives (see e.g. Reinhart and Siloni 2004, 2005), the position that unaccusative reflexives are non-existent across the board is simply not tenable in the general case, with Greek instantiating a clear case of this type of structure. Secondly, as stressed in Embick (2004b), the syncretism between verbal reflexives and other passive-like structures found in Greek and many other languages is unaccounted for on an analysis of the relevant type, where passives/unaccusatives and reflexives effectively undergo distinct reduction operations; unless the position is weakened to the point of stipulating that Voice syncretism targets structures that have undergone any one of a range of reduction operations.

The point here is not that the lexicalist analysis is to be ruled out in principle, but rather that nothing in the observations from Greek necessitates such an analysis, with the facts fully understandable on a syntactic analysis such as the one presented here. Whether the lexicalist and syntactic analyses necessarily make different predictions continues to be a non-trivial question; but, to the extent that even analyses positing lexical reflexivization have been forced to also posit a syntactic operation to the same end (Reinhart & Siloni 2005: see especially), we may wonder what the lexical approach ends up adding if, as seems to be the case for Greek, the totality of the facts can be understood on a syntactic approach.



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## (STATIVE) PASSIVES

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4.1	INTRODUCTION AND ROADMAP . . . . .	139
4.2	ON CERTAIN CORE PROPERTIES OF THE GREEK EVENTIVE PASSIVE . . . . .	140
4.3	STATIVE PASSIVE: BACKGROUND POINTS . . .	158
4.4	EVENTIVE $\neq$ STATIVE PASSIVE: MISMATCHES	184
4.5	BUILDING STATIVES ‘SMALL’ . . . . .	206
4.6	WHAT ABOUT AGENT-ORIENTED MODIFIERS?	210
4.7	FOR THE FUTURE: ATTRIBU- TIVE/PREDICATIVE CONTRASTS . . . . .	225

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### 4.1 INTRODUCTION AND ROADMAP

This chapter takes up the issue of passivization in Modern Greek – a domain that is well-investigated, yet one where many important questions persist. The chapter has a dual focus.

Firstly, in [section 4.2](#), I investigate certain core properties of the Greek eventive passive, with a focus on the status of the *by*-phrase and of the implicit agent. The need to discuss the eventive passive in general arises in light of the dissertation’s broader interest in Greek Voice syncretism, the eventive passive being at the center of the syncretism. The first aim of [section 4.2](#) is thus to ensure that the eventive passive bears the crucial properties that will allow it to participate in the syncretism under the understanding of this phenomenon

developed in [Chapter 2](#): in particular, I show below that the eventive passive lacks a syntactically projected external argument, ensuring its participation in the syncretism, which targets structures with this property. This conclusion is not new (see e.g. Alexiadou et al. 2015), but recent claims to the contrary make it necessary to ensure that these widely shared conclusions are still well-motivated.

The second aim of the investigation of eventive passives in [section 4.2](#) is to establish a baseline against which *stative* passives can be compared.

This comparison between eventive and stative passives is in turn the main focus of the second part of this chapter. After introducing some essential background on stative passives in general, and stative passives in Greek in particular, I uncover in [section 4.4](#) a range of novel generalizations that set apart stative from eventive passives. I argue that these generalizations provide crucial evidence against what is arguably the received wisdom on Greek stative passives in recent literature, namely, that they effectively amount to stativized eventive passives. Better-suited to capture the facts is an approach whereby stative passives instantiate a case of complex head formation in the sense of Embick (2021, 2023) and Wood (2021). The results have implications for the nature of verbal ‘inheritance’ more generally; at a minimum, they suggest, with some emerging literature on the topic, that the presence of verbal properties in categorially ‘mixed’ deverbal structures need not correspond to the presence of a full-fledged phrasal verbal substructure. In other words, the notions ‘syntactically constructed’ and ‘phrasally built’ are potentially dissociable.

The discussion of stative passives makes a range of novel observations concerning these structures in Greek. Many are shown to follow from the analysis proposed here; others, however, are broader in nature and are noted, where appropriate, as open questions for a future account to grapple with.

## 4.2 ON CERTAIN CORE PROPERTIES OF THE GREEK EVENTIVE PASSIVE

The discussion of the eventive passive in this section is focussed on the properties of the implicit agent of the passive, and on the properties of the *by*-phrase. The results suggest that the Greek eventive passive indeed has the structural properties of other categories participating in the Voice syncretism of Greek (see [Chapter 2](#)): in particular, it lacks a syntactically projected thematic subject, with the implicit agent being implicit in the deep sense, and the *by*-phrase not behaving argumentally.

The focus of this section is on the properties of passive agents specifically, and the broader focus of the chapter is eventually on the *stative* passives. Hence, I do not take up here various other issues in the domain of the Greek eventive passive, each of which is worthy of close investigation in its own right. I list some of these here in the interest of descriptive completeness.

Firstly, the Greek eventive passive has been repeatedly noted to be restricted in its availability (Alexiadou et al. 2015; Alexiadou & Doron 2012; Lascaratou 1984; Lascaratou & Philippaki-Warburton 1983; Smirniotopoulos 1991; Warburton 1975; Zombolou 2004), at least relative to the passive in languages like English, where very few verbs systematically resist passivization. The apparent restrictions on the Greek

eventive passive remain controversial, both empirically and theoretically.

Empirically speaking, different studies identify different restrictions supposed to arise from factors not always reducible to Root identity (e.g. discourse factors, Warburton 1975; aspectual constraints, e.g. Lekakou 2005: 184ff; purported morphophonological issues, Alexiadou et al. 2015: p. 121). There exists no comprehensive study systematically manipulating these different factors. See Alexiadou et al. (2015: 120ff) for a recent summary highlighting some of the complexities, and see Angelopoulos et al. (2020: 18ff) for one case where manipulating different factors independently seems to help dissolve some of the complexity.

Theoretically speaking, the not always well-understood restrictions on the Greek passive have formed the basis for different analytical claims. Thus, it has variously been proposed that passivization is a lexical operation in Greek (Lascaratou 1984; Lascaratou & Philippaki-Warburton 1983; Smirniotopoulos 1991); that passivization is restricted only at the level of discourse, possibly due to the passive competing for use with other agent-backgrounding constructions (Warburton 1975); that passivization in Greek-type languages must be grammatically distinct from its counterpart in English-type languages, such that the former make use of a passive head more local to the Root than in the latter (Alexiadou et al. 2015; Alexiadou & Doron 2012); or even that passivization is in fact completely free after all, and the restrictions are illusory (Angelopoulos et al. 2020).

At a minimum, the apparent restrictions on passivizability in Greek provide a list of factors to control for when studying passives in the language. In particular, I take care throughout to employ verbs that are readily passivizable; whenever we encounter an unacceptable eventive passive below, this unacceptability will not be attributable to the broader restrictions on Greek passives. Such methodological points aside, I consider the important question of what these restrictions derive from to be open, with two caveats. Firstly, there is no reason to take it *a priori* that all restrictions must derive from a single source. Secondly, the idea that a given restriction on passivization represents a grammatical fact is, strictly speaking, an assumption, not a self-evident fact; it seems as likely, if not more so, that the restrictedness of the passive in Greek relative to languages like English arises from discourse-related factors (Warburton 1975) and/or aspects of the learning process (see Legate et al. 2020: fn. 71, who make the same conjecture connecting with work on the learning of exceptions, especially C. Yang 2005; C. D. Yang 2016). In any case, this state of affairs, whereby different instances of ‘passive’ in different languages have different properties, is what we expect given a theory where the notion ‘passive’ does not have a primitive status; see especially Legate (2021) on this point.

A second and final point that is taken into account, but not directly addressed, below concerns the Greek *by*-phrase, which has itself been noted to be restricted relative to its apparent counterpart in languages like English (e.g. Lascaratou & Philippaki-Warburton 1983; Warburton 1975). In particular, it has been noted that, to the extent that other factors can be held constant, *by*-phrases that denote indefinite/non-specific agents are more readily acceptable than those denoting strongly definite, and especially singular definite, entities (see the discussion of ‘reduced agentivity’ in Alexiadou et al. 2015: p. 121 referring to Manney 2000 and Kaufmann 2004; see also Warburton 1975 for this observation made in passing; and cp. Angelopoulos

et al. 2020 for a different perspective). Once again, the details, and the question of whether these effects should be understood as grammatical in the first place, are best left to a study more narrowly devoted to the *by*-phrase, and I merely take care below to ensure whenever possible that *by*-phrases, when present, are not independently ruled out by these considerations. Note in passing, however, that the Greek passive is not alone in showing limitations on the distribution or content of *by*-phrases; compare for instance the Icelandic impersonal passive (e.g. Ingason, Nowenstein, & Sigurðsson 2016) or the *make*-causatives of Sason Arabic (Akkuş 2021: 113ff).

In this section, I review certain basic properties of agentivity in the Greek eventive passive. As in many other languages, in Greek the passive can support either an implicit agent understood existentially (249), or an (arguably) adjoined prepositional phrase naming the agent (250).

(249) I        Maria    katiyori- θ-        ik- e    sto    ðikastirio.  
 the.NOM Mary.NOM accuse    PFV.NACT PST 3SG in.the court  
 ‘Mary was accused in court.’

(250) I        Maria    katiyori- θ-        ik- e    apo tris martires sto ðikastirio.  
 the.NOM Mary.NOM accuse    PFV.NACT PST 3SG from three witness.PL in.the court  
 ‘Mary was accused by three witnesses in court.’

Here, I briefly take up both the implicit agent and the *by*-phrase. For the implicit agent, the discussion in section 4.2.1 focusses on interactions with *bona fide* syntactic phenomena diagnosing whether this element is projected or not. For the *by*-phrase, discussed in section 4.2.2, the main question of interest is its role in the argument structure of the passive, and particularly the question of whether it should be identified as an ‘argument’ on a par with the theme of the passive.

I will conclude that the view of agentivity in the Greek passive supported by much recent work (see e.g. Alexiadou et al. 2015; Alexiadou and Doron 2012) is on the right track: the implicit agent does not behave on a par with syntactically projected (null) elements, and the *by*-phrase does not pattern with *bona fide* ‘argumental’ DPs. These conclusions are not uncontroversial for Greek, but they merit discussion here by virtue of having recently been called into question by Angelopoulos et al. (2020) and Angelopoulos, Collins, Michelioudakis, and Terzi (2023). These works raise interesting empirical objections to what might be termed the received wisdom on the Greek passive, and it is important to examine these objections carefully.

In section 4.2.3, I conclude the section with some brief theoretical remarks.

#### 4.2.1 THE STATUS OF THE IMPLICIT AGENT

Any discussion of implicit arguments must begin by acknowledging the many nuances involved in this domain. In particular, the question of whether implicit arguments are syntactically realized belies a range of subquestions on what ‘syntactically realized’ should be taken to mean in the first place, a point emphasized

by recent overviews of the issue (see especially Bhatt and Embick 2017 and A. Williams 2015: ch. 5). As a result, an emerging consensus in recent syntactically oriented literature on implicit arguments states that these elements do not form a homogeneous class, with different types of implicit arguments corresponding to distinct syntactic representations; see Akkuş (2021), Landau (2010), Legate (2014), Šereikaite (2020). This literature has effected a considerable refinement of the battery of diagnostics for the properties of implicit arguments inherited from earlier work on the topic (see e.g. Baker et al. 1989; Rizzi 1986; Roeper 1987; Safir 1987; E. Williams 1985, 1987). In particular, and bearing in mind the above caveats, the binding of anaphors and the licensing of secondary predicates are widely taken as robust tests for projectedness (see especially Landau 2010).

The implicit argument in Greek passives passes neither test. Thus, unlike the (possibly null) agent of transitives and unergatives (251), the implicit agent of passives does not license subject-oriented depictives. The attempt in (251) to predicate *naked* of the understood agent is unsuccessful, regardless of how the adjective is inflected (note that neuter inflection on the adjective is grammatical only on the nonsensical reading where the depictive is predicated of the theme).

- (251) a. epeksan to pexniði jimn- i.  
 play.PST.3PL the.ACC game.ACC naked M.NOM.PL  
 ‘They played the game naked.’  
 b. etreksan jimni.  
 run.PST.3PL naked M.NOM.PL  
 ‘They ran naked.’
- (252) \*To pexniði pextike jimn- { os / i / o / i /  
 the.NOM game.NOM play.NACT.PST.3SG naked M.NOM.SG F.NOM.SG N.NOM.SG M.NOM.PL  
 es / a }.  
 F.NOM.PL N.NOM.PL  
 ‘The game was played naked.’

(253) gives some more examples for the sake of completeness, all illustrating the same fact. Once again, if the adjective matches the promoted theme in  $\phi$ -features, the sentences are acceptable, on the irrelevant theme-oriented reading.

- (253) a. \*I Maria katiyoriðike oryis- men- { os / i / o /  
 the.NOM Mary.NOM accused.NACT.PST.3SG anger PTCP M.NOM.SG F.NOM.SG N.NOM.SG  
 i / es / a }.  
 M.NOM.PL F.NOM.PL N.NOM.PL  
 ‘Mary was accused angry.’  
 b. \*To vravio aponemiðike singini- men- { os / i / o /  
 the.NOM prize.NOM award.NACT.PST.3SG move PTCP M.NOM.SG F.NOM.SG N.NOM.SG

- i / es / a }.  
 M.NOM.PL F.NOM.PL N.NOM.PL  
 ‘The prize was awarded moved.’
- c. \*I sinθici irinis simfoniθike perifan- { os / i /  
 the.NOM agreement.NOM peace.GEN agree.NACT.PST.3SG proud M.NOM.SG F.NOM.SG  
 o / i / es / a }.  
 N.NOM.SG M.NOM.PL F.NOM.PL N.NOM.PL  
 ‘The peace agreement was agreed upon proud.’

Secondly, binding of the reflexive pronoun (Anagnostopoulou & Everaert 1999; Angelopoulos & Sportiche 2022; Iatridou 1988) is of course possible in transitives, but seems to be ruled out in the passive (254).

- (254) a. [*I was delivering the last few items of mail in my own neighborhood when I saw that the last package was addressed to me. So, to end my shift...*]  
 Paređosa to paceto ??se emena / ston eafto mu.  
 deliver.NACT.3SG the.ACC package.ACC to 1SG to.the self 1SG.GEN  
 ‘I delivered the package to myself.’
- b. To paceto parađoθice se emena / \*ston eafto mu.  
 the.NOM package.NOM deliver.NACT.3SG to 1SG to.the self 1SG.GEN  
 ‘The package was delivered to me/to myself.’

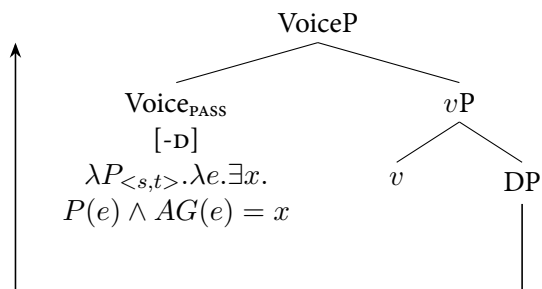
For completeness, consider that an agent entailment is, of course, still very much present in the passive. Thus, modifiers targeting this entailment are perfectly felicitous:

- (255) To pexniđi pextike nevrika / me raketes.  
 the.NOM game.NOM play.NACT.PST nervously with racket.PL  
 ‘The game was played nervously/with rackets.’

Facts of this kind have recently been taken to motivate an analysis whereby agentive semantics in the passive is contributed at the level of interpretation, without the syntactic projection of an agent nominal (Akkuş 2021; Bruening 2013; Legate 2014; Legate et al. 2020; see also Alexiadou et al. 2015 for Greek; Schäfer 2017; and Chomsky 2000). This is the type of analysis illustrated in section 2.3.2, with the relevant general representation repeated in (256): here, the feature [-D] on Voice guarantees that no nominal can appear in its specifier, while the agent role is introduced at LF. In this case, Voice itself existentially closes the agent variable; in a structure with a *by*-phrase occurring higher in the structure, this phrase would saturate the agent variable.<sup>71</sup>

<sup>71</sup>Recall from section 2.3.2 that there are different ways of understanding how the agent variable comes to be saturated by a *by*-phrase when this is present, but existentially closed otherwise. These differences are not central to this part of the discussion; see section 2.3.2, however.

(256)



A structure with the properties of (256) accommodates the availability of agent-oriented modifiers; at the same time, because there is no syntactically realized agent nominal, it is correctly predicted that the agent cannot participate in anaphoric binding, and that it cannot license depictives (assuming that these require a node of type  $\langle e, \langle s, t \rangle \rangle$  to combine with; see Pylkkänen 2008: p. 26). Existential closure at this low point in the structure predicts more generally that the implicit agent will be inert along other dimensions; for instance, it is correctly predicted that it will take obligatory low scope relative to other scope-taking elements:

(257) To            pexniði    ðen pextike.  
 the.NOM game.NOM NEG play.NACT.PST.3SG  
 ‘The game wasn’t played.’

✓ ¬ &gt; ∃ ✗ ∃ &gt; ¬

Angelopoulos et al. (2023) bring forth a number of interesting data points worth scrutinizing here. The approach is, in effect, to argue that the implicit agent of the Greek passive *is* projected; and that the reasons that this element fails to pass diagnostics of projectedness, as discussed immediately above, are independent, deriving from the distribution and properties of empty categories.

From a theoretical standpoint, the discussion in that work connects with certain considerations in Collins (2022), concerning the ways in which an elaborated theory of empty categories may supplant the need for a theory with the properties assumed in (256). I begin here with a discussion of the empirical objections, arguing that they are, in fact, not warranted, reserving the theoretical discussion for later in this section.<sup>72</sup>

<sup>72</sup> Alongside depictive predication and binding, discussed in detail here, Angelopoulos et al. (2023) also brings forth data from control in gerunds. I do not delve into the data on this front in any detail because it seems that the assumption necessary for the argument in this case, namely, that Greek gerunds require control by a syntactically projected entity, is not warranted (*pace* the discussion in this work and Michelioudakis 2021). Gerunds seem to be able to be controlled into when the matrix verb has a disjoint subject (i), or even when it is unaccusative (ii). Note that (ii) is episodic, clarifying that genericity does not clearly have a special status here.

- (i) a. Benondas stin eynatia xthes to proi, i pinakiðes itan prasines.  
 enter.GER to.the highway yesterday the.ACC morning.ACC the.NOM.PL sign.NOM.PL be.PST.3PL green.F.PL  
 ‘Entering the highway yesterday morning, the signs were green.’
- b. Milondas ðinata, i fonitikes xorðes kurazonde.  
 talk.GER loudly the.NOM.PL vocal.NOM.PL cord.NOM.PL become.tired.3PL  
 ‘By talking loudly, the vocal cords get worn out.’

### 4.2.1.1 Depictives

Angelopoulos et al. (2023) begin by noting that depictives are not licensed in the eventive passive. Following this acknowledgment, the claim is made that the impossibility of the relevant examples, see (252)–(253), arises from an independent problem with  $\phi$ -features on the predicate (the nature of this issue is not made fully explicit; see below).

In support of this general conjecture, Angelopoulos et al. (2023) provide examples suggesting that, unlike inflected depictives above, the borrowed uninflected element *deforme* (borrowed from French *déformé* ‘out of form’) appears unproblematically in the passive:

- (258) a. I pextes ine deforme.  
 the.NOM.PL player.NOM.PL be.3PL in.bad.form  
 ‘The players are in bad form.’
- b. To pexniði pextike deforme.  
 the.NOM game.NOM play.NACT.PST.3SG in.bad.form  
 ‘The game was played in bad form.’

The acceptability of (258b), the argument goes, suggests that depictives are, in fact, possible in the eventive passive; and when they appear not to be, as in (252)–(253), it is inflection that to blame, not some structural factor.

Before examining whether this conjecture in fact holds across examples, it is worth pointing out that Angelopoulos et al. (2023) does not provide an analysis of the impossibility of inflected depictives, but only allusions to a morphological issue. This is important, as it is not immediately clear why inflectedness of the depictive should matter, and in particular, why, even if there is indeterminacy of inflection in certain configurations, the resulting structure should not be ‘rescued’ by a default, as such structures with depictives in fact seem to be in other languages (see Pitteroff and Schäfer 2019: 158ff). The language does have defaults for  $\phi$ -features – e.g. neuter in the domain of gender, diagnosable as such by its appearance in gendering clausal subjects (Iatridou & Embick 1997; Roussou 1991), ‘mentioned’ words or phrases (Tsimpli & Hulk 2013: p. 133), irresolvably mismatched conjuncts (Adamson and Anagnostopoulou 2021; cf. Anagnostopoulou 2017), and deadjectival nominals (Alexiadou & Iordachioaia 2014). In other words, the account sketched in Angelopoulos et al. (2023) is not obviously able to account for why inflected depictives should be unacceptable in the first place; and in the absence of an account of this kind, it is not clear that the overall approach can achieve its original purpose of militating against the non-projectedness of the Greek implicit agent.<sup>73</sup>

- (ii) Benondas stin eynatia xthes to proi, i pinakiðes elamban kaðos tis  
 enter.GER to.the highway yesterday the.ACC morning.ACC the.NOM.PL sign.NOM.PL shine.PST.3PL AS 3PL.ACC  
 xtipuse o ilios.  
 hit.PST.3SG the.NOM sun.NOM  
 ‘Entering the highway yesterday morning, the signs shone as the sunlight hit them.’

<sup>73</sup> Another way to test whether the role of inflectedness is causal in modulating the acceptability of depictive predication in the



But it is possible to show more directly that the inflectedness of the depictive is not, in fact, at issue here. (258b) is only potentially probative if the element *deforme* therein is indeed a depictive, as opposed to an adverb. Note that, since the element is uninflected, mere inspection of its form will not settle the issue in either direction. And note further that adverbials can, of course, occur in the position where we find *deforme* in (258b), as shown in (259).

- (259) To pexniði pextike nevríka / xoris bluzes.  
 the.NOM game.NOM play.NACT.PST.3SG nervously without shirt.PL  
 ‘The game was played nervously/without shirts on.’

Crucially, the interpretive contributions of a depictive (specifying the state of the agent when the event took place) and certain adverbials (which also specify information about the event, and potentially even the agent) will not always be easy to disentangle. In other words, ensuring that examples like (258b) truly instantiate secondary predication is not trivial.

Aware of the issue, Angelopoulos et al. (2023) provide the following example, intended to militate against the adverbial counteranalysis:

- (260) #To pexniði ksekinise deforme.  
 the.NOM game.NOM start.PST.3SG in.bad.form  
 ‘The game started in bad form.’ (the original example is marked \*)

It seems fair to note that (260) does not really give the adverbial analysis of *deforme* a fair chance. Even under the adverbial analysis, *deforme* will still provide information about the event participants; we thus need not expect it to be fully natural with a verb of (possibly spontaneous) initiation like *start* any more than a *bona fide* event-participant-oriented adverb like *absent-mindedly* is:

- (261) #To pexniði ksekinise afirímena.  
 the.NOM game.NOM start.PST.3SG absent-mindedly

passive, not discussed in Angelopoulos et al. (2023), would involve testing PP depictives, where inflectedness is arguably not at stake (see once again Pitteroff and Schäfer 2019). In Greek, PP depictives do not seem significantly better than adjectival ones, once again suggesting that the implicit agent is not syntactically projected; but I do not dwell on this point as more investigation of the basic properties of PP depictives in Greek is required before firm conclusions can be reached.

- (i) a. O Janis estíle to yrama se katastasi meθis.  
 the.NOM John.NOM send.PST.3SG the.ACC letter.ACC in state drunkenness.GEN  
 ‘John sent the letter in a state of drunkenness.’  
 b. ??To yrama stalθike se katastasi meθis.  
 the.NOM letter.NOM sent.NACT.PST.3SG in state drunkenness.GEN  
 Intended: ‘The letter was sent in a state of drunkenness.’ Consultant comment: ‘It’s like the letter is drunk.’  
 c. O Janis anakriθike se katastasi meθis.  
 the.NOM John.NOM interrogate.NACT.PST.3SG in state drunkenness.GEN  
 ‘John was interrogated in a state of drunkenness.’ ✓John was drunk ✗the interrogator was drunk

‘The game started absent-mindedly.’

Once we turn to more examples, we find a few compelling reasons to assign *deforme* and many items like it an adverbial parse, thereby maintaining a uniform picture for depictive predication in the eventive passive.

Consider firstly (262), which shows two distinct possible continuations of the same basic sentence. If *deforme* were obligatorily read as a depictive, both continuations should yield blatant contradictions. They do not, though; to the extent that players who are in top form individually can play in a game that is overall played poorly, (262) is acceptable. The element *deforme* must then be able to act as an event modifier proper. This observation does not, strictly speaking, rule out the availability of a depictive parse across the board, but as soon as we countenance a possible adverbial reading, as (262) seems to compel us to, such elements cease to be probative as to the nature of possible constraints on depictives.

- (262) I pextes itan oli se top forma, ala par’ ola afta...  
 the.NOM.PL player.NOM.PL be.PST.3PL all.NOM.PL in top form but despite all.PL DEM.PL
- a. epezan deforme.  
 play.PST.3PL in.bad.form  
 ‘They played in an out-of-form way.’
- b. to pexniði pextike deforme.  
 the.NOM game.NOM play.NACT.PST.3SG in.badform  
 ‘The game was played in an out-of-form way.’

Consider now another uninflected element, *demode* (< Fr. *démodé* ‘out of style’). (263a) establishes that this element can appear in adjectival predication; crucially, as (263b-c) show, it can also appear in what is clearly an adverbial frame.

- (263) a. Afto to ruxo ine demode.  
 DEM.NOM the.NOM piece.of.clothing.NOM be.3SG out.of.fashion  
 ‘This piece of clothing is out of fashion.’
- b. Dinete poli proseymen- a / atsal- a / **demode**.  
 dress.NACT.3SG very careful ADV messy ADV out.of.fashion  
 ‘S/he dresses very thoughtfully / messily / in an out-of-fashion way.’
- c. \*Dinete poli proseymen- os / atsal- os.  
 dress.NACT.3SG very careful M.NOM messy M.NOM

Much like *deforme* above, then, an adverbial usage is motivated. It is then not a surprise that we can easily construct examples like (264), where the uninflected element appears in what could be taken to be a depictive predication structure, but clearly (and in fact more readily) supports an adverbial analysis: the most natural construal of (264) simply does not assert that the wearer was out of fashion, but rather that the piece of clothing was worn in an outdated way (e.g. by being styled alongside items that make for an out-of-style look).

- (264) To ruxo foreθike demode.  
 the.NOM piece.of.clothing.NOM wear.NACT.PST.3SG out.of.fashion  
 ‘The piece of clothing was worn out of fashion.’

We thus see that apparent uninflected depictives also support adverbial uses, calling into question the split between inflected and uninflected depictives put forth in Angelopoulos et al. (2023).

It is also possible to motivate a generalization in the opposite direction: uninflected items that only function as adjectives, and not adverbs, cannot appear as depictives in eventive passives, thus patterning on a par with inflected adjectives. In other words, inflectedness does not seem to be modulating the availability of depictive predication in any straightforward sense.

One clear case comes from borrowed color adjectives like *ble* ‘blue’, which, as expected, lack adverbial usages entirely. They do, however, freely appear as depictives:

- (265) I Maria vjike apo ta payomena nera ble.  
 the.NOM Mary.NOM exit.PST.3SG from the.PL freeze.PTCP.PL water.PL blue  
 ‘Mary got out of the freezing waters (all) blue.’

Consider in this light the minimal pair in (266), which requires some contextual work to motivate an active/passive alternation with an indefinite agent (*pro*-dropped in the active) and *blue* as a depictive oriented towards this agent. The active (266a) is, given the context, acceptable; but the passive (266b) is degraded. This type of situation is precisely what we expect if apparent agent-oriented depictives in eventive passives (258b) are in fact adverbials: items lacking adverbial usages will be ruled out in the relevant position.

- (266) [Suppose that, in the universe of the movie *Avatar*, humans are only allowed to pilot spaceships on the planet Pandora when in their blue form, not in their human form.]
- a. ?Stin Panđora, pilotarun ta ðiastimoplia (mono) ble.  
 in.the Pandora pilot.3PL the.ACC.PL spaceship.ACC.PL only blue  
 ‘On Pandora, they (only) pilot spaceships blue (i.e. when in blue form).’
- b. ?\*Stin Panđora, ta ðiastimoplia pilotaronde (mono) ble.  
 in.the Pandora the.NOM.PL spaceship.NOM.PL pilot.NACT.3PL only blue  
 ‘On Pandora, spaceships are piloted (only) blue.’

#### 4.2.1.2 Binding

A second set of interesting observations in Angelopoulos et al. (2023) concerns reflexive binding. Recall from (254b) that the implicit agent of the Greek eventive passive appears to be unable to bind reflexives; but some data points are ostensibly in tension with this first impression.

Angelopoulos et al. (2023) claim that binding is, in fact, possible in the passive, albeit only in generic contexts, which for them involve a generic *pro* appearing as the agent of the passive. Examples such as the

following are given in support of this position:

(267) *Context: As doctors, we often find it easy to apply new remedies to our patients.*

Otan aftes i therapies efarmozonde ston eafto su /  
 when this.NOM.PL the.NOM.PL treatment.NOM.PL apply.NACT.3PL to.the.ACC self.ACC 2SG.POSS  
 mas, ine periploko.  
 1PL.POSS be.3SG complicated

‘When these treatments are applied to yourself/ourselves, it is complicated.’

(267) is, indeed, perfectly acceptable, making the observation in Angelopoulos et al. (2023) indisputably insightful. However, upon closer investigation, it is far from clear that examples like (267) constitute conclusive evidence that the implicit agent of the passive must be projected.

A first important observation concerns the discourse function of the reflexive in (267). In what is arguably the most natural reading of this example, the reflexive must be contrastively focussed: since doctors are usually those administering treatments, (267) is effectively foregrounding the fact that, here, the doctors are the undergoers. In other words, in the context provided in Angelopoulos et al. (2023), it seems that (267) is intended to be read as ‘when treatments are applied to YOURSELF, as opposed to other people’; or, more generally, the context given is intended to facilitate a reflexive event reading, where the (generic) putative binder is identified with the undergoer.

This observation in itself is not a problem, but it sets the stage for a separate observation that clearly raises questions. On the account in Angelopoulos et al. (2023), reflexives like that in (267) are locally bound by the agent pronoun. As such, it is predicted that examples like (267) should only be acceptable as descriptions of reflexive events, since the agent of the passive is identified through binding with the undergoer of the treatment. However, this simply is not the case, as (268) (now illustrating the necessary focus on the reflexive) clarifies:

(268) *The speaker, a non-doctor, has always being enthusiastic about medical breakthroughs. After signing up for an experimental treatment and having it go wrong, they say:*

Otan aftes i therapies efarmozonde ston EAFTO SU /  
 when this.NOM.PL the.NOM.PL treatment.NOM.PL apply.NACT.3PL to.the.ACC self.ACC 2SG.POSS  
 MAS, alazis / alazume ynomi.  
 1PL.POSS change.2SG change.1PL opinion.ACC

‘When these treatments are applied to yourself/ourselves, you/we change your/our opinion.’

(268) is perfectly acceptable in the context given, where, crucially, the agent is distinct from the undergoer.

Since the event in this case is not reflexive in any sense, it cannot be the case that what appears to be a reflexive pronoun in (268) is bound by the agent of the passive. If, in turn, there is no local binding by the implicit agent in (268), this type of example is unlikely to be probative with respect to the status of this element.

To further buttress the point, consider the crucial observation that examples like (268) continue to be acceptable even when a *by*-phrase denoting an agent distinct from the undergoer is introduced. Examples like (269) thus clarify that local binding is simply not at issue here.

- (269) Otan aftes i therapies efarmozonde ston EAFTO SU /  
 when this.NOM.PL the.NOM.PL treatment.NOM.PL apply.NACT.3PL to.the.ACC self.ACC 2SG.POSS  
 MAS apo to iatriko katestimeno, alazis / alazume ynomi.  
 1PL.POSS from the medical establishment change.2SG change.1PL opinion.ACC  
 ‘When these remedies are applied to yourself/ourselves by the medical establishment, you/we change your/our opinion.’

Note, finally, that the reasoning in Angelopoulos et al. (2023) cuts both ways: if the putative generic pronoun in the passive is active for Condition A, it should presumably also be active for Condition C. This, however, does not seem to be the case, as suggested by (270):

- (270) *Context: As doctors, we often find it easy to apply new remedies to our patients.*

Otan aftes i therapies efarmozonde se emas, ine periploko.  
 when this.NOM.PL the.NOM.PL treatment.NOM.PL apply.NACT.3PL to 1PL.ACC be.3SG complicated

‘When these treatments are applied to us, it’s complicated.’

In other words, Angelopoulos et al. 2023 is absolutely correct in pointing out that generic passives have a special status with respect to the binding of reflexive pronouns in Greek; but the relevant examples are in fact even more special than they initially seem. The original observation made in Angelopoulos et al. (2023), however, remains important: together with the further elaboration of the empirical picture in (269)-(270), it suggests at a minimum that apparently logophoric usages of the Greek reflexive extend beyond the *picture*-NP cases recently discussed in Angelopoulos and Sportiche (2022: ex. (18)). Note especially the lack of anaphor/pronoun complementarity between (267) and (270).<sup>74</sup>

<sup>74</sup>One goal for future work in this domain might be to elucidate whether the role of genericity in the relevant type of example is causal for the apparently exceptional behavior of the reflexive. Angelopoulos et al. (2023: p. 15) provide episodic counterparts of (267) that are given as unacceptable; but the same examples seem to improve once the reflexive is focussed, as in the following example (which, like those in the main text, need not denote a reflexive event):

- (i) [Non-doctor speaking again; this time they have been defending experimental treatments without ever undergoing one, and after they do they change their mind.]

#### 4.2.2 ON THE STATUS OF THE BY-PHRASE

I now turn to some brief remarks on the status of the Greek *by*-phrase. Recall that, under the account of Voice syncretism defended in section 2.3.2, nonactive morphology targets Voice heads failing to introduce an agent in the syntax. Adopting this account places clear bounds on the admissible analysis of the passive, which always surfaces with nonactive. In particular, the account of Voice syncretism pursued here presupposes that the passive will either altogether lack a constituent saturating the agent role (as argued thus far), or that, when present, such a constituent will not appear as a specifier of Voice. For the *by*-phrase, then, the account requires an approach treating it as an adjunct (see e.g. Bruening 2013; Legate 2014; Legate et al. 2020).

Once again, this type of approach has been proposed before for Greek (see Alexiadou et al. 2015); and once again, it has recently been called into question. I therefore devote some attention here to the relevant arguments purporting to support an analysis of the Greek *by*-phrase as an argument, recently put forward in Angelopoulos et al. (2020).

As a first argument, Angelopoulos et al. (2020) notes that the *by*-phrase can receive the same range of interpretations as those that are found in the (descriptively) corresponding active. Some relevant examples are noted below (from Angelopoulos et al. 2020: ex. (5)-(9)), with the translations indicating the thematic role that the authors assume is at play in each case:

- (271) a. Ta mal̥a mu steynoθikan apo tin komotria.  
the.NOM hair.NOM mine dry.NACT.PST.3PL from the hairdresser  
'My hair was dried by the hairdresser.' (agent)
- b. I tenia pu misiθike apo to spuðeo skinoθeti.  
the.NOM movie.NOM that hate.NACT.PST.3SG from the important director  
'The movie that was hated by the important director.' (experiencer)
- c. To γrama paralifθike apo ton Emona.  
the.NOM letter.NOM receive.NACT.PST.3SG from Emonas  
'The letter was received by Emonas.' (recipient)
- d. I epifania θa kopi ke θa xaraxθi apo to laser.  
the.NOM surface.NOM FUT cut.NACT.3SG and FUT engrave.NACT.3SG from the laser  
'The surface will be cut and engraved by the laser.' (instrument)

Such data are argued therein to support an analysis of the passive as deriving derivationally from the active. But such conclusions are at best premature. The type of data shown above, of interest since at least

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Otan omos i piramatiki therapia efarmostike STON EAFTO MU,  
when however the.NOM experimental.NOM treatment.NOM apply.NACT.PST.3SG to.the.ACC self.ACC 1SG.POSS  
alaksa ynomi.  
change.PST.1SG opinion.ACC

'When the experimental treatment was applied to myself, I changed my mind.'

Jaeggli (1986), suggest in current terms that the exact interpretation of the external role of the passive can vary contextually based on the properties of the VP (Marantz 1984); it is observations of this type that has led to the adoption of the generalized term *initiator*, from Ramchand (2008), as the label for the role assigned to the *by*-phrase in Bruening (2013) and much subsequent work. From this perspective, there is little reason to countenance the interpretations shown in (271) as distinct roles in the deep sense, much less to assume that events of hating, receiving, and the like cannot be construed agentively. Crucially, Greek is a language that does sometimes make a diagnosable cut between distinct ‘roles’: recall from section 2.3.2 that there is a class of subject experiencer verbs that warrant recognizing their external argument as of a kind distinct from that of prototypical transitives. Importantly, this distinction is made on the basis of a range of properties that covary: unlike canonical transitives, subject experiencer verbs cannot undergo passivization or agent nominalization, and they obligatorily occur with nonactive morphology. None of these properties, much less their sum, characterize the verbs in (271), suggesting that the appropriate cut is between most verbs and the class of subject experiencer verbs, not between verbs with ‘agents’ and those with other ‘roles’ in the sense intended in (271).

A second argument given in Angelopoulos et al. (2020: ex. (10)) in support of a treatment of the *by*-phrase as an argument comes from idioms. Specifically, the following example is given as evidence that the *by*-phrase can host the subject of idioms:

- (272) θα ενιμεροθικε            απο κατσο pulaci.  
       must inform.NACT.PST.3SG by some little.bird  
       ‘S/he must have been informed by some little bird.’

The choice of the term ‘idiom’ here is perhaps unfortunate, as (272) does not instantiate an idiom in the diagnostically meaningful sense any more than its English translation does. That (272) instantiates instead a type of metaphor for the noun ‘bird’ is evident from the fact that, just as in English, the relevant turn of phrase has no fixed parts other than this noun itself: in particular, the verb can vary freely.

- (273) a. θα κατατοπισθικε        απο κατσο pulaci.  
       must fill.in.NACT.PST.3SG by some little.bird  
       ‘S/he must have been filled in by some little bird.’  
       b. θα παραciniθικε            απο κατσο pulaci.  
       must motivate.NACT.PST.3SG by some little.bird  
       ‘S/he must have been egged on by some little bird.’

As expected under the account of the Greek passive defended here, the *by*-phrase in fact cannot participate in idiom formation. (274)-(275) give two illustrative examples showing that passivizing idioms normally leads to retention of only the (bizarre) compositional meaning, regardless of whether the idiom includes the apparent ‘subject’ (274) or not (275). Note that (274) does not instantiate a true subject idiom: the obligatoriness of

clitic doubling suggests that the nominative-marked nominal in fact originates very low in the structure (see Anagnostopoulou 2003b on intervention configurations in Greek).<sup>75</sup> Note also that the language does have passivizable idioms, which are discussed in section 4.4.2, but these are VO idioms, excluding the agent.

- (274) a. Ton Yiani #(ton) pire o đjaolos.  
 the.ACC John.ACC 3SG.M.ACC take.PST.3SG the.NOM devil.NOM  
 ‘John was reprimanded.’  
 b. #O Yianis parθike apo ton djaolo.  
 the.NOM John.NOM take.NACT.PST.3SG from the devil
- (275) a. O Janis ti đagose ti lamarina.  
 the.NOM John.NOM 3SG.F.ACC bite.PST.3SG the.ACC iron.plate.ACC  
 ‘John fell in love.’  
 b. #I lamarina đagoθike apo to Jani.  
 the.NOM iron.plate.NOM bite.NACT.PST.3SG from the John

Finally, Angelopoulos et al. (2020) argues that, unlike *bona fide* adjunct prepositional phrases, the *by*-phrase of the passive can antecede (non-logophoric) reflexive pronouns. The relevant contrasts are of the kind in (276).

- (276) a. Aftes i lisis protaθikan apo tus  
 DEM.NOM.PL the.NOM.PL solution.NOM.PL suggest.NACT.PST.3SG from the.PL  
 psichoθerapeftes<sub>i</sub> ja ton eafto tus<sub>i</sub>.  
 psychotherapist.PL for the self 3PL.GEN  
 ‘These solutions were suggested by the psychotherapists for themselves.’  
 b. \*Aftes i lisis protaθikan xoris tus  
 DEM.NOM.PL the.NOM.PL solution.NOM.PL suggest.NACT.PST.3SG without the.PL  
 psichoθerapeftes<sub>i</sub> ja ton eafto tus<sub>i</sub>.  
 psychotherapist.PL for the self 3PL.GEN  
 ‘These solutions were suggested without the psychotherapists for themselves.’ (Angelopoulos et al. 2020: ex. (27))

These interesting examples raise various initial questions. They are not offered alongside a discussion of

<sup>75</sup>It is interesting, however, that quite a few VO idioms also require clitic doubling of the object. This seems true of (275), and of quite a few more:

- (i) O Janis #(to) trivi to piperi.  
 the.NOM John.NOM 3SG.N.ACC grind.3SG the.ACC pepper.ACC  
 ‘John is getting some.’ (without doubling: only ‘John is grinding the pepper’)

This seems to point to a broader link between clitic doubling and expresiveness, visible also in the requirement for epithets to be clitic-doubled in the language (see Anagnostopoulou 2017: p. 25; Paparounas and Salzmann 2023: fn. 25). See also Alexiadou and Anagnostopoulou (2023) for ‘bare’ clitics in Greek idioms.



where adjunct PPs like those in (276b) are assumed to attach, making evaluation of the exact claim made here difficult. Moreover, acceptability contrasts like those in (276) can hardly be said to be unexpected even under the *by*-phrase-as-an-adjunct view; on this view, too, the *by*-phrase is closely linked to both event and argument structure, and it is not clear what we learn by contrasting it with a more peripheral adjunct like those headed by *without*. Issues of plausibility arise as well; for instance, without a suitable context, it is not immediately clear what kinds of situations sentences like (276b) are meant to describe.

But there is a more specific empirical concern with these examples. Angelopoulos et al. (2020) mention that the informativity of examples like (276) is ensured by the fact that the Greek reflexive pronoun lacks logophoric usages; but they do not take into account the non-reflexive readings of this element, which can be interpreted to mean ‘one’s (inner) self’. As documented in Angelopoulos and Sportiche (2022), such interpretations make apparent non-local binding possible, when in fact there arguably is no binding involved in the first place. Thus, in examples like (277), what appears to be a reflexive pronoun is very likely a simple possessed noun (‘his Self’), with the possessor being coreferential with *Janis*.

- (277) Meta apo okto sineðries me to Jani<sub>i</sub>, o psiçotherapeftis arçise na vlepi  
 after from eight session.PL with the John the.NOM therapist.NOM begin.PST.3SG COMP see.3SG  
 tis pio skotines ptixes tu eaftu tu<sub>i</sub>.  
 the.ACC.PL most dark.ACC.PL aspect.ACC.PL the.GEN self.GEN 3SG.POSS  
 ‘After eight sessions with John, the therapist started seeing the darkest sides of his inner self.’

As noted by Angelopoulos and Sportiche (2022), one way to control for this confound involves predicating concrete properties of the reflexive: these will be incompatible with the abstract, ‘psyche’ reading, thus admitting only the true reflexive reading. (278) is one illustration of this reasoning.

- (278) a. ?O psixotherapeftis ipe tis Marias oti vriski ton eafto  
 the.NOM therapist.NOM say.PST.3SG the.GEN Mary.GEN COMP find.3SG the.ACC self.ACC  
 tis ðaraleo.  
 3SG.F.POSS courageous.ACC  
 ‘The therapist told Mary that he finds her inner self courageous.’  
 b. \*O jatros ipe tis Marias oti vriski ton eafto  
 the.NOM doctor.NOM say.PST.3SG the.GEN Mary.GEN COMP find.3SG the.ACC self.ACC  
 tis xlomo simera.  
 3SG.F.POSS pale.ACC today  
 ‘The doctor told Mary that he finds herself pale today.’

(modified from Angelopoulos et al. 2020: ex. (8))

Now, consider that examples like (276) do little to control for this confound. In fact, these specific examples from Angelopoulos et al. (2020) could even be said to strongly favor the ‘psyche’ reading of the reflexive, insofar as they involve therapy contexts; other examples in this paper are simply neutral between the reflexive

and psychological construals, but do not in any case explicitly control for the latter.<sup>76</sup>

It thus seems that, in the light of broader considerations, it is not clear that examples like those in Angelopoulos et al. (2020) compel us towards treating the *by*-phrase on a par with ‘core’ arguments.

### 4.2.3 BROADER DISCUSSION

The previous sections have provided empirical arguments in favor of a treatment *i*) of the implicit agent in the Greek passive as unprojected, and *ii*) of the *by*-phrase as an adjoined element. In particular, I have shown that recent arguments to the contrary in Angelopoulos et al. (2023), Angelopoulos et al. (2020) are subject to various confounds, though these works clearly do much to bring within reach new issues in the domain of Greek eventive passives, and are thus to be commended.

This empirically oriented discussion has been interesting in its own right; but it is meaningful to ask, at the present juncture, what the theoretical positions are that arguments such as those in Angelopoulos et al. (2023), Angelopoulos et al. (2020) are taken to support; and where we are left if, as I have argued, the facts in Greek in fact necessitate a very different approach.

Angelopoulos et al. (2023), Angelopoulos et al. (2020) form part of a broader theoretical move articulated at greater length in Collins (2022); while I cannot undertake a full exposition of that system here, much less a proper comparison between it and the system advocated in this dissertation, I offer here a focussed discussion enabled by the empirical points raised in this section.

The theory in Collins (2022) has two components relevant here. The first is a principle of *thematic bi-uniqueness*, such that there is a one-to-one mapping between thematic roles and syntactic ‘arguments’, as embodied in the *Theta Criterion* of Chomsky (1981: p. 36). The second is an articulated theory of null pronouns.

Though in principle independent, the two components are in this case inextricably linked. Thematic biuniqueness will demand, for many core cases, that an implicit argument be identified with a syntactically realized nominal; and the (often diverse) properties of implicit arguments must then be built into the theory of syntactically realized empty categories. See Collins (2022: p. 10) for an explicit statement to this end.

For the sake of illustration, consider Table 7, listing the typology of null pronouns assumed in Collins

<sup>76</sup>What remains to be understood is the status of examples where we predicate a concrete property of the reflexive in the context of a *by*-phrase, as in (i). This example is not clearly unacceptable, for me and my consultants; it is not immediately clear what to make of such facts, however, given that binding into spatial prepositional phrases is known to show complexities (see e.g. Bryant 2022 for English). See Collins (2022) for discussion of related data from English.

(i) [After a grueling final game, the winning team celebrates.]

?I sambania psekastike apo tus pextes pano stus (iðromenus) eaftus tus.  
the.NOM champagne.NOM spray.NACT.PST.3SG from the.PL player.PL on to.the.PL sweat.PTCP.PL self.PL 3PL.GEN

‘The champagne was sprayed by the players on their (sweaty) selves.’

(2022). The three pronouns listed therein – generic, existential, and definite – bear a significant explanatory burden in the overarching theory: facts concerning argument structure are taken to be driven largely by the properties and distribution of these elements.

	Person	Number	Human	Animate
$pro_{\text{GEN}}$	2SG/1PL		+	+
$pro_{\text{EXI}}$	$\emptyset$	$\emptyset$	+	+
$pro_{\text{DEF}}$	1/2/3	SG/PL	$\pm$	$\pm$

Table 7: Null pronouns and their feature specification in Collins (2022), as schematized in Angelopoulos, Collins, Michelioudakis, and Terzi (2023).

As an example of how the theory gets mileage out of the typology in Table 7, consider the case of supposed binding by the implicit agent of the Greek passive discussed in section 4.2.1. According to the argument discussed therein, from Angelopoulos et al. (2023), the implicit agent is able to bind reflexive pronouns, but only when it is identified with the  $pro_{\text{GEN}}$  of Table 7. The resulting approach thus carves out the empirical space in a particular way, such that, whenever an implicit argument seemingly fails to pass diagnostics taken to test for projectedness, an independent factor is to blame; in this case, this factor is the distribution of empty categories (see section 4.2.1.1 for one case where the blame is put elsewhere).

This move is perfectly admissible, from a theoretical point of view: nothing rules out a theory with a typology like that in Table 7 in principle. I have argued above that this type of theory is not empirically supported by the Greek facts; but it is meaningful to ask what this theory accomplishes more generally.

Theories incorporating Table 7 seem only explanatory to the extent that a principled reason can be given for why the distribution of empty categories is the way it is needed to be. In the case at hand, it is perfectly possible to state, as Angelopoulos et al. (2023) do, that only generic  $pro$  can act as a binder in Greek. But, though storable in prose, this type of restriction is only meaningful once complemented with an answer to the question of why this must be so: why does only generic  $pro$  bind? More generally, it is perfectly possible to postulate empty categories with distributional restrictions *ad nauseam*; but making the resulting theory explanatory is a broader, and perhaps more difficult, question.

A separate troubling property of Table 7 is that it seems to be based on a presumption, namely, that the properties of (argument-structurally relevant) implicit arguments are identifiable with well-established properties of pronouns. But it is well-known that the properties of implicit arguments (both existential and definite) can diverge systematically from those of overt ones; see A. Williams (2015: pp. 99–115) for one recent summary. Taking the implicit agent of the passive as one example, this element obligatorily scopes narrowly in Greek and many other languages, as shown in (257); this observation is in tension with the behavior of overt indefinites in many cases. To the extent that differences of this type are pervasive, they may demand a principled treatment following from the architecture (for instance, by allowing certain implicit arguments to be present only as entailments at the interpretive level). If implicit arguments are always syntactically realized,

as in the theory discussed here, these facts seem unexpected.

These somewhat broad points stand alongside specific concerns on the syntax and morphology of argument structure alternations.

According to the theory of the passive entailed by the assumptions in Collins (2022), the passive is little more than a transitive with a ‘special’ external argument, either a *by*-phrase or a null pronominal. This is so because, unlike theories embracing thematic biuniqueness but also postulating ‘lexical’ operations, the theory in Collins (2022) is syntactic: it is therefore unable to posit a lexical operation of passivization that eliminates one role of a transitive entry prior to the syntax, creating an intransitive passive verb that will successfully assign its single role in a biuniqueness-compliant way. *Ergo*, the external argument of the passive must be syntactically realized.

This position raises various specific questions. For instance, in Greek, passivization promotes the theme to surface subject; if the agent is syntactically realized, then this is an instance of non-intervention, and must be derived by stipulation (see Angelopoulos et al. 2023 for one implementation). Relatedly, the distribution of voice morphology, left wholly undiscussed in these works, is predicted to be random: if passives and their ilk are structurally just like actives, the morphological distinctions between actives and the broad range of syntactically passive-like categories found in Greek and the many languages like it must be little more than an accident. Though possible in principle, this stance is strongly counterevidenced by the considerations in this dissertation suggesting that voice morphology bears a principled relation with voice syntax.

### 4.3 STATIVE PASSIVE: BACKGROUND POINTS

#### 4.3.1 THE BROADER STAKES: THREE QUESTIONS ON MIXED CATEGORIES

At issue in this section is the proper analysis of Greek stative passives such as those exemplified in (279). I use the term *stative passive* as a convenient label that carries only a few, reasonable-seeming, analytical presuppositions: firstly, that structures like those in (279) are passive-like insofar as they involve a single overt syntactic argument, one that seems identifiable with the promoted internal argument of the corresponding eventive passives (280); and secondly, that a crucial component of the interpretation of structures like (279) is the signification of a state somehow linked to the relevant event.

- (279) a. I            porta        ine        kliđo- men- i.  
           the.NOM door.NOM be.3SG lock    PTCP F.NOM  
           ‘The door is locked.’
- b. I            kliđo- men- i        porta  
           the.NOM lock    PTCP F.NOM door.NOM  
           ‘The locked door.’

- (280) I        porta        eçi        kliðo- θ-        i.  
 the.NOM door.NOM have.3SG lock    PFV.NACT PST 3SG  
 ‘The door has been locked.’

Structures with this descriptive profile are often referred to also as *adjectival passives*, a terminological choice guided largely by the observation that participles like those in (280) transparently have the external distribution of adjectives; in Greek, they also take adjectival inflection, glossed separately from the stativizer *-men-* in (280) (but not necessarily elsewhere in the chapter).

Note that simplex (i.e. non-event-entailing) adjectives are morphologically distinguished from participles in Greek: in particular, they do not carry stativizing morphemes such as *-men-* in (279), see (281).

- (281) I        porta        ine        prasin- (\*men-) i        / pal- (\*men-) ia.  
 the.NOM door.NOM be.3SG green    PTCP F.NOM old    PTCP F.NOM  
 ‘The door is green/old.’

Once the relevant Roots have been verbalized, however, they freely participate in stative passive formation: crucially, in these cases the participle retains the verbalizing morphology.<sup>77</sup> (282) illustrates.

- (282) a. I        prasini    bluza    ksevapse    ke    prasin- is-    e    ola        ta  
 the.NOM green.NOM shirt.NOM fade.PST.3SG and green    VBZ 3SG all.ACC.PL the.ACC.PL  
 ruxa        sto    plindirio.  
 clothes.ACC.PL in.the washing.machine  
 ‘The green shirt underwent color bleeding and made all the clothes in the washing machine green.’
- b. I        porta        prasin- is-    e.  
 the.NOM door.NOM green    VBZ 3SG  
 ‘The door turned green.’ (e.g. by fading due to the sun, or by having moss grow on it)
- c. I        porta        ine        prasin- is-    men- i.  
 the.NOM door.NOM be.3SG green    VBZ PTCP F.NOM  
 ‘The door is in a state resulting from a greening event.’

Thus, though distributing externally like adjectives, stative participles seem to carry event implications, and can bear the categorizing morphology of verbs. These preliminary observations suggest that, one way or another, stative passives must be identified as a *mixed category*, one with both adjectival and verbal properties. In this respect they can be thought of as a possible parallel case to eventive deverbal nominalizations (283):

- (283) The frequent color- iz- ation of old photographs by trained artists...

<sup>77</sup>For verbalizing morphology in Greek, see e.g. Vassilios Spyropoulos, Revithiadou, and Panagiotidis 2015, Pappas 2023: sec. 4.

Of many important questions in the domain of mixed categories, three will be of particular interest here.

(284) *Three questions on mixed categories*

- a. *Empirical question:* Which, if any, of the properties of purely verbal categories are inherited by the mixed category?
- b. *Analytical question:* How are patterns of (non-)inheritance to be accounted for?
- c. *Diagnostic question:* To what extent do diagnostics of the properties of verbal categories apply reliably to mixed categories?

Let us consider each question in turn, referring for the moment to nominalizations as an illustrative example before returning to our main focus, stative passives.

#### 4.3.1.1 Empirical question: (Non)-inheritance of verbal properties

In the domain of nominalization, the toy example in (283) has already raised the possibility that (some) nominalizations may bear verbal properties, in the form of verbalizing morphology and (some kinds of) eventive interpretations. But patterns of inheritance in this domain clearly run more deeply: in fact, (283) itself shows that deverbal nominals seem able to host argument structure.

A set of observations central to discussions of nominalization since Grimshaw (1990) concerns apparent patterns of co-dependence between event structure and argument realization in deverbal nominals (see Alexiadou and Grimshaw 2008 for one overview). Consider (285) as one illustrative instantiation of this pattern: the presence of an event-related (in this case aspectual) modifier seems to force the presence of an (*of*-introduced) argument.

(285) The destruction \*(of the city) in a day.

Patterns of correspondence between event and argument structure of this kind led Grimshaw (1990) to propose that deverbal nominals are many-ways ambiguous between different kinds of readings; one of these readings involves an eventive denotation and the obligatory presence of argument structure, yielding so-called Complex Event Nominals.

But patterns of non-inheritance are also found. It was such patterns that led Chomsky (1970) (and earlier work, according to Marantz 1997: p. 213) to argue against what is called therein a ‘transformational’ analysis deriving (certain) deverbal nominals from clauses. One example comes from the well-known observation that the raising syntax found with verbs like *appear* (286a) does not survive in the nominalization *appearance* (286b). Importantly, it is not the case that all derivationally related nominals lack this verbal syntax, as illustrated by gerunds (286c).

(286) a. Mary appears to be the best candidate.

- b. \*Mary's appearance to be the best candidate
- c. Mary's appearing to be the best candidate

Whether patterns like (286) can be reconciled, if at all, with analyses of English CENs positing verbal phrasal structure in these nominals is an open question; see e.g. Bruening 2018 versus Wood 2021.

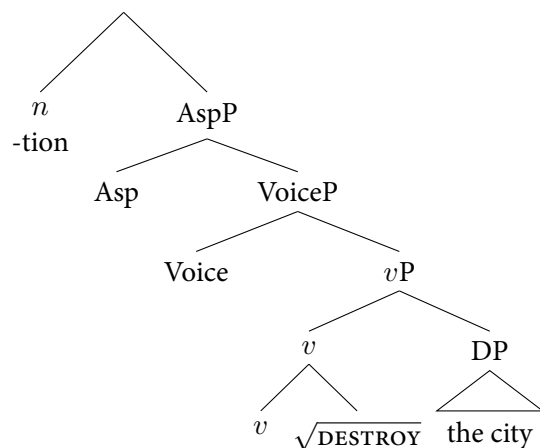
As a further example, consider patterns of non-inheritance of (inherent) Case assignment, recently highlighted for Icelandic in Wood (2021). In Icelandic, the dative case that is assigned by some verbs to their objects in the transitive (287a), and that is retained under eventive passivization (287b), does not survive under nominalization (287c). If, as Wood argues, Case assignment of this kind is a *vP/VoiceP* phenomenon and the relevant nominalizations pass other diagnostics for CEN-hood, then, at a minimum, something has to give.

- (287)
- a. Þau björguðu sjómanninum.  
3PL.NOM rescued sailor.DEF.DAT  
'They rescued the sailor.'
  - b. Sjómanninum var bjargað (af þeim).  
sailor.DEF.DAT was rescued by 3PL  
'The sailor was rescued (by them).'
  - c. björg- un sjómannsins / \*sjómanninum  
√RESCUE NMLZ sailor.GEN sailor.DAT  
'The rescue of the sailor.'

(Wood 2021: pp. 78–79)

#### 4.3.1.2 Analytical question: Whence (non-)inheritance?

In syntactically oriented approaches to word formation, the co-dependence between event and argument structure just discussed has widely been taken to evidence analyses that employ *Phrasal Layering*: on this type of approach, one type of nominalization yields both eventive interpretations and argument structure because it embeds phrasal verbal syntax (see among many others Alexiadou 2001; Borer 2003; Bruening 2013; Fu, Roeper, and Borer 2001). For instance, the complex event reading of *destruction of the city* is taken to correspond to a structure like (288):

(288) *CEN à la Phrasal Layering*

Such analyses are perfectly poised to capture patterns of inheritance of verbal properties: in the case of (288), the idea is that the verbal substructure ensures both eventive interpretations and certain types of argument licensing.

Problems for phrasal layering analyses will then arise whenever we observe patterns of *non-inheritance* of verbal properties. Such patterns are in fact also found, as argued above. For instance, analyses of English CENs as in (288) owe at the very least an explanation for the patterns noted in Chomsky (1970), which in fact antecede such analyses. Non-inheritance does not automatically rule out an analysis such as (288), but Phrasal Layering has as its disposal a limited way of dealing with such instances: given (288), non-inheritance must be due to either *i*) some projection that is absent from the nominalization but present in the clausal counterpart, or *ii*) some independent property of the nominalizing layer, which is not present in the clausal counterpart. Non-inheritance patterns not attributable to either of these sources are unexpected; Wood (2021) argues that a range of facts from Icelandic are unexpected in precisely this way on a layering analysis, and must instead be understood along different lines (see below).

#### 4.3.1.3 Diagnostic question

Methodologically speaking, investigations of the structure of mixed categories must reckon with (284c) above: to what extent can structural diagnostics from the clausal domain be extended straightforwardly to the mixed category?

The answer to this general question is not likely to be straightforward; at the same time, the domain of nominalization is rife with situations where, at a minimum, diagnostics carried over from the verbal domain seem to behave in a more liberal fashion (see Wood 2021: sec. 2.5, ch. 4 for recent discussion). Consider, for



instance, the appearance in English of *by*-phrases in nominals that are not clearly deverbal:

- (289) a. This sketch by Picasso sold for quite a bit.  
 b. A foul by the midfielder caused the game to be halted.

The point of such examples is not to suggest that *by*-phrases in nominals must necessarily be treated differently in nominals versus clauses (see esp. Bruening 2013 on related points), but merely to illustrate that recategorization has the potential, descriptively at least, to introduce modification possibilities of its own, distinct from what one observes in the verbal domain proper. In other words, facts such as (289) do little on their own to illuminate the proper analyses of such cases, but they do constitute a cautionary note against a piecemeal extension of diagnostics from the verbal to the recategorized domain: for instance, it would clearly be premature to conclude from simple inspection of (289) that the nominals at hand must include a Voice projection.

#### 4.3.2 RETURN TO STATIVE PASSIVE: ROADMAP

The key questions that arise in the domain of nominalization, as just briefly surveyed, find parallels in the domain of stative passives. Here, too, issues concerning the interplay of event and argument structure have been central, as have been approaches couched in different views of the nature of word formation.

What might be termed the classical treatment of stative passives takes differences between them and their eventive counterparts as evidence in favor of a modular division between the syntax and a generative lexicon: on this approach, stative passives are derived in the lexicon, and eventive passives in the syntax. This is the conclusion in Wasow (1977), inherited by some later work (Horvath & Siloni 2008; Meltzer-Asscher 2011).<sup>78</sup> For languages like English, where both eventive and stative passives are formed participially, the eventive/stative dichotomy has also sometimes been mapped onto a categorial distinction between verbal and adjectival participles, following Wasow (1977); see Bešlin (2022) for an insightful reassessment of this view.

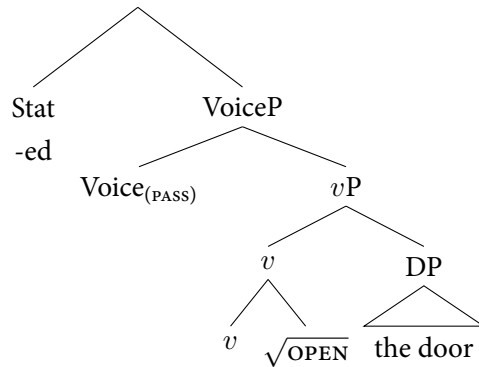
An important move in the literature introduces the position that, in fact, stative passives can be built syntactically: Kratzer (2001) proposes that (at least some) stative passives are formed in the syntax, and this line of inquiry is taken up further in Embick (2004a) (under somewhat different assumptions than those of Kratzer's, and with a different focus). That statives are syntactically constructed is a position characterizing much later work (see e.g. Alexiadou and Anagnostopoulou 2008; Alexiadou et al. 2015; Anagnostopoulou 2003a; Bešlin 2022; Bruening 2014; Embick 2023).

This position – that stative passives are derived in the syntax – has given rise to Phrasal Layering analyses of these categories, too. Thus, the works cited immediately above propose some version of (290), which is to

<sup>78</sup>Some theories adhere to the modular distinction discussed in the main text, but deny the existence of syntactic word formation, such that both types of participles are derived in the lexicon; see Bresnan 1982; Levin and Rappaport 1986.

be read as stating, abstractly, that a stative passive is a stativized phrasal clausal structure, paralleling Phrasal Layering analyses of deverbal nominalizations (288).

(290) *Stative passive à la Phrasal Layering*



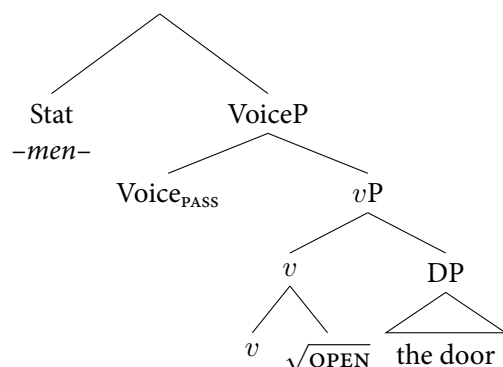
On this type of approach, the crucial dimension of variation across structures is expected to involve the size of the embedded verbal projection: we thus expect cross-linguistic differences along these lines (see e.g. the comparison between Greek and German/English in Alexiadou et al. 2015: ch. 5), as well as possible analytical disagreements about whether a given layer is present or not in the same construction (compare e.g. the analyses of English statives in Alexiadou et al. 2015: ch. 5 and Bruening 2014).

Such points of variation aside, analyses such as (290) will easily capture patterns of inheritance of verbal properties, and will have at their disposal a limited number of ways of accommodating patterns of non-inheritance, as discussed above for CENs.

Greek has arguably been the poster child for Phrasal Layering analyses of stative passives ever since the pioneering work of Anagnostopoulou (2003a). This work observed that Greek stative passives license agent-oriented modifiers seemingly freely; (291) is one example. The assumption that such modifiers must be hosted in a (phrasal) Voice projection suggests that this projection must be present in the structure of (291); hence the adoption of (292) as a basic analysis, and the emergence of a view according to which the presence/absence of Voice is one crucial point of parametric variation distinguishing languages like Greek from, say, German (see e.g. Rapp 1996).

- (291) I        porta    ine    aniy-    meni    viea    / me    losto        / apo    ton    ðiarikti.  
 the.NOM door.NOM be.3SG √OPEN PTCP violently    with crowbar.ACC    from the.ACC burglar.ACC  
 ‘The door is opened violently/with a crowbar/by the burglar.’

(292)



These conclusions have more or less formed the basis for work on Greek statives ever since Anagnostopoulou (2003a): see in particular Alexiadou and Anagnostopoulou (2005, 2008), Alexiadou et al. (2015), Anagnostopoulou (2016), Anagnostopoulou and Samioti (2013, 2014), Samioti (2015). This body of work has yielded a number of valuable insights, to be outlined briefly below; but the focus on agent-oriented modification has come at the cost of other kinds of modification in the Greek stative passive being left relatively underexplored.

Here, I first take up the task of examining the properties of stative passives beyond the domain of agent-oriented modification, uncovering a range of novel generalizations. Taken together, these generalizations seem to point in a direction opposite to what is the received wisdom on Greek, ostensibly motivated by examples such as (291).

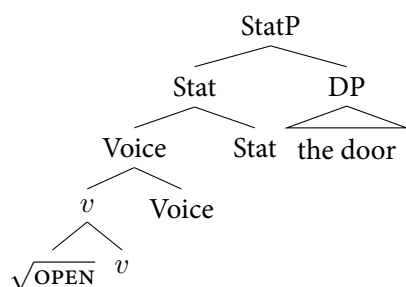
In particular, the generalizations below run counter to several central predictions of the Phrasal Layering analysis in (292) as applied to Greek. Structures like (292) make a strong prediction for languages like Greek, where Voice is ostensibly present in stative passives: they predict that, all things being equal, stative passives in this language are little more than stativized eventive passives, i.e. passive VoicePs that have undergone stativizations.

I present below a range of generalizations in sharp tension with this view, showing that stative passives in Greek pattern wholly unlike their eventive counterparts along two dimensions. Firstly, event-oriented modification treats the events in the eventive and stative passive very differently; a detailed case study of Greek approximatives highlights this point. Secondly, the sole argument of the Greek stative passive shows a profile sharply different from that of the surface subject in the eventive passive: it does not originate *v*P-internally, and is integrated in the thematic structure of the state, not the event. In other words, Greek stative passives are neither stativized eventive passives, nor true passives at all.

In place of the layering analysis, I propose to treat Greek stative passives as complex heads, in the sense advocated for English stative passives by Biggs and Embick (2023), Embick (2021, 2023); for Icelandic nominalizations by Wood (2021); and for (some) German nominalizations by Benz (2023). The gist of the proposal is illustrated in (293). I take the central divergence of this type of analysis from phrasal layering to lie in the fact that any ‘arguments’ are syntactically introduced high, above the stativizing layer. As a result, there is no

projection that is unambiguously phrasal (cp. Chomsky 1994) below the stativizer.

(293) *Stative passive as a complex head*



I argue that (293) insightfully accounts for the core generalizations identified below; the explanatory potential of (293) in turn serves as an existence proof for this type of structure, echoing similar conclusions in recent work cited above. In this sense, the claim made here is weaker than conceivable alternatives: the claim is emphatically not that Layering structures like (292) must be ruled out in principle, but merely that structures like (293) must be ruled in as an option in the grammar, and that it is this option that is favored by the facts of Greek.

More broadly, the perspective taken here breaks with the assumption, implicit in much recent work on deverbal mixed categories, that the analytical space in this domain is defined exhaustively by the choice between ‘lexical’ and syntactic word formation, where ‘syntactic’ necessarily entails ‘phrasal’. In short, (293) raises the possibility of a third way, where the notion ‘syntactically constructed’ is divorced from the notion ‘containing phrasal structure identical to clausal projections’.

At the same time, (293) raises a number of important questions that are not resolved here. For instance, I do not take a stance on the question of how exactly the not-unambiguously-phrasal nodes in (293) should be labeled; the crucial point is simply that the sole DP in (293) originates high. I also do not take up the very important question of what, mechanically speaking, forces the creation of a structure like (293), and additionally prevents, in this language, the association of the relevant strings with a structure like (292).

There is a clear sense, then, in which the account presented here is, I believe, empirically well-motivated, but theoretically incomplete; the hope is that future work on these issues will be stimulated by the disentangling, below, of the predictions of (292) from those of (293).

These points, novel for this language and premised on novel observations, suggest that the conclusions drawn in favor of Phrasal Layering in Greek from patterns of agent-oriented modification must be revisited. I conclude the section by offering a first round of discussion to this end, noting that the empirically situation here turns out to be much more complex than noted in previous work. The relevant points of complexity arise from the nuances involved in extending diagnostics from the verbal domain to mixed categories, briefly raised with reference to nominalization in section 4.3.1.3; before proceeding, I clarify what the issues are here.

In the domain of nominalization, the apparently more liberal nature of certain kinds of modification is a familiar problem. In stative passives, complexities of a related, but eventually different, nature arise from the presence of two eventualities in the structure.

Consider, for instance, the Greek example in (294). It involves a manner adverb modifying a stative passive; and it is possible to conclude, from the mere fact that the adverb is licensed here, that (294) must illustrate a *bona fide* level of event modification, with the example asserting that the poster in a state resulting from a hanging event that unfolded in an awkward or sloppy manner.

- (294) I       afisa       ine   kremas- men- i       atsala.  
 the.NOM poster.NOM be.3SG hang   PTCP F.NOM sloppily  
 ‘The poster is sloppily/awkwardly hung.’

But we must be wary of reaching this conclusion too fast, since (294) is compatible with a reading on which the adverb has little to do with the underlying event: it is possible to utter (294), for instance, in a situation where we know the poster to have been hung up perfectly, but where the adhesive later failed, resulting in an awkward way of hanging at present. That this construal is at least possible is clarified by similar-looking examples such as (295), where there is no plausible event-related construal. There is no sense in which the poster-hanging event could reasonably have taken place in an upside-down fashion; rather, the poster is in an upside-down state.

- (295) I       afisa       ine   kremas- men- i       anapoða.  
 the.NOM poster.NOM be.3SG hang   PTCP F.NOM upside.down  
 ‘The poster is hung upside down.’

What is intended here by examples (294) and (295) is a cautionary note arising from the properties of stative passives: since they involve an event and a state, either eventuality could, in principle, be targeted for modification; and while it is easy to tell which one is actually targeted in examples like (295), this is not as clear in (294). This type of complexity is emphasized by studies focussed on issues of the modification of eventualities in stative passives (see especially Gehrke 2011, 2015; McIntyre 2013, 2015; Rapp 1996).

Consider now that such nuances have not always been taken into account in studies of agent-oriented modification in Greek, with the notable exception being Alexiadou et al. (2015: ch. 5), at least to some extent. I thus revisit this issue in section 4.6, arguing that, at a minimum, agent-oriented modifiers are not clearly as freely attachable in stative passives as they are in eventive passives. It is possible to draw different kinds of conclusions from this point onward; it must be noted, however, that the issue of whether Voice must be included in the complex head in (293) is, strictly speaking, independent of the arguments that this type of object is what is needed for Greek. It is the latter issue that forms the main focus here.

### 4.3.3 BACKGROUND ON (GREEK) STATIVE PASSIVES

#### 4.3.3.1 Basic properties

In languages that build their eventive passives by means of a participle, eventive and stative readings of the passive can be surface-identical. English is such a language: thus, the two examples in (296) are indeed ambiguous between eventive and stative readings.

- (296) a. The meat was roasted.  
           ✓*eventive*: the meat underwent a roasting event  
           ✓*stative*: the meat was in a state resulting from a roasting event  
 b. The meat is roasted.  
           ✓*eventive*: the meat undergoes a roasting event (habitually)  
           ✓*stative*: the meat is in a state resulting from a roasting event

In languages like English, then, disambiguating between the two readings is imperative whenever the stative/eventive distinction is likely to be pertinent. Sometimes, the participial morphology itself comes to the rescue, as in English *shaven* versus *shaved* and similar cases (see Embick 2004a). Otherwise, we must resort to teasing apart the different readings with modifiers: (297) illustrates with a manner adverbial, and (298) with a temporal adverbial.

- (297) a. The meat was roasted quickly. ✓*eventive* ✗*stative*  
 b. The meat is roasted quickly. ✓*eventive* ✗*stative*  
 (298) a. The meat was roasted at 3pm. ✓*eventive* ✗*stative*  
 b. The meat is roasted at 3pm. ✓*eventive* ✗*stative*

Recall now, that, in Greek, telling apart stative passives from their eventive counterparts is considerably more straightforward: eventive passives are built affixally (299), and participial morphology is reserved for the stative passives (300). In fact, as (300) shows, the language shows two distinct stativizers, *-men-* and *-t-*, yielding different kinds of states (see section 4.3.3.2).

- (299) To kreas psi- θ- ik- e.  
 the.NOM meat.NOM √ROAST PFV.NACT PST 3SG  
 ‘The meat was roasted.’

- (300) a. To kreas ine psi- men- o.  
 the.NOM meat.NOM be.3SG √ROAST PTCP N.NOM  
 ‘The meat is roasted.’

- b. To kreas ine psi- t- o.  
 the.NOM meat.NOM be.3SG  $\sqrt{\text{ROAST}}$  PTCP N.NOM  
 ‘The meat is of the roast kind.’

The formations in (300) can be shown to be stative using the expected diagnostics. For instance, in (301a), temporal modification of the event is impossible, and a temporal adverbial is only licensed if it can modify the state (301b). Similarly, manner adverbs not construable with respect to the event are in general difficult in the stative passive (302) (see also (295)–(294) above).

- (301) a. #I porta ine va- men- i xthes.  
 the.NOM door.NOM be.3SG  $\sqrt{\text{PAINT}}$  PTCP F.NOM yesterday  
 ‘The door is painted yesterday.’  
 b. I porta itan va- men- i xthes.  
 the.NOM door.NOM be.PST.3SG  $\sqrt{\text{PAINT}}$  PTCP F.NOM yesterday  
 ‘The door was in a painted state yesterday (but it looks like someone stripped the paint off this morning).’
- (302) I porta ine aniymeni (#yriyora).  
 the.NOM door.NOM be.3SG open.PTCP.F.NOM fast  
 ‘The door is opened fast.’

It is worth noting that these two diagnostics – temporal and manner modifications – are sensitive to different aspects of the relevant examples. The impossibility of temporal modification is not particular to stative passives, appearing instead as a general property of state-denoting structures, witness the perfect in (303b). But, unlike the stative passive, the perfect of course freely admits state-irrelevant manner modification (304).<sup>79</sup>

- (303) a. I porta vaftike xthes.  
 the.NOM door.NOM paint.NACT.PST.3SG yesterday  
 ‘The door was painted yesterday.’  
 b. #I porta eçi vafti xthes.  
 the.NOM door.NOM have.3SG paint.PFV yesterday  
 ‘The door has been painted yesterday.’
- (304) I porta eçi anixti xthes.  
 the.NOM door.NOM have.3SG open.PFV quickly  
 ‘The door has been opened quickly.’

Preliminary facts like these illustrate an important broader point, linking with the diagnostic question outlined in section 4.3.1.3: some divergences between eventive and stative passives, like the impossibility of

<sup>79</sup>In Greek perfects, subject agreement surfaces on the auxiliary, and the full verb surfaces with the third-singular suffix *-i* in all person/number combinations. This suffix is very plausibly an instance of default agreement; I gloss it as 3SG for reasons of consistency with cases where we find true agreement with a third-singular subject.

temporal modification in the latter, are attributable to independent properties of stativity. But others, like the impossibility of state-irrelevant manner modification in the stative, are not; and it is divergences of this latter kind that Phrasal Layering accounts will have trouble reckoning with.

#### 4.3.3.2 *-men-* versus *-t-*

The primary focus below is on stative passives in *-men-*, as in (300a), repeated here as (305a), but *-t-* participles will be brought in at a few points when their inclusion is crucial to fully understanding the generalizations. For this reason, I briefly outline certain crucial facts on the distribution of the two stativizers here, recapitulating and building on the conclusions of a large literature on the topic; see esp. Anagnostopoulou 2003a; Georgala 2000; Kordoni unpublished; Lascaratou 1991; Markantonatou, Caliakostas, Bouboureka, Kordoni, and Stavrakaki 1996; Samioti 2009. For a succinct summary of many of the crucial differences see Alexiadou and Anagnostopoulou (2008); many examples below are inspired from examples therein.

- (305) a. To kreas ine psi- men- o.  
 the.NOM meat.NOM be.3SG  $\sqrt{\text{ROAST}}$  PTCP N.NOM  
 ‘The meat is roasted.’
- b. To kreas ine psi- t- o.  
 the.NOM meat.NOM be.3SG  $\sqrt{\text{ROAST}}$  PTCP N.NOM  
 ‘The meat is of the roast kind.’

The literature just cited provides consensus around the point that the different stativizing morphemes in (305) correspond to states with distinct interpretations; but some complexity arises from the fact that the exponent *-t-* turns out to be associated with a few distinct syntaxes. I focus first on the simple case, namely, the simple unnegated states in (305b), before moving to the more complex cases.

A first important observation is that, while (305a) invariably denotes an event-entailing state – in this case, a state resulting from a roasting event – (305b) has no such event implications. Instead, in examples like (305b), *-t-* denotes states that are variously labeled simple, underived, or, in the terms of Markantonatou et al. (1996), characteristic: in this case, *-t-* is employed to denote meat that is of the roast kind, not of, say, the boiled kind.

This latter type of interpretation is not always easy to grasp, not the least because, in many cases, the simple state is not truth-conditionally distinct from the event-entailing one: roast meat, for instance, is normally meat that has undergone roasting. But the basic *-men-/t-* difference can, in fact, be illustrated in a few ways.

Consider firstly (306), illustrating the fact that *-men-* seems to correspond to a *bona fide* English participle (*opened*), whereas *-t-* seems to correspond to what in English would be taken to be a simplex (i.e. non-deverbal) adjective (*open*). Importantly, a clear contrast between English participles and simplex adjectives extends straightforwardly to the *-men-/t-* split: *-men-* and *opened* are incompatible with explicit



denials of the state-creating event, *-t-* and *open* result in no contradiction here, suggesting that they indeed do not imply the existence of such an event.

- (306) a. Afti i porta ine aniymeni, #ala ðen tin eçi  
 this.NOM the.NOM door.NOM be.3SG open.PTCP.F.NOM but NEG 3SG.F.ACC have.3SG  
 aniksi kanis.  
 open.PFV nobody.NOM  
 ‘This door is opened, #but nobody has opened it.’
- b. Afti i porta ine anixti, ala ðen tin eçi aniksi  
 this.NOM the.NOM door.NOM be.3SG open.PTCP.F.NOM but NEG 3SG.F.ACC have.3SG open.PFV  
 kanis.  
 nobody.NOM  
 ‘This door is open, but nobody has opened it.’

In what sorts of situations could (306b) be uttered? Possibly in situations where a door has just been constructed in an open configuration, and has not yet undergone an opening. Such scenarios in fact provide a second diagnostic of the differences in event structure between *-men-* and *-t-*. *-men-* is infelicitous in the complement of creation verbs: in (306a), the verb of creation contributes an event that brings about the existence of the door, and this contribution clashes with the entailment from *-men-* of a prior event of opening. *-t-* in (306b) yields no such contradiction, since there is no prior event. Once again, English *opened* and *open* provide translations that pattern in the same way in English (see Embick 2004a: pp. 357–358).

- (307) a. #I porta xtistike aniymeni.  
 the.NOM door.NOM build.NACT.PST.3SG open.PTCP.F.NOM  
 ‘The door was built opened.’
- b. I porta xtistike anixti.  
 the.NOM door.NOM build.NACT.PST.3SG open.PTCP.F.NOM  
 ‘The door was built open.’

Since *-t-* lacks event implications, it should not be surprising that it is also incompatible across the board with agent-oriented modification, unlike (some) *-men-* statives (308) (Alexiadou & Anagnostopoulou 2008; Anagnostopoulou 2003a; Markantonatou et al. 1996). The impossibility of *-t-* in (308) is not surprising: since there is no event entailed to begin with, discerning agency is out of the question. The issue of whether (308) needs to be taken to suggest that Voice is present in the structure of *-men-* participles is separate, and is taken up in section 4.6.

- (308) I porta ine aniy- { men- / \*t- } i viea / me losto / apo  
 the.NOM door.NOM be.3SG  $\sqrt{\text{OPEN}}$  PTCP PTCP F.NOM violently with crowbar.ACC from  
 ton ðiarikti.  
 the.ACC burglar.ACC

‘The door is opened violently/with a crowbar/by the burglar.’

The simple, non-event entailing states built with *-t-* often result in interpretations that may be termed kind-level readings, in the sense that they can be used to describe prototypical, conventionalized, or culturally reified states of objects. (309) is a first example: whereas (309a) describes a cake, of whatever kind, that has undergone an (unfortunate) event of being turned upside down, (309b) describes a particular type of cake, namely, the kind that is baked with toppings at the bottom of the pan, and has not (necessarily) ever been turned upside down. Tellingly, and amusingly, the two states can freely co-occur, as in (309c).

- (309) a.  $\overline{\text{anapo\ddot{d}o-}} \overline{\text{jiris-}} \text{men- o ceik}$   
 $\sqrt{\text{REVERSE}} \sqrt{\text{TURN}} \text{PTCP N cake}$   
 ‘cake that has been turned upside down’
- b.  $\overline{\text{anapo\ddot{d}o-}} \overline{\text{jiris-}} \text{t- o ceik}$   
 $\sqrt{\text{REVERSE}} \sqrt{\text{TURN}} \text{PTCP N cake}$   
 ‘upside-down cake’
- c.  $\overline{\text{anapo\ddot{d}o-}} \overline{\text{jiris-}} \text{men- o anapo\ddot{d}o- jiris- t- o ceik}$   
 $\sqrt{\text{REVERSE}} \sqrt{\text{TURN}} \text{PTCP N } \sqrt{\text{REVERSE}} \sqrt{\text{TURN}} \text{PTCP N cake}$   
 ‘upside-down upside-down cake’ (i.e. an upside-down cake that has been turned upside down)

It is thus not uncommon to encounter *-t-* formations that do not normally modify nouns (at least not any longer), denoting themselves an entity transparently related to the participial meaning. Importantly, *-men-* never shows this behavior in the language, always exhibiting its systematic behavior deriving states from events:

- (310) a.  $\overline{\text{kini-}} \text{t- o}$   
 $\sqrt{\text{MOVE}} \text{PTCP N}$   
 ‘mobile phone’
- b.  $\overline{\text{jemis-}} \text{t- a}$   
 $\sqrt{\text{STUFF}} \text{PTCP N.PL}$   
 ‘stuffed vegetable dish’
- c.  $\overline{\text{payo-}} \text{t- o}$   
 $\sqrt{\text{ICE}} \text{PTCP N.PL}$   
 ‘ice cream’
- d.  $\overline{\text{fusko-}} \text{t- o}$   
 $\sqrt{\text{INFLATE}} \text{PTCP N}$   
 ‘inflatable dinghy’
- e.  $\overline{\text{zaxaro-}} \text{t- o}$   
 $\sqrt{\text{SUGARCOAT}} \text{PTCP N}$   
 ‘candy’
- f.  $\overline{\text{grap-}} \text{t- o}$   
 $\sqrt{\text{WRITE}} \text{PTCP N}$   
 ‘hand-written thing, manuscript’
- g.  $\overline{\text{jlip-}} \text{t- o}$   
 $\sqrt{\text{SCULPT/LICK}} \text{PTCP N}$   
 ‘sculpture’
- h.  $\overline{\text{raf-}} \text{t- o}$   
 $\sqrt{\text{WEAVE}} \text{PTCP N}$   
 ‘sculpture’

Often, *-t-* formations seem to interact with Root meaning, insofar as they yield interpretations that move away from the Root’s regular position in lexico-semantic space (see Anagnostopoulou 2016; Anagnos-

topoulou & Samioti 2013, 2014). (311) is one example, partly inspired by Valma (2016: p. 516): here, *-men-* forms from the root  $\sqrt{\text{BREAK}}$  yield the predictable meaning related to breaking, but *-t-* forms have seemingly more idiosyncratic interpretations related at most to broader senses of breaking.

- (311) a. (i) spas- men- o kalamaci  
 $\sqrt{\text{BREAK}}$  PTCP N.NOM straw  
 ‘broken straw’  
 (ii) spas- t- o kalamaci  
 $\sqrt{\text{BREAK}}$  PTCP N.NOM straw  
 ‘bendy straw’  
 b. (i) spas- men- i ombrela  
 $\sqrt{\text{BREAK}}$  PTCP.F umbrella  
 ‘broken umbrella’  
 (ii) spas- t- i ombrela  
 $\sqrt{\text{BREAK}}$  PTCP F umbrella  
 ‘folding umbrella’

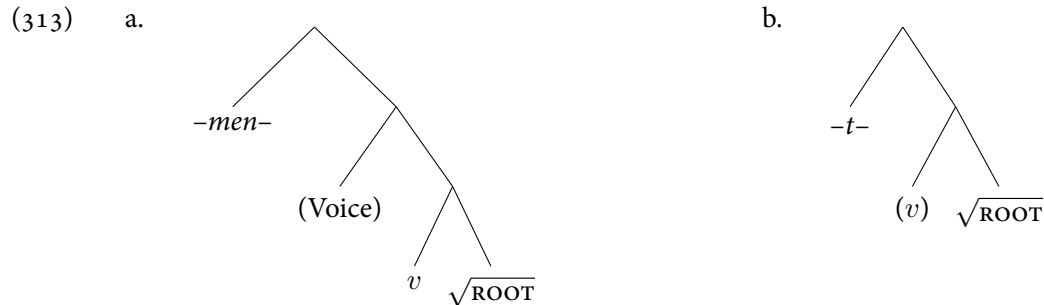
There is a sense in which the readings in (311a-ii) and (311b-ii) may have roots in modal readings: perhaps a bendy straw is one that is breakable, in the sense of being able to be broken without actually breaking. Such intuitions are fuzzy, but *-t-* does often yield meanings that are unambiguously modal, and in particular potential in nature (Anagnostopoulou & Samioti 2013; Samioti 2009, 2015): (312) and (313) illustrates.<sup>80</sup>

- (312) a. Afti i ðiceolojia ine pistef- t- i.  
 this.NOM the.NOM excuse.NOM be.3SG  $\sqrt{\text{BELIEVE}}$  PTCP F.NOM  
 ‘This excuse is believable.’  
 b. To maθima itan katanoi- t- o.  
 the.NOM lesson.NOM be.PST.3SG  $\sqrt{\text{UNDERSTAND}}$  PTCP N.NOM  
 ‘The lesson was understandable.’ (Anagnostopoulou & Samioti 2014: p. 92)

That the contribution of *-t-* is overall far less predictable than of *-men-*, coupled with the capacity of the former to interact with Root meanings, has motivated an analysis whereby a stativizing projection can be structurally local to the Root,<sup>81</sup> making possible the observed patterns of idiosyncrasy and being realized as *-t-*. I will take this analysis to be largely on the right track here, schematizing in (313), which abstracts away from issues to be tackled elsewhere in this chapter, namely the phrasal structure/complex head dimension and the presence/absence of Voice.<sup>82</sup> See Alexiadou and Anagnostopoulou (2008) for the basic idea; Anagnostopoulou 2003a for a related proposal under somewhat different assumptions; Anagnostopoulou 2016; Anagnostopoulou and Samioti 2013, 2014 for refinements; and Marantz 2001 and Arad 2003 for the basic

<sup>80</sup>Some of the discussion in works on modal *-t-* is focussed on the status of agent-oriented modifiers in these statives; I must put this issue to the side here.

assumptions underpinning (313).



The relatively simple distributional picture suggested by (313) is complicated by two further points on the distribution of *-t-*. One is noted here because it involves negated statives, which will recur in different places below; the other is noted only briefly, purely in the interest of descriptive completeness. Taken together, both observations caution against reasoning on the basis of exponents when approaching Greek statives: as we will see, the exponent *-t-* has a broader distribution than that sketched thus far, appearing in configurations distinct from (313b) and thus possibly having the status of a default.

Firstly, it is a well-recognized fact in the literature on Greek stative passives that *-t-* appears in negated statives. (314) illustrates this basic fact: in (314a), both *-men-* and *-t-* are possible in non-negated statives, with the by-now familiar interpretive differences. But in (314b), the negated state is only grammatical if realized with *-t-*.

- (314) a.  $\sqrt{\text{BAKE}}$  PTCP M.NOM *psi- men- os* ,  $\sqrt{\text{BAKE}}$  PTCP M.NOM *psi- t- os*  
 ‘roasted/roast’

<sup>82</sup>Interestingly, as noted in Anagnostopoulou and Samioti (2013), *-t-* participles can embed verbalizers, even though they lack event implications; (i) demonstrates. I conjecture, with these authors, that this may suggest a dissociation of verbalizing heads from eventivizers, with exponents like Greek *-iz-* realizing the former. This is the reason why the *v* head is parenthesized in (313). Needless to say, much remains to be done here.

- (i) a.  $\sqrt{\text{SMOKE}}$  M.NOM *kapn- os*  
 ‘smoke (noun)’  
 b.  $\sqrt{\text{SMOKE}}$  VBZ 1SG the.ACC salmon.ACC *kapn- iz- o ton solomo*  
 ‘I’m smoking the salmon.’  
 c.  $\sqrt{\text{SMOKE}}$  VBZ PTCP M.NOM salmon.NOM *kapn- is- t- os solomos*  
 ‘smoked salmon’  
 d.  $\sqrt{\text{SMOKE}}$  VBZ PTCP M.NOM salmon.NOM *kapn- is- men- os solomos*  
 ‘salmon that is in a state resulting from a smoking event’

- b. a- psi- t- os , \*a- psi- men- os  
 NEG  $\sqrt{\text{BAKE}}$ - PTCP M.NOM NEG  $\sqrt{\text{BAKE}}$ - PTCP M.NOM  
 ‘unroasted’

This is a fully general fact of the system: there is simply no *a(n)*-prefixed *-men-* form. (315) provides a few more examples for the sake of further illustration, and (316) clarifies that *a(n)-* is an adjectival negation prefix (conceivable as the Greek counterpart of English *un-* but lacking reversative readings).

- (315) a. { majire- , asfaliz- , pliro- } men- os  
 $\sqrt{\text{COOK}}$   $\sqrt{\text{INSURE}}$   $\sqrt{\text{PAY}}$  PTCP M.NOM  
 ‘cooked, insured, paid’
- b. a(n)- { majiref- , asfaliz- , pliro- } t- os  
 NEG  $\sqrt{\text{COOK}}$   $\sqrt{\text{INSURE}}$   $\sqrt{\text{PAY}}$  PTCP M.NOM  
 ‘uncooked, uninsured, unpaid’
- (316) a. iθikos, ikanos, eparcis, energos, aksios  
 moral able sufficient active worthy
- b. **ani**θikos, **ani**kanos, **an**eparcis, **an**eneryos, **an**aksios  
 immoral unable insufficient inactive unworthy

This pattern, though widely noted, remains unexplained. But there is a further fact that is crucial here: negated participles are the negated counterparts of unnegated *-men-* states, not of unnegated *-t-* states. In other words, *apsitos* in (314b) means ‘not roasted’, not ‘not of the roast kind’; see Alexiadou et al. 2015: p. 167 and references therein.

That negated participles are effectively negated event-entailing participles, not negated simple states, can be seen in (317) and (318). To see what is at stake in (317), recall (311b) above, where it was shown that *-t-* statives formed from  $\sqrt{\text{BREAK}}$  have idiosyncratic interpretations, denoting, for instance, folding umbrellas. (317) shows that the negated participle of  $\sqrt{\text{BREAK}}$  does not retain this idiosyncratic interpretation: if it did, (317) should be perfectly felicitous on the intended reading given in the translation. Instead, the only reading available for (317) is the bizarre one also given therein, suggesting that the negated participle of  $\sqrt{\text{BREAK}}$  can only mean ‘unbroken.’

- (317) ðe mu aresun i spas- t- es ombreles – #eçete a-  
 NEG 1SG.GEN please.3PL the.NOM.PL  $\sqrt{\text{BREAK}}$  PTCP F.PL.NOM umbrella.PL.NOM have.2PL NEG  
 spas- t- es?  
 $\sqrt{\text{BREAK}}$  PTCP F.ACC.PL

Intended: ‘I don’t like folding umbrellas – do you have not-folding ones?’

Actual: ‘I don’t like folding umbrellas – #do you have unbroken ones?’

Consider (318), an example based on a similar reasoning. In (318a), the *-t-* participle of  $\sqrt{\text{INFLATE}}$  picks

out a particular type of boat, the kind that is inflatable (but not necessarily inflated). If the negated stative of  $\sqrt{\text{INFLATE}}$  could mean ‘not of the inflated kind’, (318b) should be acceptable, contrary to fact.<sup>83</sup>

(318) a. [Choosing between wooden and inflatable boats, I point to the inflatable ones and say:]

θelo tis fusko- t- es varkes  
want.1SG the.ACC.PL  $\sqrt{\text{INFLATE}}$  PTCP F.ACC.PL boat.ACC.PL

‘I want the inflatable boats.’

b. [Choosing between wooden and inflatable boats, I point to the wooden ones and say:]

#θelo tis a- fusko- t- es varkes  
want.1SG the.ACC.PL NEG  $\sqrt{\text{INFLATE}}$  PTCP F.ACC.PL boat.ACC.PL

Intended: ‘I want the non-inflatable boats.’

Actual: ‘I want the uninflated boats.’

I leave the puzzle of accounting for the overall distribution of  $-t-$  versus  $-men-$  to future work. It must be noted here that two broad generalizations can be drawn on this point, each pulling in a different direction. On the one hand,  $-t-$  has a broad distribution reminiscent of an elsewhere item. On the other hand, as in fact already noted in Anagnostopoulou (2003a), it is possible to surmise that the environments where  $-t-$  appears do, in fact, form a natural class, insofar as they comprise eventualities that are not instantiated (thus, all of simple, negated, and modal states). The tension here deserves to be resolved.

#### 4.3.4 A FURTHER REFINEMENT: TARGET VS RESULTANT STATES

Until now, the discussion of Greek stative passives has proceeded on the tacit assumption that participles in  $-men-$  form a homogeneous category. But it has previously been proposed that this is not the case: indeed, the proposals in Anagnostopoulou (2003a) and subsequent work (see especially Alexiadou et al. 2015) incorporate the suggestion that there exist two different structures for  $-men-$  statives in Greek. If this suggestion turns out to be on the right track, then the purported structural ambiguity ought to be taken seriously when deploying diagnostics on the structure and interpretation of participles. Here, I argue that, in fact, there is little reason to posit a structural ambiguity of this type for Greek.

<sup>83</sup>Note that negated participles are often ambiguous between ‘pure negated’ ( $un-$ ) and negated modal ( $un\dots able$ ) readings:

- (i) a. To miθiko afto spaθi parameni a- siko- t- o  
the.NOM legendary.NOM DEM.NOM sword.NOM remain.3SG NEG  $\sqrt{\text{LIFT}}$  PTCP F.NOM  
‘This legendary sword remains unlifted.’  
b. To spaθi afto ine a- siko- t- o.  
the.NOM sword.NOM DEM.NOM be.3SG NEG  $\sqrt{\text{LIFT}}$  PTCP F.NOM  
‘This sword is impossible to lift.’

For non-negated modal readings, see (312). For some remarks on the role of *remain* in licensing certain properties of stative passives in Greek, see section 4.6.

The approach in Anagnostopoulou (2003a) and subsequent work involves two steps. The first step involves inheriting from Kratzer (2001) the interpretive distinction between *target* and *resultant* states. The second step is to hard-code these readings into the syntax, by means of distinct structural correlates for each interpretation. I argue here that, on closer investigation, neither step is warranted. In particular, the distinction posed by Kratzer need not be treated by means of positing a rigid boundary between distinct interpretations in the first place; and there is thus little motivation for deriving each reading from a distinct syntax.

#### 4.3.4.1 The reasoning

The distinction between target and resultant states forms the backbone of the influential discussion in Kratzer (2001). It finds its roots in an idea from Parsons (1990):

‘If I throw a ball onto the roof, the target state of this event is the ball’s being on the roof, a state that may or may not last for a long time. What I am calling the Resultant-state is different; it is the state of my having thrown the ball onto the roof, and it is a state that cannot cease holding at some later time.’ (Parsons 1990: p. 235)

Kratzer proposes to implement Parsons’ distinction between two kinds of states by positing two separate stative denotations, each associated with a different stativizing morpheme, as shown in (319):

(319) *Kratzer’s denotations*

- |    |   |                        |
|----|---|------------------------|
| a. | $\llbracket \text{Stat}_1 \rrbracket = \lambda P. \lambda s. \exists e. P(s)(e)$                    | <i>target state</i>    |
| b. | $\llbracket \text{Stat}_2 \rrbracket = \lambda P. \lambda t. \exists e. P(e) \wedge \tau(e) \leq t$ | <i>resultant state</i> |

(319a) is effectively a kind of resultative: combined with some  $P$ , it will yield a set of states resulting from prior events. (319b) is different: it will produce a predicate of times, one that will be true iff the state-holder underwent the relevant event at some point in the past.<sup>84</sup>

Kratzer’s discussion is focussed on showing that that these two readings can be disentangled in German.<sup>85</sup> Some attention is devoted to the behavior of the adverbial *immer noch* ‘still’, which Kratzer takes it can tease

<sup>84</sup>Kratzer (2001: p. 12), building on Parsons, emphasises that resultant states hold ‘forever after’ an event has taken place. Clearly, this notion must be relativized to particular time points: it must be the case that the resultant state of the dog being walked at noon today is a state of having been walked at noon today, not merely one of having been walked. If it were the state of having been walked that held forever, it would be contradictory to assert, the following day, that the dog has not been walked yet.

<sup>85</sup>Kratzer’s diagnostic endeavor proceeds in concert with the development of several proposals not central here; these include, for instance, the proposal that only some participles are derived syntactically; the idea that, in turn, certain stative denotations can be hard-coded into the meaning of particular Roots; and the idea that, when the denotations in (319) are combined with verbs structurally, verbs that form target state passives are type-theoretically different from verbs that form resultant state passives (see Baglini 2012: p. 36). In the main text, I abstract away from these ancillary assumptions, focussing instead on the patterns that are argued to follow from the distinction in (319), and which in turn have motivated the extension of this distinction to Greek.

apart the two types of states (cf. Nedjalkov and Jaxontov 1988). This adverbial seems sensitive to the reversibility of a given state: Kratzer's reasoning is based on the assumption that target states are in principle reversible, whereas resultant states are not, insofar as they amount, by definition, to states that hold forever after an event has taken place. Thus, the acceptability of *immer noch* in (320a) indicates that the participle in this example is compatible with a target state reading; in (320b), on the other hand, the oddness induced by inclusion of the adverbial is taken to suggest that the participle *getrocknet* describes a resultant state.<sup>86</sup>

- (320) a. Die Reifen sind (immer noch) aufgepumpt.  
 the.NOM.PL tire.NOM.PL be.3PL always more pump.up.PTCP  
 'The tires are (still) pumped up.'
- b. Die Wäsche ist (#immer noch) getrocknet.  
 the.NOM laundry.NOM be.3SG always more dry.PTCP  
 'The laundry is (still) dried.' (Kratzer 2001: pp. 1–2)

In the influential discussion in Anagnostopoulou (2003b) and subsequent work, this basic proposal from Kratzer is extended to Greek as follows. Firstly, it is observed that Greek *-men-* statives seem to be ambiguous between target and resultant states, insofar as the adverbial *akoma* 'still' can be observed to be differentially available across examples:

- (321) a. Ta lastixa ine (akoma) fusko- mena.  
 the.NOM.PL tire.NOM.PL be.3PL still  $\sqrt{\text{INFLATE}}$  PTCP  
 'The tires are (still) inflated.'
- b. Ta ruxa ine (#akoma) stejno- mena.  
 the.NOM.PL clothes.NOM.PL be.3PL still  $\sqrt{\text{DRY}}$  PTCP  
 'The clothes are (still) dried.' (Alexiadou and Anagnostopoulou 2008: p. 36; judgments from the original)

Then, Greek is argued to evidence the existence of a structural basis for the purported ambiguity between target and resultant states. The crucial examples here are of the type in (322): they seem to suggest that the presence of an agent-oriented modifier makes *akoma* deviant, and that this effect obtains across the board, i.e. both with Roots that yield good target states (like *inflated*) and with ones that do not (like *dried*).

- (322) a. Ta lastixa ine (#akoma) fusko- mena apo ti Maria.  
 the.NOM.PL tire.NOM.PL be.3PL still  $\sqrt{\text{INFLATE}}$  PTCP from the Mary  
 'The tires are (still) inflated by Mary.' (Alexiadou & Müller 2008: ex. (24a))
- b. Ta ruxa ine (#akoma) stejno- mena me to sesuar.  
 the.NOM.PL clothes.NOM.PL be.3PL still  $\sqrt{\text{DRY}}$  PTCP with the blowdryer  
 'The clothes are (still) dried with the blowdryer.'

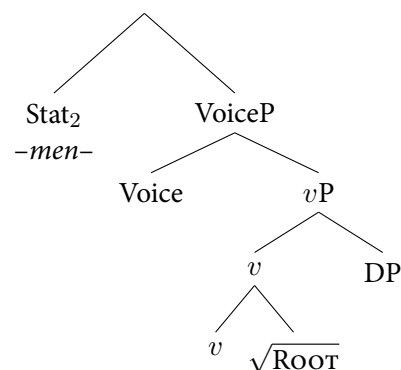
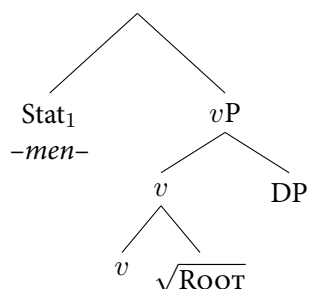
<sup>86</sup>Kratzer (2001: p. 3) in fact seems to take the adverbial as a one-way diagnostic, arguing that, in some cases, failure to be modified by *immer noch* may be due to independent reasons related to lexical semantics (or, in fact, world knowledge). See main text below.



These facts are thus taken to suggest a one-to-one mapping between two seemingly unrelated dimensions, namely the target/resultant state distinction and the presence/absence of Voice, where agent-oriented modifiers are hosted. The resulting analysis is shown in (323).

(323) a. *Target state –men–*

b. *Resultant state –men–*



#### 4.3.4.2 Against the structural ambiguity account

Let us summarize the reasoning that has led to the structural ambiguity account illustrated in (323). In (324), this reasoning is presented broken down into its component parts.

- (324)
- There exists a rigid interpretive distinction between target and resultant states.
  - This distinction is diagnosable by the behavior of modifiers sensitive to reversibility, like *still*.
  - In Greek, examples where a stative passive is modified both by *akoma* ‘still’ and an agent-oriented modifier are ungrammatical.
  - Ergo*, the presence/absence of Voice maps onto the target/resultant state distinction.

I argue here that none of (324a-d) are evidenced by the facts in Greek.

Let us begin with (324a), the assumption that the target/resultant state distinction corresponds to a genuine interpretive ambiguity, to be treated by means of denotations as rigidly distinct as those in (319). It seems reasonable to treat (319) with some suspicion to begin with: it treats the two stativizers as two type-theoretically very different entities, which in turn need to combine with type-theoretically distinct verbs (see footnote 85). To the extent that the two meanings are judged to be closely related from a descriptive standpoint, and insofar as they will very often entail each other, (319) may give the initial impression of too inflexible a solution (see also Biggs and Embick 2023 on this point). Note, incidentally, that a Kratzer-style account is essentially one of homophony, and furnishes the expectation that the two stativizers should, in principle,

be able to receive different realizations. I know of no language where this appears to be the case. Absence of evidence need not, of course, be taken as evidence of absence; but, at a minimum, questions should arise from the fact that even languages like Greek, which otherwise do assign distinct realizations to stativizers that can also be shown to be interpretively distinct, do not do the same for the purported ambiguity between target and resultant states.

Interpretively oriented literature following Kratzer (2001) has recognized as issues both of these points, namely, the less-than-intuitive rigidity of (319) and the homophony problem (see e.g. Baglini 2012; Baglini and Kennedy 2019; Gehrke 2015; Maienborn 2009; see also Biggs and Embick 2023; Rapp 1996). Importantly, this literature also seems to have converged on the idea that the target/resultant state distinction can be recast without positing a sharp boundary between two wholly unrelated denotations, as Kratzer does. I cannot do justice to this literature here, and individual proposals differ from each other; what matters here is merely that it is far from clear that the facts necessitate positing a sharp distinction in the semantics, and the interpretive basis for a structural ambiguity of the kind posited in previous work on Greek may thus well be absent.<sup>87</sup>

(324b), the assumption that adverbs like *still* reliably partition the data space into two classes that coincide more or less perfectly with the target/resultant state distinction, also seems questionable. As already noted in footnote 86, Kratzer (2001) cautions that the impossibility of *still*-modification is not a foolproof diagnostic of resultant-state-hood. It is not difficult to see why by returning Parsons' original example reproduced on p. 177: an event that involves a ball being thrown on the roof produces the target state resulting from this event, held by the ball. The reversibility of this state – in particular, whether the ball can be taken off the roof – is what *still* seems sensitive to, at least in part. But this seems orthogonal to the resultant state, which begins holding the moment the throwing event concludes. As such, conclusions predicated on the impossibility of *still* must be treated with caution.

Recent work on the interpretation of *still* has treated the reversibility requirement as presuppositional content contributed by this modifier, with a proposition *P* and its *still*-modified counterpart *still P* otherwise sharing the same basic at-issue content (see Baglini and Kennedy 2019; Ippolito 2004). The resulting view obviates the need for a target/resultant state distinction in the (lexical) semantics, as mentioned above; but

<sup>87</sup>It is worth noting in passing that the resultant state denotation in (319) itself has properties that could raise questions. For instance, Kratzer (2001: p. 11) seems to suggest that the German counterpart of (i) is felicitous in the context given.

- (i) [A building was evacuated successfully hours ago, and the tenants have now moved back in. A police officer reports the successful evacuation to his supervisor:]

#To ktirio ine ekeno- men- o.  
the.NOM building.NOM be.3SG evacuate PTCP N.SG

'The building is evacuated.'

In Greek, at least, (i) is deeply infelicitous in the context given. This infelicity suggests that, whatever the nature of the resultant state reading is, it does not seem to be freely available, an observation not easy to reconcile with a distinct-denotations approach to the target/resultant state distinction.

it also has implications for what is to be concluded when *still* cannot be added to a sentence. Consider, for instance, the Greek paradigm in (325), based partly on a pair from English discussed in Baglini (2012: p. 38).

- (325) a. #To ktirio ine akoma xtis- men- o.  
 the.NOM building.NOM be.3SG still build PTCP N.NOM  
 ‘The building is still built.’
- b. To ktirio ine akoma miso- xtis- men- o.  
 the.NOM building.NOM be.3SG still half build PTCP N.NOM  
 ‘The building is still half- built.’
- c. To ktirio ine akoma a- xtis- t- o.  
 the.NOM building.NOM be.3SG still NEG buildPTCP N.NOM  
 ‘The building is still unbuilt.’

(325a), uttered when pointing to a building, is odd in a way that its unmodified counterpart is not (*The building is built*, like any activity stative, becomes fine in a job-is-done context). Crucially, the addition of the degree modifier *half* in (325b) yields a flawless utterance. Why should such a sharp difference obtain? Clearly, the oddness of (325a) must be due to the fact that, simplifying considerably relative to the worked-out formal solutions above, the addition of *still* presupposes that the building’s buildedness is at issue at utterance time. But it is difficult to conceive, out of the blue, of contexts where this would be the case; in other words, *still* being built is normally a trivial matter when we find ourselves at a time postdating the completion of a building event. In (325b), however, the addition of *half* makes it so that it is not trivial to assert that the relevant state, one of half-buildedness, holds at utterance time, precisely because this state is liable to change in the future.<sup>88</sup> The same is true of the state of being unbuilt in (325c). Note furthermore with respect to (325a) that, once we *do* provide a context where it is buildedness, not half-buildedness, that is at issue, this example improves considerably.<sup>89</sup>

- (326) A: I can’t believe we borrowed so much money to have that building built! We’re about to go bankrupt!
- B: Ne, ala to ktirio ine akoma xtismeno.  
 yes but the.NOM building.NOM be.3SG still built.PTCP.N.NOM  
 ‘Yes, but the building is still built.’

These examples illustrate that the (in)felicity of modifiers like *still* is governed by constraints operating at a pragmatic level;<sup>90</sup> and that, in any case, there seems little reason to hard-code into the lexical semantics of

<sup>88</sup>Note that this means that *still* is allowed to surface not by virtue of reversibility *sensu stricto*, as what is at stake in (325b) is not whether the half-built building will revert to not having been built at all; rather, what seems crucial is whether the state is changeable (or *transitory*, to use Kratzer’s and Parsons’ term).

<sup>89</sup>Julie Legate (p.c.) notes that *akoma* in (326) is paraphrasable as *nevertheless* in a way that other instances of this modifier are not. I leave open whether this observation may make (326) less probative than it initially seems, noting that the other crucial examples in the main text are not subject to the same concerns.

verbal forms the factors governing the differential availability of such modifiers between such examples as (325a) and (326). Looking ahead, I will argue that there is even less reason to hard-code these factors in the *syntactic* structure of different stative passives, at least in Greek.

What, then, of (324c), the observation that *akoma* ‘still’ cannot appear if the stative is modified by agent-oriented modifiers? We just saw that the felicity of *still*-type adverbials seems to be modulated heavily by pragmatic factors; it is considerations of this type that must extend to these cases, too.

Consider in more detail the relevant examples, which are of the type in (322), repeated here as (327). There are questions that could be asked here concerning the licensing of agent-oriented modifiers, that I postpone to section 4.6. Instead, let us focus, again in informal terms, on the conditions under which examples like (327a) could be uttered. Recall that an *akoma*-modified participle is infelicitous whenever it is not plausible that the state’s holding at utterance time is at issue. Examples like (327a) set the bar somewhat higher, by requiring that it be the case additionally that Mary’s bringing about the eventuality be part of the at-issue content.

- (327) a. Ta lastixa ine (#akoma) fusko- mena apo ti Maria.  
 the.NOM.PL tire.NOM.PL be.3PL still  $\sqrt{\text{INFLATE}}$  PTCP from the Mary  
 ‘The tires are (still) inflated by Mary.’
- b. Ta ruxa ine (#akoma) steyno- mena me to sesuar.  
 the.NOM.PL clothes.NOM.PL be.3PL still  $\sqrt{\text{DRY}}$  PTCP with the blowdryer  
 ‘The clothes are (still) dried with the blowdryer.’

The conditions under which (328a) could be felicitously uttered thus seem quite narrowly circumscribed: they are limited to those situations where Mary’s bringing about the inflatedness that holds at utterance time is at issue, and where it is also crucially relevant that the individual in question was Mary; if only inflatedness were at issue, the *by*-phrase would have little to contribute.

(327) does not provide contexts against which to judge the relevant examples, and it is not unexpected, then, that the sentences are judged as odd when they are read with *akoma* ‘still’ included. Providing an appropriate context, contrived as the result might be, seems to help the example greatly; see also Alexiadou et al. 2015: p. 181, who reach a similar conclusion, discussed further in section 4.6.

- (328) [It has been thought for decades that Wiles provided the definitive proof of Fermat’s Last Theorem. Now, an elderly mathematician alleges that the solution provided by Wiles is, in fact, his, and was

<sup>90</sup>The following example from Biggs and Embick (2023) clarifies even further that the felicity of *still* is determined by pragmatic factors, in this case relating clearly to world knowledge: we happen to know that vases are hard to put back together once shattered, but alliances less so. Similar examples can be constructed for Greek; see also Meltzer-Asscher (2011: fn. 27) for the same conclusion in Hebrew.

- (i) a. The vase is #(still) shattered.  
 b. The alliance is (still) shattered.

*plagiarized by Wiles all those years ago. After much press coverage and investigation, the allegation is proven to be false.]*

To theorima tu Ferma { ine akoma / parameni / eksakoluθi na  
 the.NOM theorem.NOM the.GEN Fermat.GEN be.3SG still remain.3SG continue.3SG COMP  
 ine } apoðeðiymeno apo ton Wiles.  
 be.3SG prove.PTCP.NOM from the Wiles

‘Fermat’s theorem is still/remains/continues to be proven by Wiles.’

Though further work is clearly needed, these facts militate against the move to cast examples like (327) as crucially probative on the structure of participles; all the more so when they are coupled with the more general consensus in the interpretively-oriented literature on the topic that *still*-type adverbials need not be accounted for in the lexical semantics of verbs.

We thus arrive at (328d), the proposal that Greek evidences two types of *-men-* participles, distinguished by the presence/absence of Voice, related in turn to the target/resultant state distinction. At this point in the discussion, we are left with little reason to posit this structural distinction. There seems little motivation from the perspective of interpretation to treat the boundary between the relevant readings as grammatically encoded in the first place. In light of this conclusion, the examples that seemed to support the structural ambiguity account for Greek can be insightfully reanalyzed; and, in any case, it does not seem warranted to posit, with reference to alternations like (325), repeated here as (329), that *built* derives from a structure that includes Voice, while *half-built* necessarily corresponds to a Voice-less structure. The syntax/interpretation of Voice instead seems orthogonal to patterns like (329).

- (329) a. #To ktirio ine akoma xtis- men- o.  
 the.NOM building.NOM be.3SG still buil PTCP N.NOM  
 ‘The building is still built.’
- b. To ktirio ine akoma miso- xtis- men- o.  
 the.NOM building.NOM be.3SG still half buil PTCP N.NOM  
 ‘The building is still half- built.’

In giving up the structural ambiguity account in (323), we seem to be relinquishing little by way of explaining the target/resultant state distinction. The reason is that it is not clear that the role of Voice is in any sense causal, even on an account like (323): there is no principled reason inherent to the semantics of target or resultant states why the former should be incompatible with agentive semantics, and why the latter should necessitate it. Instead, it seems that the reasons for making Voice differentially available in the relevant structures were purely correlational, based on the apparent incompatibility of agent-oriented modifiers with *akoma* (327). But, since this apparent incompatibility arguably has a non-structural source, and is not absolute in any case, an account eschewing (323) suffers no loss of insight in this domain.<sup>91</sup> We also avoid

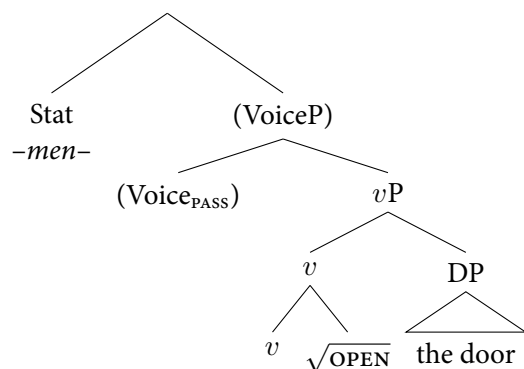
the homophony problem, insofar as the two instances of *-men-* in (323) were intended as distinct stativizers with distinct selectional properties.

For these reasons, I depart from much previous work on Greek in not taking the target/resultant state distinction to have a structural source. At the same time, much has been learned by discussing these previous proposals, and the target/resultant state distinction will be borne in mind below whenever it arises as a possible factor to control for; this refinement would, of course, not have been possible here were it not for the substantial body of work on this distinction in Greek that the discussion here builds on.

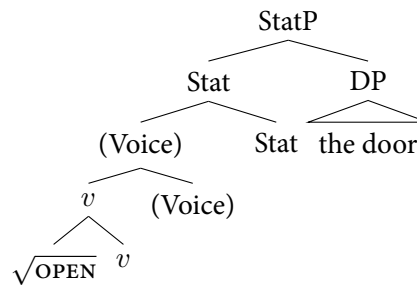
#### 4.4 EVENTIVE $\neq$ STATIVE PASSIVE: MISMATCHES

This section compares the prediction of a Phrasal Layering account of Greek stative passives (330) with those of a complex head analysis (331). The focus is on novel diagnostics for the presence of phrasal verbal structure, as posited in (330); we will see that the facts instead favor an analysis along the lines of (331) where, crucially, the argument DP originates high, in the stative portion of the structure. Much of the evidence arises from a careful comparison of the stative passive with the eventive; the two are shown to pattern in very different ways.

(330)



(331)



I parenthesize Voice in (330)-(331) in the interest of clarifying that the choice between the structures in (332) or (333) is in principle independent of the issue of whether we must countenance the presence of particular projections, in this case Voice, inside whatever the correct structure turns out to be. I focus on the first question here, and leave the question of Voice to section 4.6.

Finally, I focus on stative passives in the *predicative* position below; as we will see in section 4.7, the attributive position has its own properties.

<sup>91</sup>See also Biggs (2021: 300ff) for the conclusion that Voice cannot be the factor blocking target state readings in English *done* statives.

#### 4.4.1 APPROXIMATIVE MODIFICATION

A first diagnostic helping adjudicate between the two competing analyses of stative passives outlined above comes from modification by approximative adverbials. This phenomenon constitutes a domain where the properties of the stative passive seem crucially different to those of the eventive; as we will see, the stative licenses a proper subset of the interpretive possibilities found in the eventive, a finding wholly unexpected under the layering account.

Diagnostically speaking, the broader aim here is to examine modification of the eventualities denoted by the stative passive. At first glance, this endeavor should be straightforward: in particular, it may seem like the predictions of (330) and (331) should be able to be teased apart straightforwardly, by examining the behavior of *vP* modifiers. Recall that the Layering analysis posits a phrasal *vP*, thereby predicting that such modifiers should be readily available; the complex head analysis does not posit a *vP*, and therefore ostensibly makes no such prediction. Thus, examining the behavior of *bona fide* *vP* modifiers should straightforwardly help adjudicate between the two analyses.

Unfortunately, the facts on the ground are not that simple. Recall from (294), repeated here as (332), that many modifiers whose behavior is straightforward in the clausal context are less clearly reliable in the stative passive: in the case at hand, it will not be instantly clear whether the adverb in (332) is construed as an event and a state modifier, as these readings are not unrelated to each other. In fact, as clarified by (295), repeated here as (333), pure state-level modification can be shown to be independently available. As such, the mere presence of the adverb in (332) is not by itself probative, and such cases will more generally be informative as to the structure of stative passives only insofar as the relevant readings can be manipulated independently of each other; as we will see in section 4.6, this is no simple matter.

- (332) I       afisa       ine   kremas- men- i       atsala.  
           the.NOM poster.NOM be.3SG hang   PTCP F.NOM sloppily  
           ‘The poster is sloppily/awkwardly hung.’
- (333) I       afisa       ine   kremas- men- i       anapođa.  
           the.NOM poster.NOM be.3SG hang   PTCP F.NOM upside.down  
           ‘The poster is hung upside down.’

The reason why examples like (332) are not instantly probative is that the two conceivable readings of the modifier are intimately related: sloppy events and sloppy states are both sloppy in the same way. An obvious way to sidestep this complication would be to identify a modifier that instead yields easily distinguishable, to some extent unrelated, readings. I argue here that approximatives, in particular the Greek counterpart(s) of *almost*, instantiate one case of exactly this kind, providing easily disentangleable readings and yielding judgments that are generally satisfyingly sharp.<sup>92</sup>

<sup>92</sup>In principle, similar results should obtain with other modifiers that produce sharply distinguishable readings when attaching

To my knowledge, approximative modification has not been investigated in detail in the context of stative passives elsewhere; but see Nissenbaum 2018, who touches on the issue with reference to English, noting the basic contrast in the context of a broader discussion.

#### 4.4.1.1 A (non-)ambiguity

To see what is at stake, consider the ambiguous Greek sentence in (334), containing an active verb modified by one of the language's approximatives, *σχεδόν*. Like its English counterpart,<sup>93</sup> this modifier licenses a well-known ambiguity (see e.g. McCawley 1971; Rapp & von Stechow 1999). As shown in the translation, (334) can describe situations where Snow White initiated an apple-eating event and came very close to completing it without doing so; or situations where it nearly came to pass that Snow White ate the apple, but in fact the event was never initiated. Call the former interpretation the *scalar* reading, and the latter the *counterfactual* one.

- (334) I            çonati        σχεδόν efaje        to        milo.  
           the.NOM Snow.White almost eat.PST.3SG the.ACC apple.ACC  
           ‘Snow White almost ate the apple.’
- ✓ ‘Snow White almost finished eating the apple.’ *scalar*  
 ✓ ‘It almost happened that Snow White ate the apple.’ *counterfactual*

The scalar/counterfactual ambiguity is plausibly one determined by the attachment height of the approximative modifier (see Rapp & von Stechow 1999). In particular, we can take the scalar interpretation to be state-modifying, in the sense of asserting that the resultant state associated with some event almost obtained; whereas the counterfactual reading is event-oriented insofar as it asserts that the event did not take place (though there can be nuance on the exact nature of this reading, orthogonal here; see e.g. Horn 2011; Sadock 1981).<sup>94</sup> Given that the scalar reading is state-modifying, it does not obtain with predicates lacking good target states; as such, a *σχεδόν*-modified activity like that in (335) is unambiguous.

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to events versus states. I have not been able to identify consistent results with *ksana* ‘again’, noting instead wide-ranging variation in judgments both across consultants and across sessions, for both eventive and stative passives. The reasons for this different behavior of *ksana* are not entirely obvious to me; but some independent properties of this modifier do at least seem relevant. In particular, the contribution of *ksana* ‘again’ is strongly presuppositional, necessitating (on either reading) the existence of a prior eventuality of the relevant type; the need to keep this background information in play, even when presented with a context, must one way or another make for quite a heavy load on the part of consultants, especially when each eventuality is a stative passive, and thus contains itself two subeventualities. Additionally, *ksana* may trigger competing parses, given that it can occur pre-verbally, postverbally, as well as incorporated into the verb; approximatives are rigid with respect to word order, and never incorporate.

<sup>93</sup>The judgments below replicate across my consultants; however, I have encountered two speakers for whom *σχεδόν* cannot be counterfactual. For speakers of this type, the point made by the following examples can be made with the purely counterfactual modifier *paraliyo*, see section 4.4.1.3 below. See also Oikonomou, Rizou, Bondarenko, Özsoy, and Alexiadou (2022).

<sup>94</sup>The discussion in McCawley (1971) in fact distinguishes a third reading very closely related to what I here take to be the scalar one; see Rapp and von Stechow (1999) for discussion of whether these are actually distinct readings.



- (335) I            çionati        sçeðon klotsise        ti        bala.  
 the.NOM Snow.White almost kick.PST.3SG the.ACC ball.ACC  
 ‘Snow White almost kicked the ball.’ ✗scalar ✓counterfactual

Crucial here is the behavior of this modifier in passive contexts. Consider firstly that eventive passives freely license the scalar/counterfactual ambiguity: thus, the eventive passive in (336) is ambiguous just as the active transitive (334) was. In (336), this ambiguity is brought out by the different continuations provided in the subexamples, with the first one favoring the scalar reading of the starting sentence, and the second one the counterfactual reading.

- (336) To        milo        sçedon fayøthike        apo tin xçionati...  
 the.NOM apple.NOM almost eat.NACT.PST.3SG from the Snow.White  
 ‘The apple was almost eaten by Snow White...’
- a. ... Afise            mono ena        komataki.  
 leave.PST.3SG only one.ACC piece.DIM.ACC  
 ‘She left only a little piece.’ *scalar-facilitating*
- b. ... Eftixos, o        griniaris        ti        stamatisè        prin kataferi        na  
 thankfully the.NOM Grouchy.NOM 3SG.F.ACC stop.PST.3SG before manage.3SG COMP  
 to        dagosi.  
 3SG.N.ACC bite.3SG  
 ‘Thankfully, Grouchy stopped her before she managed to take a bite.’  
*counterfactual-facilitating*

Strikingly, stative passives behave entirely unlike eventive passives with respect to modification by approximatives. Consider firstly the basic examples in (337), providing an initial illustration of this crucial contrast: *sçeðon*-modified predicative stative passives only license the scalar reading. The judgments here are generally extremely robust, as they seem to be for the English translations of the examples; see [footnote 93](#) for an orthogonal point on inter-speaker variation, and cf. Oikonomou et al. (2022).

- (337) a. To        milo        ine        sçeðon fayø- men- o.  
 the.NOM apple.NOM be.3SG almost  $\sqrt{\text{EAT}}$  PTCP N  
 ‘The apple is almost eaten.’ ✗counterfactual ✓scalar
- b. To        milo        itan        sçeðon fayø- men- o.  
 the.NOM apple.NOM be.PST.3SG almost  $\sqrt{\text{EAT}}$  PTCP 3SG  
 ‘The apple was almost eaten.’ ✗counterfactual ✓scalar

One may wonder whether the difference between (336) and (337) can be attributable to some hidden third factor independent of the structure of passives *per se*, such as the mere presence of stativity. To the best of my knowledge, this does not seem to be the case: (plu)perfect eventive passives continue to be ambiguous when modified by *sçeðon*, even though (plu)perfects are state-signifying.

- (338) To milo sçedon içe fayothi apo tin xñonati...  
 the.NOM apple.NOM almost have.PST.3SG eat.PFV from the Snow.White  
 ‘The apple had almost been eaten by Snow White.’
- a. ... otan i vasilisa ti fonakse ke ecini afise to  
 when the.NOM queen.NOM 3SG.F.ACC call.PST.3SG and DEM.F.NOM leave.PST.3SG the.ACC  
 telefteo komati.  
 last.ACC piece.ACC  
 ‘when the queen called her and she left the last piece.’
- b. ... otan o griniaris ti stamatisse prin kan to  
 thankfully the.NOM Grouchy.NOM 3SG.F.ACC stop.PST.3SG before even 3SG.N.ACC  
 dagosi.  
 bite.PFV.3SG  
 ‘when Grouchy stopped her before she even took a bite.’

A particularly striking illustration of this difference between stative and eventive passives is found when we embed both in a context that forces the counterfactual reading. In (339), we find first a *sçedon*-modified eventive or stative passive, followed by a continuation asserting that the event in question did not in fact take place. As expected, this continuation is perfectly felicitous in eventive passives in the aorist (339a) and pluperfect (339b); but it yields a stark contradiction in (339c). This is precisely the state of affairs we expect if, unlike eventive passives, stative passives do not accommodate the counterfactual reading.

- (339) [In a Hunger Games-esque competitive deathmatch, a cunning player leaves out a poisoned apple for their hungry competitors.]
- a. To ðilitirias- men- o milo sçedon fayothike apo polus pextes,  
 the.NOM  $\sqrt{\text{POISON}}$  PTCP N.NOM apple.NOM almost eat.NACT.PST.3SG from many player.PL  
 ala eftixos kanis tus ðen to efaje telika.  
 but thankfully no-one.NOM 3PL.POSS NEG 3SG.N.ACC eat.PST.3SG ultimately  
 ‘The poisoned apple was almost eaten by many players, but thankfully none of them ate it in the end.’
- b. To ðilitirias- men- o milo sçedon içe fayothi apo polus  
 the.NOM  $\sqrt{\text{POISON}}$  PTCP N.NOM apple.NOM almost have.PST.3SG eat.PFV from many  
 pextes, ala eftixos kanis tus ðen to efaje telika.  
 player.PL but thankfully no-one.NOM 3PL.POSS NEG 3SG.N.ACC eat.PST.3SG ultimately  
 ‘The poisoned apple was almost eaten by many players, but thankfully none of them ate it in the end.’
- c. To ðilitirias- men- o milo itan sçedon fayomen- o (apo  
 the.NOM  $\sqrt{\text{POISON}}$  PTCP N.NOM apple.NOM be.PST.3SG almost  $\sqrt{\text{EAT}}$  PTCP N.NOM from  
 polus pextes), #ala eftixos kanis ðen to içe fai.  
 many.PL player.PL but thankfully no-one.NOM NEG 3SG.N.ACC have.PST.3SG eat.PST.3SG  
 ‘The poisoned apple was almost eaten, but thankfully no-one had eaten it.’

#### 4.4.1.2 Approximatives in activity statives

Probing the matter further, we find additional evidence that stative and eventive passives dissociate in the domain of approximative modification.

One clear case comes from activities, which were noted in (335) to never license counterfactual readings. For completeness, let us first note that this impossibility of the counterfactual construal of *sçeðon* persists in the eventive passive:

- (340) I            bala        sçeðon klotsiθike      apo ti çonati.  
           the.NOM ball.NOM almost kick.NACT.3SG from the Snow.White  
           ‘The ball was almost kicked by Snow White.’ ✓counterfactual ✗scalar

Recall now that the counterfactual reading is the one that stative passives seem to not license. Since this is the only reading available with activities (340), the preceding discussion leads us to expect that the stative counterpart of (340) should be entirely infelicitous. This prediction is borne out: (341) is judged as highly deviant, unlike its eventive counterpart (340).

- (341) #I            bala        ine / itan            sçeðon klotsi- men- i.  
           the.NOM ball.NOM be.3SG be.PST.3SG almost  $\sqrt{\text{KICK}}$  PTCP F.NOM

Note that the impossibility of (341) cannot be reduced solely to the more general difficulty associated with interpreting stative passives of activities (see section 4.3.3.1). Activity stative passives, odd when uttered out of the blue, improve considerably when embedded in a so-called ‘job is done’ context such as (342) (cf. Kratzer 2001: p. 11, Alexiadou et al. 2015: p. 153; the type of context in (342) due to David Embick):

- (342) [*Our job in the football factory is to test the durability of all newly produced footballs by kicking them.*]  
           I            bales        ine klotsi- menes, pame na fiyume.  
           the.NOM.PL ball.NOM.PL be.3PL  $\sqrt{\text{KICK}}$  PTCP go.1PL COMP leave.1PL  
           ‘The balls are kicked, let’s go home.’

The ‘job is done’ context, however, does not serve to repair (341), as shown in (343). The deviance of (341) is thus not reducible solely to the difficulty of forming a good activity stative passive; rather, the culprit must (also) be the unavailability of a counterfactual reading, the only type of reading otherwise possible with activities in stative passives.

(343) [*The speaker recounts their early departure from the football factory today:*]

#I teleftees bales itan sçeðon klotsi- menes, ala  
 the.NOM.PL last.NOM.PL ball.NOM.PL be.PST.3PL almost  $\sqrt{\text{KICK}}$  PTCP but  
 vareθikame ke fiyame.  
 become.bored.PST.1PL and leave.PST.1PL

‘The last balls were almost kicked, but we got bored and left.’

#### 4.4.1.3 A counterfactual modifier

A crucial final piece of evidence demonstrating that stative and eventive passives do not behave on a par with respect to approximative modification comes from the language’s other approximative modifier. The adverbial *para-liyo* (literally but.for-little) is purely counterfactual: as shown in (344) it never licenses the scalar reading in active transitives and eventive passives.

- (344) a. O Janis paraliyo efaje to milo.  
 the.NOM John.NOM very.nearly eat.PST.3SG the.ACC apple.ACC  
 ‘John very nearly ate the apple.’ ✓counterfactual ✗scalar
- b. To milo paraliyo fayθike apo to Jani.  
 the.NOM apple.NOM very.nearly eat.NACT.PST.3SG from the John  
 ‘The apple was very nearly eaten by John.’ ✓counterfactual ✗scalar

This modifier thus provides a generalized version of the case of activity statives just noted, that is, a case where we eliminate in the baseline one of the two readings of *sçeðon* available with the eventive but not the stative passive. Just as in the case of activity statives, we expect *paraliyo*-modified stative passives to be odd, since this modifier is only capable of yielding a counterfactual reading, but this is precisely the reading that we have found to be impossible with stative passives elsewhere. And indeed, just as in the case of activity statives, this prediction is borne out:

- (345) #To milo ine / itan paraliyo fayō- men- o.  
 the.NOM apple.NOM be.3SG be.PST.3SG very.nearly  $\sqrt{\text{EAT}}$  PTCP N  
 ‘The apple is very nearly eaten.’

Note that (345) uses an accomplishment, which otherwise forms perfect target states; the deviance of (345) is thus entirely due to the impossibility of counterfactual modification in the stative passive.

#### 4.4.1.4 Explaining the contrast

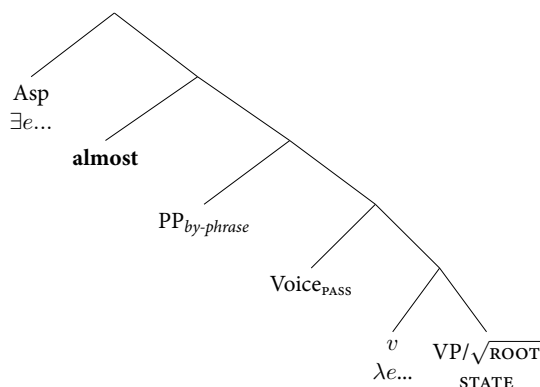
It is sensible to treat the *almost* ambiguity as structural: in particular, following Rapp and von Stechow (1999), the two readings of approximatives can be taken to correspond to two distinct attachment sites for this type

of modifier, yielding distinct interpretations.

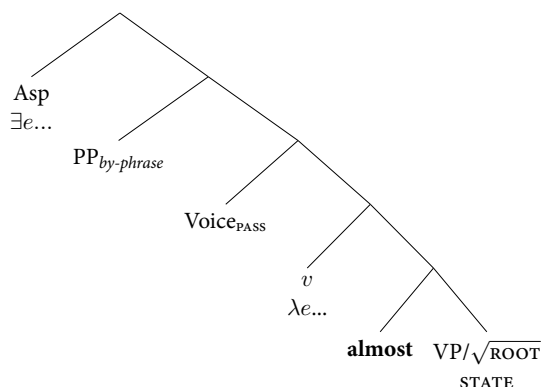
For concreteness, we can describe the denotation of the approximative in informal terms that capture a popular semantics for such elements due to Sadock (1981): a modifier like *almost* applied to some proposition P entails that P is true in some possible world very similar to the world of evaluation. I shy away from committing to a particular implementation of this general approach, and thus illustrate the ambiguity in informal terms immediately below. This is done partly for reasons of brevity and partly in the interest of sidestepping disagreements on the precise semantics for *almost* that, though important, are orthogonal to the point made here (see Horn 2011 for one overview). Simply put, what is of interest here is the different behavior of *almost* in eventive versus stative passives, not the nature of *almost* itself.

What is crucial is that, following Rapp and von Stechow (1999), *almost* will yield different results when attaching to an event compared to a state. Attached to an event, the modifier will assert effectively that it was almost the case that the event occurred; attached to a state caused by an (instantiated) event, *almost* will assert that the event brought it about that the state almost obtained.

From this perspective, consider the following two abstract structures, illustrating informally how each reading can be derived when an approximative modifier combines with the structure of an eventive passive. In (346), *almost* attaches above the eventive core of the structure, but presumably below the level where the event variable is closed off. This type of structure will yield the type of denotation whereby the modifier has access to the event, thus eventually signifying the set of events where it was almost the case that the denotation of the eventive passive came about. Compare this state of affairs to (346), where the attachment site of the modifier is considerably lower: the idea in this case is that *almost* can attach below the level where the event variable is introduced, such that the resulting denotation will pick out the set of relevant events initiated by the *by*-phrase that almost culminated in bringing about a state of the relevant type. What is crucial here is not so much the exact projections to which *almost* is taken to attach; rather what matters is the location of this modifier relative to the event variable.

(346) *Counterfactual*

≈ ‘it was almost the case that PP brought it about that VP’

(346) *Scalar*

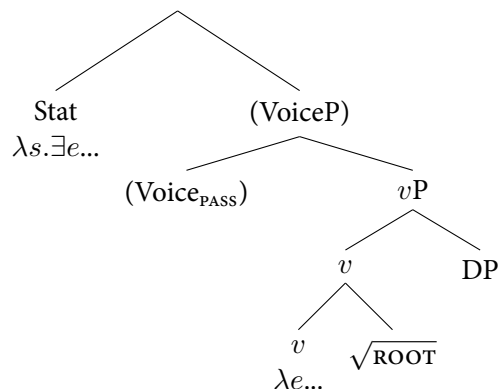
≈ ‘PP brought it about that almost VP’

Now, consider the behavior of *almost* in the stative passive, as predicted by each of the two analyses thereof under consideration here. Unlike the eventive passive, the stative passive has, on any conceivable analysis, a high stative component alongside its eventive core (let us ignore the VP/Root-level state here). The difference between the Layering and complex analyses is with respect to that eventive core: on Layering analyses, this consists of (at least) a full-fledged *vP*, one presumably capable of being modified. On the complex head analysis, by contrast, the structure has different properties: there is no unambiguously phrasal *vP* projection capable of hosting *vP* modifiers.

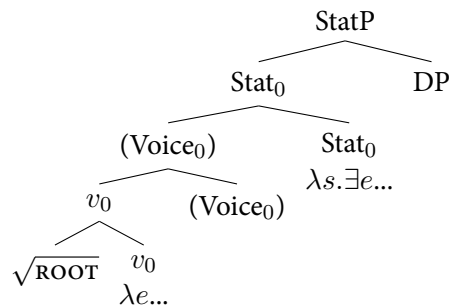
The reasoning of the argument now becomes clear: if the stative passive is like the eventive passive in possessing phrasal verbal structure, then *almost* should, all things being equal, be able to attach there. In (347), the relevant verbal projection is, as it happens, the projection where eventivity is introduced: it is thus unclear why, in a structure like (347), *almost* cannot modify a verbal projection with an open event variable, much like it does in (346), to derive the counterfactual reading.

Compare now the complex head structure. If no phrasal structure is possible below the stativizer, then *almost* has no event-related projection to attach to: the first phrasal projection is in fact one whose minimal projection has existentially closed the event, such that a Stat-level *almost* will only have access to the higher stative eventuality. In other words, only the complex head approach seems capable of deriving all and only the interpretations that we find, namely, just the scalar one.

(347)



(348)



Clearly, more must be said about *why* phrasal structure cannot be created below the stativizer. There is strong evidence that the DP in the stative passive originates outside the verbal core, and it is thus sensible that the *v*-level projection is not *necessarily* phrasal. But something stronger is needed to prevent this structure from becoming phrasal through attachment of *almost*. This problem will recur throughout, and will receive more discussion, but no resolution, in [section 4.5.1](#).

#### 4.4.2 IDIOMS

Stative and eventive passives dissociate in a further respect, namely, their ability to host passivizable idioms. This diagnostic differs from the preceding ones along a few dimensions worth clarifying. It represents a somewhat restricted corner of the overall empirical picture, insofar as the language's reliable passivizable idioms are few and far between; nonetheless, those passivizable idioms that we do find offer a clear empirical picture, and the judgments here, too, are extremely robust.

Consider firstly the baseline example in (349); as the translations indicate, the example furnishes two quite distinct interpretations. The literal, compositional meaning is a quite bizarre one, to the extent that it is available in the first place (see below); alongside it, we find the idiomatic reading that a speaker uttering (349) would usually intend.

- (349) I   θorivi   mu       exun   kopsi   ta       ipata.  
 the noises 1SG.GEN have.3PL cut.PFV the.ACC.PL livers.ACC.PL  
 Literal: 'The noises have cut the livers to my detriment.'  
 Idiomatic: 'The noises have scared me to death.'

(350) is an additional example clarifying that the fixed part of the idiom is made up of the verb 'cut' and the nominal 'the livers', with the dative maleficiary and (what is in this case) the nominative DP not forming part of the idiom.

- (350) I teleftea skini tis tenias mas ekopse ta ipata.  
 the.NOM last.NOM scene.NOM the.GEN movie.GEN 1PL.GEN cut.PST.3SG the.ACC.PL livers.ACC.PL  
 ‘The last scene of the movie scared us to death.’

It is worth noting at the outset that (349)-(350) are strongly idiomatic in a very straightforward sense. The archaic noun *ipata* ‘livers’ does not, in fact, form part of many speakers’ vocabularies outside of this idiom, the everyday word for ‘liver’ in Modern Greek being distinct; even for the speakers who are aware of the meaning of *ipata* outside the idiom, it is very plausibly part of a learned stratum of the vocabulary (typically found, for example, in medical textbooks). This fact has a positive upshot for the diagnostic utility of this idiom, insofar as, if the idiom turns out to be unavailable in some particular configuration, this effect is particularly pronounced, a non-idiomatic reading generally being hard to access due to the restricted distribution of *ipata*.

Note now that the idiom survives in the eventive passive, as shown in (351). But things change in the stative passive: insofar as (352) is interpretable, it can bear only the bizarre literal interpretation which, as just mentioned, is in fact not readily available for many speakers.

- (351) Mu exun kopi ta ipata apo tus θorivus.  
 1SG.GEN have.3PL cut.PASS.PFV the livers from the noises  
 ‘I have been scared to death by the noises.’
- (352) #Mu ine ko- mena ta ipata (apo tus θorivus).  
 1SG.GEN be.3PL  $\sqrt{\text{CUT}}$  PTCP the livers from the noises  
 Intended: ‘I am scared to death (by the noises).’

The language’s second reliable passivizable idiom behaves similarly. In (353), we observe that ‘to roast the fish on one’s lips’ can be interpreted to refer to the act of tormenting someone; this idiomatic reading is as accessible in the active as it is in the eventive passive.<sup>95</sup> It disappears, however, in the stative (354).<sup>96</sup>

<sup>95</sup>For one of my consultants, (353b) is not clearly well-formed; but the same consultant nonetheless notes that (354) is worse than (353b).

<sup>96</sup>Note that the ungrammaticality of (352) and (354) cannot be easily attributed to incompatibility between the structure of the stative passive and the dative that denotes the maleficiary in these idioms. Datives involved in body-part possession, such as those in the idioms discussed here, do otherwise appear in the stative passive:

- (i) Mu ine pes- meno to iθiko.  
 1SG.GEN be.3SG fall PTCP the.NOM morale.NOM  
 ‘My morale is low.’

An obvious question concerns the implications of such data for the structure of stative passives. Much could be said in this connection, but, at a minimum, no problem will arise for the complex head analysis if, as I argue below, the core argument of stative passives originates in the stative component of the structure. But this domain clearly deserves more investigation, perhaps by examining against the background of the stative passive the many different datives of Greek (see Michelioudakis 2012: 192ff; Michelioudakis and Kapogianni 2013). Note that, as predicted by the analysis here, *bona fide* indirect objects are out in the stative passive:

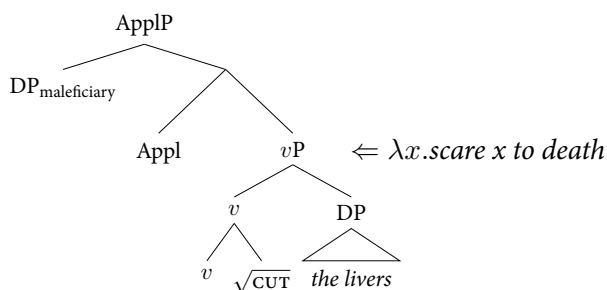
- (ii) a. To yrama \*(tu) stalθice tu Joryu.  
 the.NOM letter.NOM 3SG.M.GEN send.NACT.PST.3SG the.GEN George.GEN





idiom as a denotation optionally ‘inserted’ into the relevant point in the structure. The idea in (357) is that, if ‘insertion’ of this kind occurs at the (phrasal, transitive) *v*P level, it is correctly predicted to be insensitive to higher portions thereof, and in particular to the presence/absence or properties of Voice; *ergo*, it should be able to obtain in both transitives and stative passives, as indeed it does.

(357)



The reasoning of the diagnostic now becomes clear. If the stative passive contained a phrasal *v*P, as it does on the layering analysis, it is not clear why idioms cannot arise in the stative. If, by contrast, the stative simply does not furnish the structure into which the idiom can be inserted – if, in particular, the ‘object’ DP and *v* are in fact not local to each other at all – we correctly derive this divergence between eventive and stative passives.

This is a first piece of evidence that the sole argument of stative passives originates in a distinct position from the theme of transitives/eventive passives. This conclusion is reinforced by the next diagnostic.

#### 4.4.3 ASYMMETRIES IN VOICE REVERSALS: INGESTIVES

Evidence in favor of a ‘small’ analysis of Greek stative passives comes from a previously un(der)discussed but surprisingly rich domain, concerning the behavior of ingestive verbs under stativization. The facts from this domain turn out to be particularly informative as to the position in which the sole argument of stative passives originates, and potentially for the way in which this argument is thematically interpreted: ingestives allow us to see that the interpretation of the sole argument of the stative passive is thematically more flexible than that of the theme of the passive, in a way that militates against associating this element with the verbal structure.

Though the empirical picture discussed here has, I believe, not been noticed before in its entirety, some crucial observations have already been made in Anagnostopoulou (2001) with specific reference to Greek; cf. Arad 1998a and Haspelmath 1994: p. 161 for related facts from other languages. Though I limit my attention to the behavior of ingestive verbs in stative passives here, the patterns discussed are likely part of a much broader cross-linguistic picture suggesting that the argument structure of ingestive verbs has particular properties; see e.g. Bhatt and Embick 2017; Krejci 2012; Newman 2009; Saksena 1980.

#### 4.4.3.1 The pattern

Ordinarily, the sole argument of stative passives seems to share its thematic properties with the direct object of transitives, and the surface subject of eventive passives, in being read as the theme of the corresponding event. This fact has been true of every stative passive we have encountered thus far; (358) illustrates with one more set of examples.

- (358) a. *Kliðosa tin porta apo mesa.*  
lock.PST.1SG the.ACC door.ACC from inside  
'I locked the door from the inside.'
- b. *I porta eçi kliðoði apo mesa.*  
the.NOM door.NOM have.3SG lock.NACT.PFV from inside  
'The door has been locked from the inside.'
- c. *I porta ine kliðo- men- i apo mesa.*  
the.NOM door.NOM be.3SG lock PTCP F.NOM from inside  
'The door is locked from the inside.'

But a restricted class of verbs constitutes an exception to this generalization. The basic pattern can be illustrated easily with reference to  $\sqrt{\text{EAT}}$ . Stative passives formed from this Root can license the expected interpretation of their sole argument, whereby this element is read as the theme of the associated event; (359) illustrates this possibility by embedding the stative in a context where Mary has undergone an eating event. But stative passives formed on the basis of  $\sqrt{\text{EAT}}$  license a second, exceptional interpretation, one where the sole argument is (in some sense) the *agent* of the corresponding event. Thus, the Greek counterpart of *Mary is eaten* is felicitous not just in contexts like the one in (359), but also in situations where Mary is understood to have done the eating: (360) illustrates by showing that both the stative passive and the perfect are acceptable descriptions of the relevant event.

- (359) [*The vicious human-eating plant consumes Mary.*]

*I Maria ine faço- men- i.*  
the.NOM Mary.NOM be.3SG eat PTCP F.NOM

'Mary is eaten.'

- (360) Q: I'm setting the table – is Mary joining us?  
A1: *Oçi, i Maria ine faço- men- i.*  
no the.NOM Mary.NOM be.3SG eat PTCP F.NOM  
'No – Mary has eaten.'
- A2: *Oçi, i Maria eçi fai.*  
no the.NOM Mary.NOM have.3SG eat.PFV  
'No – Mary has eaten.'

(361) illustrates the full set of verbs patterning in the relevant way: stative passives formed from  $\sqrt{\text{EAT}}$ ,  $\sqrt{\text{DRINK}}$ ,  $\sqrt{\text{STUDY}}$  and  $\sqrt{\text{LEARN}}$  can all license the relevant ‘special’ interpretation, such that in (361), *Mary* can in principle be read as either the theme or the agent of the relevant events.<sup>97</sup>

(361) I            Maria    ine    { fayο- , pço- , ðiavaz- , maθi- } men- i.  
 the.NOM Mary.NOM be.3SG  $\sqrt{\text{EAT}}$   $\sqrt{\text{DRINK}}$   $\sqrt{\text{STUDY}}$   $\sqrt{\text{LEARN}}$  PTCP NOM.F

It bears emphasizing just how unexpected this pattern is given what we have seen so far: this type of interpretation is simply completely impossible to obtain in what seems to be the normal case in stative passives. It also bears emphasizing that this interpretation is not enabled by context alone, but must be grammatically encoded somehow. (362) makes both points by illustrating that a non-ingestive Root like  $\sqrt{\text{PAY}}$  cannot license the special interpretation even in a context where this would be highly plausible. (363) clarifies for completeness that, as expected, the stative is just fine in a context that favors the subject-as-theme reading that statives always allow.

(362) [*Splitting the check at the restaurant, our group discovers that Mary has already paid for her bit.*]

Q: Does Mary need to put her card down?

A1: #Oçi, i            Maria    ine    pliro- men- i.  
 no the.NOM Mary.NOM be.3SG pay PTCP F.NOM  
 Intended: ‘No – Mary has paid.’

A2: Oçi, i            Maria    eçi    plirosi.  
 no the.NOM Mary.NOM have.3SG pay.PFV  
 ‘No – Mary has paid.’

(363) Q: Do we still need to pay Mary this month?

A1: Oçi, i            Maria    ine    pliro- men- i.  
 no the.NOM Mary.NOM be.3SG pay PTCP F.NOM  
 Intended: ‘No – Mary is paid.’

<sup>97</sup> An important part of the empirical picture here is that the relevant formations have clear aspectual properties, to the effect that the event in question must be read as telic/completed: we thus find (i) (this is also cross-linguistically pervasive: thus Engl. *drunk* and Italian *bevuti* mean ‘inebriated’, not just ‘having drunk’. Cf. in this respect the *done*-statives of English (ii).

- (i) a. Exo    fai,    ala ðen exo    xortasi.  
 have.1SG eat.PFV but NEG have.1SG become.full.PFV  
 ‘I’ve eaten, but I’m not full.’  
 b. Ime    fayο-    menos, #ala ðen exo    xortasi.  
 be.1SG  $\sqrt{\text{EAT}}$  PTCP but NEG have.1SG become.full.PFV  
 ‘I’m eaten, but I’m not full.’

- (ii) a. I’m done eating.  
 b. I’m done my homework.

(Biggs 2021)  
 (Fruehwald & Myler 2015)

A2: Oçi, i Maria eçi pliroði.  
 no the.NOM Mary.NOM have.3SG pay.NACT.PFV  
 ‘No – Mary has been paid.’

The verbs participating in this alternation are all (literally or metaphorically) *ingestive*, denoting the consumption of a concrete or abstract entity. This type of pattern seems to be cross-linguistically pervasive with ingestives: see English in (364),<sup>98</sup> Hebrew in (365), and Italian in (366).<sup>99</sup>

(364) Mary is drunk / learned / well-read.

(365) a. Ha tapux haya axul.  
 the apple be.PST.3SG eat.PTCP  
 ‘The apple was in an eaten state.’

b. Lazet la derex axulim ve stuyim.  
 get under way eat.PTCP.PL and drink.PTCP.PL  
 ‘Set off having eaten and drunk enough.’

(Arad 1998a: ex. (18))

(366) Venite già mangiati e bevuti.  
 come.IMP.2PL already eat.PTCP.PL and drink.PTCP.PL  
 ‘Come over after having eaten and drunk.’

(Arad 1998a: ex. (14b))

#### 4.4.3.2 Deriving the pattern

Aspects of the interesting behavior of ingestives in Greek have been noted in Anagnostopoulou (2001), which proposes to cast the facts under a ‘dependent role’ account: the proposal is effectively that the relevant Roots are embedded in a structure involving an intermediate, VP-internal argument, one that can be interpreted as an agent whenever the ‘real’ agent DP is missing. (367) schematizes.

<sup>98</sup>Examples from English like those in (i) sometimes arise in the literature on English stative passives; see e.g. Bresnan 1995, Embick 2004a: fn. 6, McIntyre 2013: fn. 2, Bruening 2014: appendix 2.

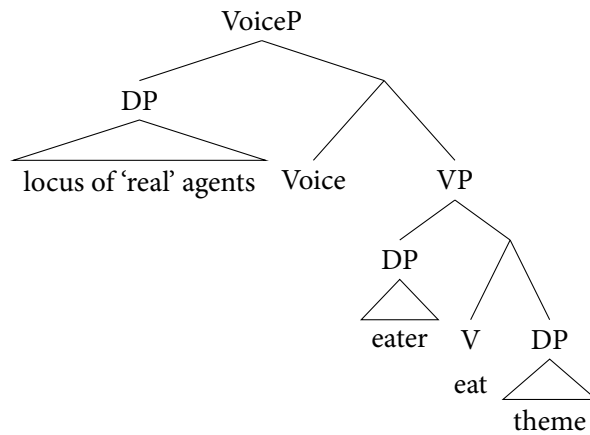
- (i) a. An escaped convict.  
 b. A confessed criminal.

Though superficially similar to Greek ingestive participles, these have different properties that render them very likely orthogonal to the discussion here. In English, these are degraded in predicative position (ii); do not belong to the class ingestives which bears a consistent cross-linguistic profile. The Greek cases discussed in the main text share none of these properties.

- (ii) #The criminal is escaped/confessed.

<sup>99</sup>Ingestive verbs in fact behave in a special way with respect to both stativization and (a type of) causativization: see e.g. Hindi in Bhatt and Embick 2017; Saksena 1980; Chichewa in Baker 1988: p. 461; Greek in Anagnostopoulou (2001); and cf. the papers in Newman 2009. I leave the intriguing links here for future work.

(367)



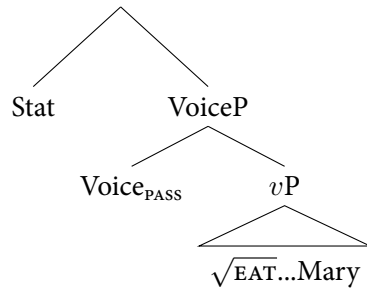
But there exists a crucial observation suggesting that this account will not be sufficient, and enabling a novel insight into the structure of statives in Greek more generally: the ‘special’ behavior of ingestive Roots, whereby the sole argument can (apparently) be interpreted agentively, arises in the stative passive, but never in the eventive. (368) illustrates: the examples in (368a) are perfectly well-formed, but only license the readings, implausible out of the blue, whereby Mary has been the theme of an eating, studying, or learning event. (368b) clarifies, for completeness, that passives from these Roots are flawless in the right contexts.

- (368) a. #I Maria eçi { fayothi / đjavasti / maθefti }.  
 the.NOM Mary.NOM have.3SG eat.PFV.3SG read.PFV.3SG learn.PFV.3SG  
 Only reading: ‘Mary was eaten/read/learned.’
- b. To psomi eçi fayothi / to vivlio eçi đjavasti /  
 the.NOM bread.NOM have.3SG eat.PFV.3SG the.NOM book.NOM have.3SG read.PFV.3SG  
 to mistiko eçi maθefti.  
 the.NOM secret.NOM have.3SG learn.PFV.3SG  
 ‘The bread was eaten / the book was read / the secret was found out.’

The overall pattern is thus asymmetrical: ‘special’ readings of the sole argument in the context of ingestive Roots are possible only in the stative passive, but never in the eventive passive.

This asymmetry is entirely unexpected on the Phrasal Layering account, and, more generally, on any account where the sole argument of the stative passive originates below the stativizer. To see why, consider the representation in (369). Here, the stative contains the eventive; if the relevant effect involves interpreting *Mary* as an agent, and this interpretation takes place low in the structure, before Stat is merged, then, in (369), we should be able to derive the effect without ever merging Stat, thereby predicting that (368a) should be acceptable.

(369)



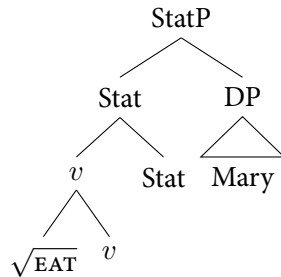
In other words, that the phenomenon is relativized to the stative passive suggests that we must ‘know’ that the structure is stative before introducing the argument that is exceptionally read as an ‘agent’. If this argument originates low, as in (369), there is no way to derive this effect.

Compare now the complex head analysis in (370); here, the crucial aspect of the representation is that *Mary* is structurally unrelated to *v*, originating instead in the stativizing projection. Unlike the layering account, (370) manages to furnish, at the very least, the correct conditions for deriving the effect we find: since the argument originates above *Stat*, it is straightforward to guarantee that the phenomenon targets this configuration, which crucially sets apart the stative from the eventive passive.<sup>100</sup>

<sup>100</sup>Elena Anagnostopoulou (p.c.) conjectures that the structure in (367) might be able to derive the fact that the phenomenon here is relativized only to stative passives without recourse to a structure like (370). The idea would effectively be that, in (367), the ‘eater’ argument is not a canonical external argument, and thus cannot be targeted by eventive passivization, much like the external argument of experiencer and deponent verbs (see Chapter 2). This account does not seem tenable, however. Firstly, it owes an explanation for the stative passive facts: given a structure like (367), what guarantees that the ‘wrong’ argument (i.e. the eater) can be externalized in the stative passive in the first place? Secondly, and relatedly, the parallel with deponents and experiencer verbs is only apparent: if there were a true parallel here, we would expect the effect that obtains with ingestives under stativized verbs to also obtain with stativized deponents and experiencer verbs, and this is not the case:

- (i) I        Maria    ine    katara- men- i.  
 the.NOM Mary.NOM be.3SG curse    PTCP F.NOM  
 ‘Mary is cursed’; NOT ‘Mary has cursed (someone)’
- (ii) a. To        sçeđio    ine    skarfiz- men- o.  
 the.NOM plan.NOM be.3SG think.up PTCP N.NOM  
 ‘The plan is devised.’  
 b. #O        efevretis    ine    skarfiz- men- os.  
 the.NOM inventor.NOM be.3SG think.up PTCP M.NOM  
 Intended: ‘The inventor has come up (with something)’

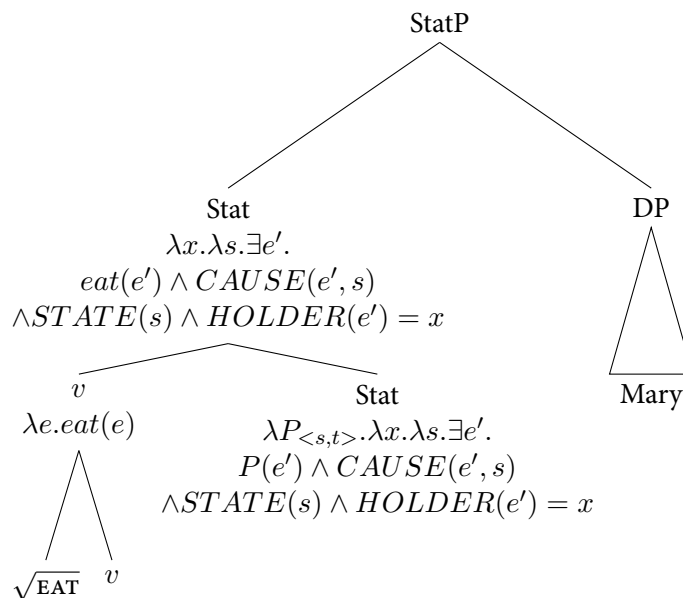
(370)



Consider in more detail how the basic pattern, and its asymmetrical distribution, can be derived from (370).

I propose firstly that the crucial structural difference between (369) and (370), concerning the position of *Mary*, correlates with an interpretive difference: *Mary* in (370) is interpreted with respect to the theme, not the event. In particular, *Mary* is linked to the state by means of a holder role; this element is not linked directly to the event.

(371)



(371) stands between several different views on the structure and thematic interpretation of stative passives. It resembles the conclusions of works on other languages insofar as they take the core argument of stative passives to be fully external (see Horvath and Siloni 2008; Meltzer-Asscher 2011, 2012 for Hebrew; Levin and Rappaport 1986; McIntyre 2013 and, to some extent, Bruening 2014 for English). It differs from these



works, however, in taking it that the interpretation of this element is also distinguished from the theme of transitives/eventive passives: in particular, the theme role is not ‘passed up’ the structure in (371) (which might technically be possible; see e.g. Wood 2021).<sup>101</sup> Closest to the approach in (371) are the analyses of the *done*-statives of English in Biggs (2021), Fruehwald and Myler (2015), where the core argument is both external to the verbal substructure structurally and understood as a state-holder interpretively;<sup>102</sup> the statives analyzed in these works are, of course, different in important ways to the cases at hand here.

Once we countenance the view of thematic interpretation in the stative passive expressed in (371), we have the beginnings of a solution that derives the asymmetry between eventive and stative passives in the domain of ingestives. Whereas the eventive passive involves an instance of strict thematic determination, with the internal argument associated with the theme role, the stative passive affords thematic flexibility, insofar as it links the nominal in question to the role of holder of a state, remaining neutral, in principle, as to what its link is to the associated event. In other words, the core argument of a Greek stative passive is primarily a state-holder, and acquires other roles derivatively; as in Kratzer (1996), I take the role of state-holder assigned to some  $x$  to be in principle compatible with the inference that  $x$  is responsible for the state’s obtaining, but also with construals where  $x$  is affected by the state in looser ways. What is needed, then, is some amount of precision on how these two possibilities distribute.

Schematizing the desired outcome informally, we may posit the meaning postulates in (372). (372a) ensures that holders of event-entailing states will normally be interpreted as themes of the associated event; this much captures the arguably prevailing case in stative passives. (372b) is contextual: it states that, in the context of (some) ingestive Roots, state-holders of event-entailing states may be read agentively instead. The idea is that the meaning postulates compete, with competition regulated by the Elsewhere principle, and that (372b) is optional; as such, (372a) will apply with the vast majority of Roots, and (372b) may, but need not, apply with ingestive Roots.

(372) *Meaning postulate*

- a. Interpret the holder of an event-entailing state as the theme of the entailed event.
- b. In the context of {  $\sqrt{\text{EAT}}$ , ... }, optionally interpret said entity as an agent.

(372) should thus be understood as an instruction on how to interpret a particular thematic function

<sup>101</sup> Compare, for instance, the accounts in Meltzer-Asscher (2011) and Bruening (2014). Though differing on a few important fronts, both of these works postulate lambda abstraction for the theme role: for Meltzer-Asscher, this operation is part of the lexical rule of adjectival passive formation, while for Bruening it is effected by operator movement from the complement of  $v$  in the stative passive. Neither approach seems well-positioned to accommodate the thematic flexibility we observe with stativized ingestives in Greek. Note also that the analysis in Bruening (2014) predicts that evidence for  $A'$  movement within the stative passive should be found; this does not immediately seem to be the case.

(i) \*The papers are filed without examining.

<sup>102</sup>In fact, Biggs (2021) takes the state-holder DP to also control a PRO in the lower agent position.

present from LF onward; more specifically, it is an instruction on how to interpret the function *HOLDER*. Merely positing (372) does not seem to enrich the inventory of interpretive levels of the theory, insofar as any theory where thematic roles are functions at LF will need to eventually comprise instructions, at a level after LF, that specify how formal relations such as *AGENT* are to be read more concretely. From this perspective, the claim in (372b) is simply that speakers ‘know’ to interpret the holders of ingestive-induced states in a special way, at a level of lexical meaning that interacts with, but is fed by, the core grammar.<sup>103</sup>

It is important to be precise about what aspect of the informal (372) is central to the discussion here, and what is incidental or beyond our scope. What is essential is that (372) is designed to apply to state-holders; as such, the instructions in (372) are simply not at stake in the eventive passive, where the deep object is unambiguously associated with the theme role. What is truly central here, then, is the idea that the core argument of the stative is thematically distinct from the deep object of the eventive passive, in a way that enables the former’s special behavior in the context of ingestive Roots. A theory assigning identical thematic roles to these two elements would be faced with difficulty when it comes to the facts from ingestives, and this is what is crucial here. Beyond this point, we could choose to implement the particulars differently with little loss of insight, it seems; though not entirely satisfying, (372) suffices for now.

(372b) raises the natural question of why it is ingestive Roots in particular that enable this special behavior, seemingly widely attested cross-linguistically. Though answering this question in depth is beyond our scope here, it is possible to offer a few instructive remarks, building in part on intuitions in the typological literature on ingestives.

Fistly, note that ingestives belong to the category of incremental theme verbs in the terms of Dowty (1991) and subsequent literature on telicity (cf. e.g. Krifka 1998; Tenny 1994): broadly speaking, the theme of an eating event is incrementally involved in the event itself, insofar as the state it is in, from wholeness to

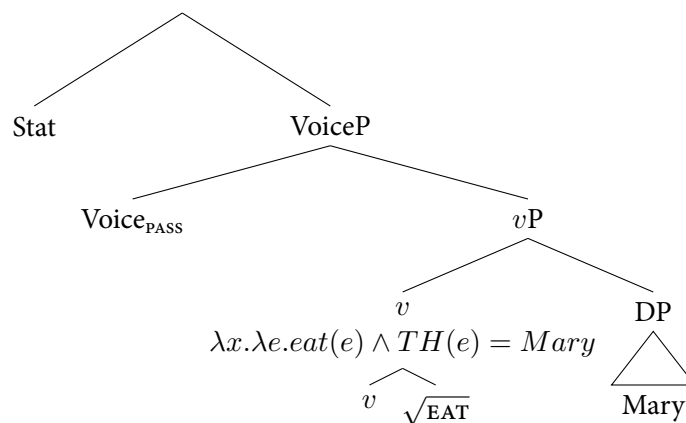
<sup>103</sup>Note in this connection that the ‘agentive’ reading of the core argument of an *eat* stative passive is clearly modulated by world knowledge, (i); cf. (ii).

- (i) a. Taisa { to peði / to eyo mu / (?to fito }.  
 feed.PST.1SG the.ACC child.ACC the.ACC ego.ACC 1SG.GEN the.ACC plant.ACC  
 ‘I fed the child/my ego/the plant.’
- b. To peði ine { taismeno / fayomeno }.  
 the.NOM child.NOM be.3SG feed.PTCP.N.NOM eat.PTCP.N.NOM  
 ‘The child is fed/full.’
- c. To eyo mu ine { taismeno / #fayomeno }.  
 the.NOM ego.NOM 1SG.GEN be.3SG feed.PTCP.N.NOM eat.PTCP.N.NOM  
 ‘My ego is fed/full.’
- d. To fito ine { taismeno / #fayomeno }.  
 the.NOM plant.NOM be.3SG feed.PTCP.N.NOM eat.PTCP.N.NOM  
 ‘The plant is fed/full.’
- (ii) To peði / #to eyo mu / #to fito efaje afto pu to taisa.  
 the.NOM child.NOM the.NOM ego.NOM 1SG.GEN the.NOM plant.NOM eat.PST.3SG DEM.ACC that 3SG.N.ACC feed.PST.1SG  
 ‘The child/my ego/the plant ate what I fed it.’

non-existence, determines the progression of the event. But ingestive verbs are described in the typological literature as having another noteworthy property, sometimes understood through the label ‘affected agent’ (e.g. Haspelmath 1994: 161ff; Saksena 1980; Naess 2011; Newman 2009); in prototypical ingestive events, agents can also be understood as affected, in the sense that ingestion alters the (physical or mental) composition of the ingestor. The intuition in the typological literature on ingestive verbs is thus that their agents may be notionally more ‘patient-like’ than those of other predicates;<sup>104</sup> (372b) is one attempt of making this fuzzy notion somewhat more concrete, and, crucially, relativizing it to the corner of the grammar where it obtains in Greek, namely, stative passives.

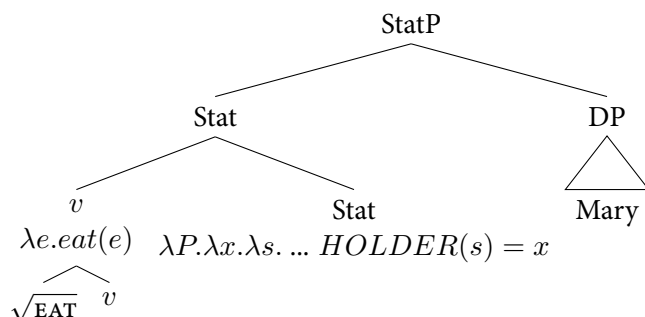
In summary, then, I take the exceptional behavior of ingestive Roots to be one corner of the grammar allowing us to glimpse an important divergence between eventive and stative passives: their core arguments, ostensibly both identifiable as themes, in fact have distinct structural and thematic properties. (373) schematizes.

(373) *Eventive passive of ‘eat’*



<sup>104</sup>Naess (2011) notes that the ‘affectedness’ of the agents of ingestive verbs may underpin the cross-linguistically common deployment of verbs like ‘eat’ in so-called adversative constructions. Greek evidences these usages as well: in (ia), the subject of ‘eat’ is not read as active in any sense, instead merely receiving various unfortunate actions; this usage of ‘eat’ is pragmatically adversative insofar as combining it with positively-interpreted actions is distinctly odd (ib).

- (i) a. Efaje { ksilo / klotsça / jiuxaisma / vrisimo / ... }.  
eat.PST.3SG beating.ACC kick.ACC heckling.ACC cursing.ACC  
‘S/he was beaten up / kicked / heckled / cursed at.’
- b. #Efaje { çirokrotima / epeno / sinxaritiria }.  
eat.PST.3SG applause.ACC praise.ACC congratulations.ACC  
Intended: ‘S/he received an applause/praise/congratulations.’

(374) *Stative passive of 'eat'*

## 4.5 BUILDING STATIVES ‘SMALL’

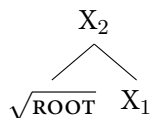
We have seen a range of evidence for assigning a complex head analysis to Greek stative passives; in this section, I offer some more specific remarks on this type of analysis.

### 4.5.1 STRUCTURE

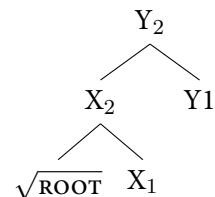
The proposal here is based on the idea that complex heads can be created by movement-free head-adjunction in the syntax, i.e. by external Merge, in the terms of Chomsky (2001a). It is important to be precise on what exactly is entailed by this move from a theoretical perspective, and what questions arise once this move is made.

Take two X and Y below to be terminal nodes, and take all terminal nodes to be *heads* (the opposite cannot be the case). What the approach here requires is that heads can head-adjoin to each other, and that Roots can attach to heads in a similar manner, such that an object like (375a) can be produced by adjoining a Root to X, and subsequent adjunction of another head Y will produce the object in (375b).

(375) a.



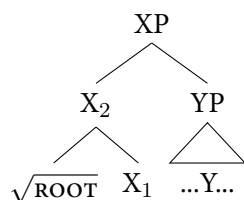
b.



What is not crucial here is the labelling-theoretic status of nodes like X<sub>2</sub> and Y<sub>2</sub> in the representations above: in a framework where labeling is relational, such as Bare Phrase Structure (Chomsky 1995), these would be simultaneously minimal and maximal, the distinction between heads and phrases not being primitive. What *is* crucial concerns representations like (376), where the label-theoretically ambiguous portion of

the structure has received an adjunct that is unambiguously phrasal; it is in these situations that the output of the adjunction operation is itself unambiguously phrasal.

(376)



As already iterated several times in this chapter, the domain of the investigation of the stative passive where these considerations play out concerns the introduction of the core argument: in particular, the terms ‘phrasal’ and ‘not phrasal’ have effectively been used as convenient shorthands for the idea that, whereas the highest projection of *v* in the stative passive is unambiguously phrasal, insofar as it takes a phrasal complement DP, the same projection in the stative passive is not unambiguously phrasal in this way, because the core argument DP does not originate in a verbal projection in the stative passive.

That an object like (375b) must be countenanced as a licit output of external Merge is, in my view, the null hypothesis given a system of phrase structure with the properties of that in Chomsky (1994, 1995): simply put, it is not clear, given the absence of a rigid phrase-structural schema, that objects like that in (375b) can be kept out without stipulation. This is of course not so in frameworks assuming a rigid phrase-structural component, which is perhaps why, in work in Government and Binding theory Chomsky 1981, objects like (375b) were associated solely with the output of the operation Head Movement (see among many others Baker 1985, 1988; K. L. Hale and Keyser 1993) and, later, its postsyntactic counterparts (see esp. Embick and Noyer 2001; for recent developments in connection with the broader theory of affixation see e.g. Arregi and Pietraszko 2021; Harizanov and Gribanova 2019; Harley 2013). The claim that objects like (375b) can be derived in the absence of head movement is, of course, far from new in more recent years: the perspective here builds on Embick (2021, 2023), Wood (2021), but related ideas are also found in Bruening (2019), Epstein, Kitahara, and Seely (2016), Oda (2022); cf. the notion of ‘direct Merge’ in Embick (2004a: 372ff).

That external-Merge-derived complex heads must be countenanced is, of course, only one side of the larger theoretical question discussed here. The other half comprises the puzzle of how to circumscribe the cases where the system *must* create such a structure. I have shown above that taking it that no unambiguously phrasal structure can be present below the stativizing projection in Greek predicative stative passives perspicuously accounts for several novel generalizations; these properties would go unaccounted for under an approach where the stativizer embeds unambiguously phrasal verbal syntax. But I have not been able to make precise what mechanical aspect of the derivation ensures that things work this way; in other words, what prevents the creation of unambiguously phrasal structure below the stativizer?

I am not in a position to offer a compelling answer to this question here, but some notes are in order.

Firstly, the shape of the eventual solution must make crucial reference to the head Stat, which is an independent distinguishing feature of stative passives *vis-à-vis* their eventive counterparts; recall that Greek does not employ participles in eventive passives, so, for this language at least, attributing particular properties to Stat is a sensible first way to attempt to make the right cut in the data. I cannot do justice here to the question of what these properties might be; see Epstein et al. (2016) and Oda (2022: ch. 4) for some labeling-oriented proposals.<sup>105</sup>

Secondly, I have emphasized at several points that the empirical arguments above should be seen as arguments in favor of countenancing, under certain assumptions at least, complex head structures of the relevant type; and that empirical arguments of this sort can be made is, I believe, important in itself. It highlights the possibility that the notions ‘syntactically derived’ and ‘embedding a phrasal/clausal syntax’ are dissociable. It is hoped here that the potential for a dissociation of this kind will prompt further careful examination of the predictions of analyses that take deverbal mixed categories to embed phrasal syntax; the null hypothesis, given the discussion here, is that we expect to find both types of structures attested cross-linguistically or even intra-linguistically, and it will take considerable care to tell them apart.

Finally, a broader point is in order. Arguments that phrasal syntax is present in mixed categories are sometimes seen as arguments for the broader notion of syntactic word formation, and against lexicalist approaches (at least in one sense of the term). The move here has not been to deny the existence of such cases, but to propose that Greek stative passives do not instantiate such a case. It is possible, in this broader context, that the arguments advanced here then swing the pendulum back in the direction of lexical analyses, at least to the extent that the complex head approach recognizes that, even if syntactically complex in the technical sense, certain categories do not have the properties of phrasal syntax. I reserve this broader discussion for [section 4.7.3](#) and, eventually, for [section 5.2.3](#).<sup>106</sup>

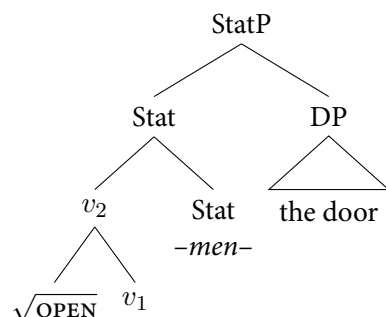
#### 4.5.2 INTERPRETING THE SMALL STRUCTURE

The interpretation of *-men-* statives on the complex head approach is fully compositional. Putting to the side the possible inclusion of Voice (on which see [section 4.6](#)), a representation like (377) involves the two basic pieces in (378).

<sup>105</sup>Bruening (2019) enforces the creation of complex heads mechanically by positing well-formedness conditions of the type ‘projection X must create a complex head’. It is not clear to me whether these statements are afforded theoretical status therein, or whether they are merely given as placeholders for more articulated theoretical devices.

<sup>106</sup>Embick (2023) provides one argument in favor of the ‘small’ analysis of English statives, and against lexicalist solutions, based on the behavior of negation and resultative secondary predication. I believe the argument will carry over nicely to Greek, recruiting the predicative complements identified in [section 3.3.2.1](#); since it would also presuppose quite a bit of detail on the behavior of negation in stative passives in Greek, I put it to the side here.

(377)

(378) *Basic denotations*

- a.  $\llbracket v_2 \rrbracket = \lambda e.open(e)$
- b.  $\llbracket Stat \rrbracket = \lambda P_{\langle s,t \rangle}.\lambda x.\lambda s.\exists e.P(e) \wedge CAUSE(e, s) \wedge STATE(s) \wedge HOLDER(s) = x$

(378a) is a denotation according to which  $v$ , combined with  $\sqrt{OPEN}$ ,<sup>107</sup> yields sets of opening events. Note that this is, in a sense, the ‘unergative’ denotation of  $v$ , one that does not introduce a theme role. The structure in (377), where the DP is introduced high, will inevitably guarantee that this denotation of  $v$  is chosen, on any sensible view of how  $v$  comes to be associated with distinct denotations in unergative versus other structures. If the difference arises solely at LF, with one and the same syntactic object  $v$  taking different denotations conditioned by the local presence of an internal argument, then in (377) the non-theme-introducing denotation would have to be chosen; if we instead have distinct syntactic objects  $v_1$  and  $v_2$ , associated in a one-to-one fashion with distinct denotations conditioned by the local presence of an internal argument, then, again, the ‘unergative’  $v$  will have to be chosen.

(378b) is a denotation that resembles to a large extent the basic denotation of (target) state-deriving elements in Kratzer (2001), or, more precisely, a delexicalized version thereof. On this approach, Stat takes a predicate of events, existentially closes the associate event, introduces a state variable, and asserts that a CAUSE relation holds between these two eventualities. This much is more or less a standard treatment of stativizers; (378b) has the additional property that it introduces a state-holder role, and an associated entity variable.

Note that, as discussed in section 4.4.1.4, existential closure of the event at the Stat level will correctly preclude higher modifiers from accessing the event variable; and, as discussed in section 4.4.3.2, the association of a state-related holder role to the core argument DP will correctly leave open the possibility that this DP not be interpreted as a theme of the event in the narrow sense. Note in this connection that the facts from idiom formation discussed in section 4.4.2 independently support positioning the DP that saturates the holder role apart from the verbal substructure.

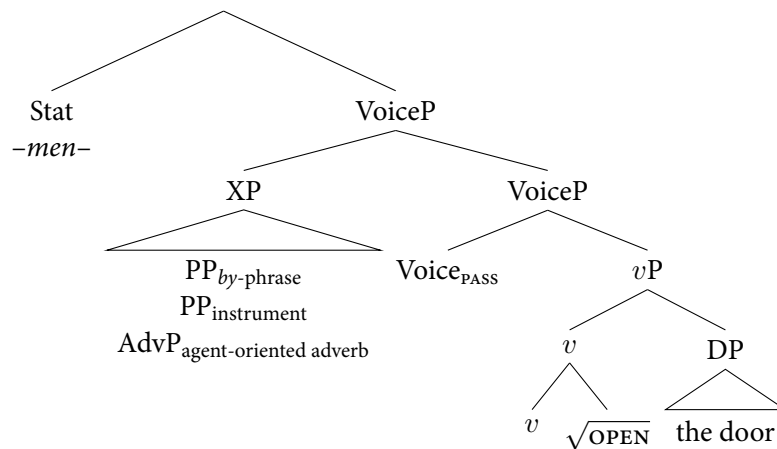
<sup>107</sup>I remain agnostic on the details of how the Root composes with  $v$ ; this is not central here.

#### 4.6 WHAT ABOUT AGENT-ORIENTED MODIFIERS?

Recall from [section 4.6](#) that Greek is often taken to be a language that freely admits agent-oriented modifiers in stative passives (see Anagnostopoulou 2003a et seq.). The observation that agent-oriented modifiers are admissible in a seemingly much more liberal fashion than in languages like English or German (see especially Alexiadou et al. 2015: ch. 5 for recent comparative overview); see (379) for one example (not taken directly from previous literature), whose informativeness will be revised below. In turn, this observation has often been understood in terms of the presence of a Voice projection that is necessarily phrasal, by virtue of hosting said agent-oriented modifiers, as in (380).

- (379) I        porta    ine    aniy-    meni viea    / me losto        / apo ton    ðiarikti.  
 the.NOM door.NOM be.3SG  $\sqrt{\text{OPEN}}$  PTCP violently with crowbar.ACC from the.ACC burglar.ACC  
 ‘The door is opened violently/with a crowbar/by the burglar.’

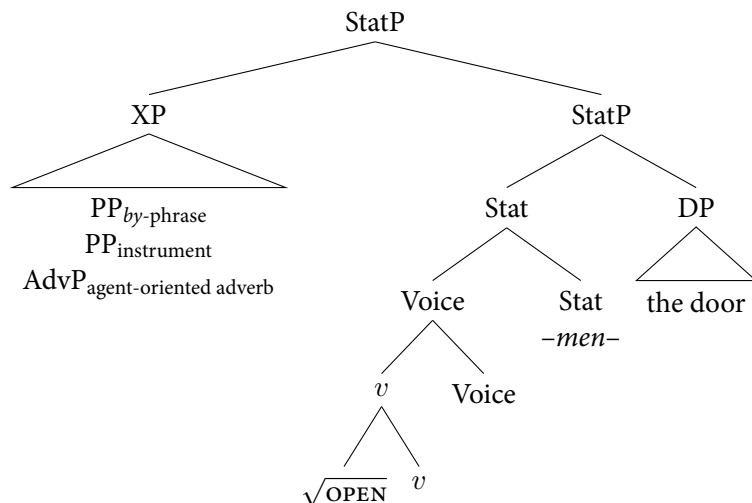
(380)



The ‘small’ analysis developed thus far does not admit phrasal adjunction of this type below the Stat projection, and such modifiers must enter higher, e.g. as in (381).



(381)



I explore here two analyses compatible with this structure, without yet being able to adjudicate between them. The discussion that follows should serve, at the very least, to highlight several points of nuance in the domain of agent-oriented modifiers in Greek stative passives, ones that deserve to be explored further.

A first possible position would be to maintain that Voice is, indeed, present in the structure, but that the agentive semantics it introduces is saturated higher in the structure, above the Stat level. The resulting analysis would thus involve an instance of *delayed saturation*, where the (thematic) function introduced by one head is saturated by a nominal not syntactically introduced by the same head.

Several studies emphasize the point that delayed saturation is a natural consequence of a system such as the one already assumed here, where *i*) thematic roles are nothing more than functions at LF, and *ii*) syntactic argument introduction is dissociated from the introduction of a thematic role (see Kastner 2017; Myler 2016; Wood 2014, 2015; Wood & Marantz 2017). Since admitting a delayed saturation account would not enrich the range of mechanisms employed in this dissertation, I do not wish to rule it out as a possible account of the role of Voice in the complex head structure of Greek stative passives. It must be pointed out, however, that such an account would admittedly require a somewhat more involved denotation for Stat, one that would be crucially implicated in ‘passing up’ the agent variable; see Paparounas (in press) for a concrete proposal along these lines, albeit under slightly different assumptions on the origin of the ‘theme’ of the stative passive.

Motivated in part by these complexities, I explore here at greater length an alternative according to which Voice is altogether absent, and agent-oriented modifiers not only originate structurally in the stative part of the structure, but are also interpretively linked to the state. This proposal has clear antecedents in the literature on stative passives, though not for Greek (see below); I thus discuss here its possible merits in some detail, before turning to one important correct prediction made by this analysis, presented in section 4.6.1.

Let us first introduce the basic idea with reference to event modification, before turning to agent-oriented modifiers.

It has been proposed for different languages that eventuality-oriented modifiers are only licit in stative passives insofar as they are construable as relevant to the state (see Rapp 1996 for German; Meltzer-Asscher 2011 for Hebrew; McIntyre 2013 for English; see also Gehrke 2015 versus McIntyre 2015). The notion of state relevance is, admittedly, a somewhat slippery one, corresponding in principle to a few distinct but related situations; see below.

Importantly, it is clear that Greek shows traces of this restriction. Consider first the pair in (382), suggesting that the adverb *fast* is differentially available in stative passives formed from  $\sqrt{\text{OPEN}}$  and  $\sqrt{\text{WRITE}}$ . In (382a), the adverb does not seem to be able to modify *opened*; if event-related modification were freely available in the stative passive, this restriction should not arise. Consider now (382b): the adverb is significantly better in this case.

- (382) a. I        porta    ine    anigmeni        (#γριγoρα).  
           the.NOM door.NOM be.3SG open.PTCP.F.NOM quickly  
           ‘The door is opened quickly.’
- b. To        grama    ine    γραμενο        (γριγoρα).  
           the.NOM letter.NOM be.3SG write.PTCP.N.NOM quickly  
           ‘The letter is written quickly.’

This apparently Root-modulated availability of modification is unexpected if the eventive component of the stative passive is freely accessible. Instead, what seems to be playing a crucial role is the possibility of extrapolating from the state itself that the event unfolded quickly. With a Root like  $\sqrt{\text{WRITE}}$ , this type of reverse-engineering is easy: in particular, (382b) is uttered most felicitously in situations where one can detect from properties of the writing itself that the writing event must have unfolded quickly, for instance by noticing that the handwriting is sloppy. What a quick door-opening event would look like that leaves detectable marks of quickness on the opened state seems, all things being equal, more difficult to imagine.

It is important to note that judgments like those in (382a) are somewhat fickle when examples are presented in isolation: in particular, consultants will often internally posit contexts that favor a state-relevant construal of the modifier. In the case at hand, (382a) *can* be felicitously uttered in situations where we conclude from inspection of the scene that the opening event was one where the door accumulated enough speed to collide with the wall. Diacritics like # should thus be treated with caution in cases such as (382a); they are not intended to suggest that the examples are categorically infelicitous, but merely that they require heavy contextual support of the kind just described.

What is instructive, from this perspective, is not the status of example like (382a) in isolation. Rather, any conclusions should arise from observing possible contrasts between such examples and examples like (382b), where the context for the state-relevant construal is less far-fetched. Even more probative, in this case and all

cases below, is the contrast between stative and eventive passives with respect to modification. The stative is subject to state relevance effects, insofar as the availability of an adverb like *quickly* seems to be modulated by speakers' encyclopedic knowledge of what kinds of states a quick event could produce when it is one of writing versus one of opening. Crucially, the eventive passive is simply not subject to such effects (383), and this fact deserves a principled explanation; put simply, the hypothesis that stative passives do not include a modifiable eventive projection, per the 'small' analysis, leads us to expect precisely that event modifiers will present a somewhat muddled picture in stative passives, but a fully systematic one in eventives.

- (383) a. I porta ie anixti yriyora (ja na perasi i  
 the.NOM door.NOM have.PST.3SG open.NACT.PFV quickly to COMP pass.3SG the.NOM  
 vasilisa).  
 queen.NOM  
 'The door had been opened quickly (so that the queen would pass through).'
- b. To yrama ie yrafti yriyora (jati ekline to  
 the.NOM letter.NOM have.PST.3SG write.NACT.PFV quickly because close.PST.3SG the.NOM  
 taiđromio).  
 post.office.NOM  
 'The letter had been written quickly (because the post office was closing).'

That contrasts like (382) are, ultimately, a matter of world knowledge correctly predicts that, holding the Root constant, adverbs more easily understood as state-relevant will produce better results than (382a). This seems to be the case: in (384), for instance, it is not difficult to imagine that a violent door-opening event will produce a state that allows us to conclude that the event unfolded violently.

- (384) I porta ine aniymeni viea.  
 the.NOM door.NOM be.3SG open.PTCP.F.NOM violently  
 'The door is opened violently.'

A particularly instructive case comes from re-examining the claim that the event of the Greek stative passive can be temporally situated or spatially localized (cf. Gehrke 2011, 2013). This conclusion is ostensibly motivated by examples like (385):

- (385) To spiti ine xtismeno prin apo đekaeties, to 1963.  
 the.NOM house.NOM be.3SG build.PTCP.N.NOM before from decade.PL the 1963  
 'The house is built decades ago, in 1963.' (modified from Alexiadou et al. 2015: p. 184)<sup>108</sup>

Notice that the example in (385) contains a creation verb. Creation verbs are known to be otherwise liberal with temporal modification, however (see e.g. McIntyre 2015: 944ff): in this case, sentences like

<sup>108</sup>I add the phrase *decades ago* to these examples to rule out a historical present parse, of the type 'The year is 1963; Lyndon B. Johnson is president, and our house is built.'

(385) can be seen to denote a *kind* of building style, rather than an instance of true temporal localization. In Greek, this conjecture is supported by contrasting creation verbs with destruction verbs, which seem to behave interestingly differently. State relevance again seems at play: for instance, whereas we may know what 60s architecture looks like, it is not clear that demolishing events were any different in previous decades.

- (386) To spiti ine { xtis- / #kateðafis- } men- o prin apo ðekaeties, to  
 the.NOM house.NOM be.3SG  $\sqrt{\text{BUILD}}$   $\sqrt{\text{DEMOLISH}}$  PTCP N.NOM before from decade.PL the  
 1970.  
 1970  
 ‘The house is built/demolished decades ago, in 1970.’

Further support for the fact that (385) is not necessarily probative as to the event structure of the Greek stative passive comes from the observation that such examples are acceptable even in languages that indisputably do not tolerate other kinds of event-related modifiers in statives, such as German (Rapp 1996: p. 201).

As for apparent cases of spatial localization in stative passives, these might be vulnerable to the same objections: even in languages like English, where (predicative) stative passives normally never admit true event modification, sentences like (387) are perfectly acceptable, and are also clear cases of kind readings.

- (387) This computer is made in China.

That state relevance seems to modulate the availability of certain modifiers in the domain of eventive modification raises the question whether a similar situation could obtain in the domain of apparently agent-oriented modifications. I wish below to at least raise this possibility, highlighting in any case that the licensing of agent-oriented modifiers in Greek statives may present a more complex empirical picture than previously recognized.

Note firstly that there is some precedent in the literature for allowing Greek agent-oriented modifiers to be construable with respect to the state: Alexiadou et al. (2015: p. 181) posit this type of analysis to accommodate the presence in some examples of agent-oriented modifiers alongside *akoma* ‘still’. Recall from section 4.3.4 that this work takes target and resultant state passives to be structurally distinct, with only resultant state passives including Voice. It is further assumed that *akoma* ‘still’ distinguishes between these two structural possibilities, with the adverbial being claimed to be *i*) only compatible with target states, and *ii*) incompatible with agent-oriented modifiers. State relevance is then invoked to explain data like the following, where, in tension with what is taken in Alexiadou et al. (2015) to be the general pattern, *akoma* ‘still’ surfaces unproblematically next to an agent-oriented modifier:

- (388) a. To staðio ine akomi periciklomeno apo tin astinomia.  
 the.NOM stadium.NOM be.3SG still surround.PTCP.N.NOM from the police  
 ‘The stadium is still surrounded by the police.’

- b. O skilos ine akomi ðemenos me skini.  
 the.NOM dog.NOM be.3SG still tie.up.PTCP.N.NOM with rope  
 ‘The dog is still tied up with a rope.’ (Alexiadou et al. 2015: p. 181)

The conclusion drawn from such examples in Alexiadou et al. (2015) is that target state participles must admit apparently agent-oriented modifiers to in fact enter the structure at the state level, since, on the account therein, target states lack Voice; on the resulting overall account, resultant state participles admit ‘real’ agent-oriented modifiers, while target state participles admit only state-relevant adjuncts. Recall now from section 4.3.4 that there in fact seems little reason to reify the target/resultant state distinction as anything more than a matter of world knowledge; and that, in any case, there is no easily identifiable sense in which the presence of Voice should be causal in deriving resultant state readings. As such, it seems reasonable to try and generalize the conclusion already drawn for part of the data in Alexiadou et al. (2015), to the effect that all Greek participles only admit state-oriented modifiers.

Note in passing that the way in which the modifiers in (388) pertain to the state is slightly different from the sense of state relevance assumed thus far. In discussing apparently event-oriented modifiers above, I informally conceived of state relevance as the requirement that the modifier’s involvement in the event be somehow reconstructible from the state itself. The situation in (388) is subtly different: as perspicuously noted in Alexiadou et al. (2015: p. 181), what seems crucial in (388) is that the police is crucial in *maintaining* the surrounded state, just as the rope is crucial in maintaining the tied-up state (cf. the discussion of *still* in section 4.3.4). *State maintenance* thus seems like a more appropriate label for whatever is enabling the presence of the modifiers in (388); I do not tease apart this notion from that of state relevance here, but the issue of state maintenance does recur below.

If apparently agent-oriented modifiers are in fact modifiers of states, we expect to find contrasts between eventive and stative passives whenever the state is not of the kind that allows easy extrapolation of the agent’s properties. This seems to be what we find, though judgments here are subtle along the lines already discussed above for event-oriented modifiers. In the case of *by*-phrases in (389), the idea would be that the state derived by an event of destruction does not facilitate identification of the agent. Similarly, we expect the target states of activities, felicitous only in job-is-done contexts, to be difficult to associate a *by*-phrase with, on the account where this phrase is a state-level modifier. Again, what is central here is the contrast between the eventive and stative versions.

- (389) a. I poli katastrafike (apo Romeus stratiotes).  
 the.NOM city.NOM destroy.NACT.PST.3SG from Roman soldier.PL  
 ‘The city was destroyed (by Roman soldiers).’  
 b. I poli ine katestra- men- i (#apo Romeus stratiotes).  
 the.NOM city.NOM be.3SG  $\sqrt{\text{DESTROY}}$  PTCP F.NOM from Roman soldier.PL  
 ‘The city is destroyed (by Roman soldiers).’

- (390) a. I maθites eksetastikan apo to ðiefθindi.  
 the.NOM.PL student.NOM.PL examine.NACT.PST.3PL from the principal  
 ‘The students were examined by the principal.’
- b. I maθites ine eksetas- men- i (#apo to ðiefθindi).  
 the.NOM.PL student.NOM.PL be.3PL  $\sqrt{\text{EXAMINE}}$  PTCP PL.NOM from the principal  
 ‘The students are examined (by the principal).’

The question arises, then, of why agent-oriented modifiers have previously been taken to be freely available in (resultant) stative passives in Greek. Though this is not the place to examine every example adduced to this end in previous work, some first directions prove instructive.

Firstly, unless care is taken to devise examples where a state-level construal is disfavored (see (389)-(390)), we expect modifiers to be coercable into state-relevance, all things being equal. Indeed, this confound has not always been controlled for; for instance, in the cases in (391), Mary could be construed as having a signature cooking style, while the question of whether a pen was deployed is not difficult to resolve from inspecting a piece of writing.

- (391) a. Ta kefteðakia ine tiyanis- men- a (apo ti Maria).  
 the.PL meatball.PL.NOM be.3PL  $\sqrt{\text{FRY}}$  PTCP N.PL.NOM from the Mary  
 ‘The meatballs are fried by Mary.’ (Alexiadou et al. 2015: p. 154)
- b. Ta kefteðakia ine kala / prosektika tiyanis- men- a.  
 the.PL meatball.PL.NOM be.3PL well carefully  $\sqrt{\text{FRY}}$  PTCP N.PL.NOM  
 ‘The meatballs are fried well/carefully.’ (Alexiadou et al. 2015: p. 154)
- c. To kimeno ine yrameno me stilo.  
 the.NOM text.NOM be.3SG write.PTCP.N.NOM with pen  
 ‘The text is written with a pen.’ (Alexiadou et al. 2015: p. 154)

Secondly, certain examples ostensibly supporting the presence of *bona fide* agent-oriented modifiers deploy additional elements that seem to facilitate the inclusion of such modifiers, relative even to examples like (391). One example comes from the insightful discussion of Greek negated participles in Alexiadou et al. (2015: 167ff). This work argues that *bona fide* agent-oriented modifiers can be present in negated statives in Greek (cp. Anagnostopoulou 2003a for the opposite claim). Regarding *by*-phrases, many examples look like (392a); the rest of the examples in (392) are attested and taken from the web.

- (392) a. I simberifora tu ðen emine a- sxolias- t- i apo tus  
 the.NOM behavior.NOM 3SG.POSS.M NEG stay.PST.3SG NEG  $\sqrt{\text{COMMENT}}$  PTCP F.NOM from the  
 ðimosioyrafus.  
 journalist.PL  
 ‘His behavior did not remain uncommented on by the journalists.’ (Alexiadou et al. 2015: p. 167)

- b. Mono to 5% tis jis parameni an- engix- t- o apo ton anθropo  
 only the the.GEN earth.GEN remain.3SG NEG  $\sqrt{\text{TOUCH}}$  PTCP N.NOM from the human  
 ‘Only 5% of the Earth remains untouched by humans.’ <https://tinyurl.com/bdfwd266>
- c. I perioçi ... parameni se meçalo vaθmo an- ekserevni- t- i apo  
 the.NOM area.NOM remain.3SG in large degree NEG  $\sqrt{\text{EXPLORE}}$  PTCP F.NOM from  
 episkeptes.  
 visitors  
 ‘The area remains mostly unexplored by visitors.’ <https://tinyurl.com/3kddazmz>
- d. Enas θavmasios xoros pu meni an- ekmetalef- t- os apo tin  
 one.NOM wonderful.NOM space.NOM that stay.3SG NEG  $\sqrt{\text{EXPLOIT}}$  PTCP M.NOM from the  
 politia.  
 state  
 ‘A wonderful space that remains unexploited by the state.’ <https://tinyurl.com/4ca9katj>

Strikingly, however, the above examples use *remain*; changing this verb to the copula reduces the acceptability of the examples significantly.

- (393) a. I simberifora tu (ðen) ine a- sxolias- t- i (??apo tus  
 the.NOM behavior.NOM 3SG.POSS.M NEG be.3SG NEG  $\sqrt{\text{COMMENT}}$  PTCP F.NOM from the  
 ðimosioyrafus).  
 journalist.PL  
 ‘His behavior is (not) uncommented on (by the journalists).’
- b. Mono to 5% tis jis ine an- engix- t- o (??apo ton anθropo).  
 only the the.GEN earth.GEN be.3SG NEG  $\sqrt{\text{TOUCH}}$  PTCP N.NOM from the human  
 ‘Only 5% of the Earth is untouched (by humans).’ <https://tinyurl.com/bdfwd266>
- c. I perioçi ine se meçalo vaθmo an- ekserevni- t- i (??apo  
 the.NOM area.NOM be.3SG in large degree NEG  $\sqrt{\text{EXPLORE}}$  PTCP F.NOM from  
 episkeptes).  
 visitors  
 ‘The area is mostly unexplored by visitors.’ <https://tinyurl.com/3kddazmz>
- d. Enas θavmasios xoros pu ine an- ekmetalef- t- os (??apo tin  
 one.NOM wonderful.NOM space.NOM that be.3SG NEG  $\sqrt{\text{EXPLOIT}}$  PTCP M.NOM from the  
 politia).  
 state  
 ‘A wonderful space that is unexploited (by the state).’ <https://tinyurl.com/4ca9katj>

Once again, it seems somehow crucial that the *by*-phrase be the one determining whether the state is to be maintained or not, as already discussed above, hence the *be/remain* contrast. What the contrast follows from is an open question; for our purposes here, it suffices to note that contrasts such as those between (392) and (393) do not seem entirely expected if negated participles include Voice.<sup>109</sup>

<sup>109</sup>The contrast here could also be taken as evidence against the view that non-negated *-men-* statives freely admit agent-oriented

Related considerations arise for instruments. Many examples here are of the type in (394).

- (394) To DNA ine a- ora- t- o akoma ke me to pço ðinato mikroskopio.  
 the.NOM be.3SG NEG  $\sqrt{\text{SEE}}$  PTCP N even and with the most powerful microscope  
 ‘DNA is invisible even with the strongest microscope.’ (Alexiadou et al. 2015: p. 170)

Note here two factors; firstly, the fact that these are seem to be negated modal states (thus ‘invisible’, not ‘unseen’; cf. section 4.3.3.2); secondly, the inclusion of *akoma ke* ‘even’. This element seems crucial in enabling the modifier to be licensed, compare (395a). (395b) is a constructed example illustrating the same point, as does (395c), which is a repurposed example from the literature showing also that, sometimes, *remain* and *even* are deployed in the same example.

- (395) a. To DNA ine a- ora- t- o (??me to pço ðinato mikroskopio).  
 the.NOM be.3SG NEG  $\sqrt{\text{SEE}}$  PTCP N with the most powerful microscope  
 ‘DNA is invisible even with the strongest microscope.’ (Alexiadou et al. 2015: p. 170)
- b. Me tetrapli ependīsi titaniu, to xrimatocivotio ine a- paravias- t-  
 with four-ply coating titanium.GEN the.NOM safe.NOM be.3SG NEG  $\sqrt{\text{BREACH}}$  PTCP  
 o ??(akoma ke) me tripani.  
 N.NOM even and with drill  
 ‘With a four-ply titanium coating, the safe is unbreachable, even with a drill.’
- c. Ta proima staðia tis arostças paramenun / ??ine a-  
 the.NOM.PL early.NOM.PL stage.NOM.PL the.GEN sickness.GEN remain.3PL be.3PL NEG  
 ðiaynos- t- a ??(akoma ke) me tis pço sinxrones klinices meθoðus.  
 $\sqrt{\text{DIAGNOSE}}$  PTCP N.PL even and with the most contemporary clinical method.PL  
 ‘The early stages of the disease remain/are undiagnosable even with the most up-to-date clinical methods.’ (cf. Alexiadou et al. 2015: p. 170)

Note now that *even* has clear focal properties, raising the question of whether its inclusion forces attachment of its associate in a position different from that of *bona fide* agent-oriented modifiers. Note further that there is a sense in which using *even* makes it unclear whether the objects in question are, in fact, interpreted as real instruments: in conjunction with the modal nature of the negated participle, examples like (395b) seem to mean ‘the safe is unbreachable, even with a drill *at our disposal*’.

Overall, it is this type of observation that seems worthy of being taken into account in a future investigation of agent-oriented modification in Greek stative passives with an eye towards state relevance. Such an account must be supplemented with a more precise definition of what these effects derive from; the distinction alluded to here, between state relevance and state maintenance, might be a first dimension worth exploring.

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modifiers, given that negated statives seem to be negated *–men–* statives (see section 4.3.3.2). This conclusion is only safe to draw, however, once we firmly establish the properties of negated participles in further detail. In any case, conclusions on agent introduction should not be drawn from negated statives alone; see in this connection the discussion of Bruening’s (2014) argument in favor of the presence of Voice in English statives in Alexiadou et al. (2015: ch. 5).



A definition of this kind is essential in ensuring that state relevance not be manipulated as an *ad hoc* device for Voice-less accounts of stative passive to escape potential issues. Finally, a comprehensive account must do justice to possible differences between languages; the lucid comparative discussion in Alexiadou et al. (2015: 181ff) provides a foundation to this end.

For now, I turn to one final observation that seems crucially in line with the predictions of a Voice-less account of Greek stative passives.

#### 4.6.1 A CORRECT PREDICTION: REFLEXIVIZATION

Recall from Chapter 3 that Greek builds verbal reflexives by means of the prefix *afto-*, such that (396b) is, descriptively, the verbal counterpart of (396a). A fully parallel situation obtains in the domain of reciprocals (397).

- (396) a. Simfona me ti miθolojia, afti i theotita ðimiuryi- s- e  
 according.to with the mythology this.NOM the.NOM deity.NOM  $\sqrt{\text{CREATE}}$  PFV.ACT 3SG  
**ton eafto tis** apo to miðen.  
 the.ACC self.ACC her from the zero  
 ‘According to mythology, this deity created itself out of nothing.’
- b. Simfona me ti miθolojia, afti i theotita **afto-** ðimiuryi- **θ-**  
 according.to with the mythology this.NOM the.NOM deity.NOM REFL  $\sqrt{\text{CREATE}}$  PFV.NACT  
 ik- e apo to miðen.  
 PST.NACT 3SG from the zero  
 ‘According to mythology, this deity self-created out of nothing.’
- (397) a. I Maria ke o Janis ipostiriz- **un** o enas ton  
 the.NOM Mary.NOM and the.NOM John.NOM support 3PL.ACT the.NOM one.NOM the.ACC  
 alo.  
 other.ACC  
 ‘Mary and John support each other.’
- b. I Maria ke o Janis **alilo-** ipostiriz- **onde.**  
 the.NOM Mary.NOM and the.NOM John.NOM RECIP  $\sqrt{\text{SUPPORT-}}$  3PL.NACT  
 ‘Mary and John support each other.’

Chapter 3 showed that Greek verbal reflexives and reciprocals have the syntax of passives: they involve a single, internal argument, with the element *afto-/alilo-* being responsible for deriving reflexivity/reciprocity, respectively. Crucially, it was also argued that this type of reflexivity is Voice-based: Greek verbal reflexives and reciprocals are derived through a reflexive/reciprocal Voice head. Clearly, this conclusion has potential diagnostic utility in the domain of stative passives: if verbal reflexives/reciprocals are Voice constructions, they could be used to test for the presence of Voice.

Once we take this diagnostic step, we see that *afto-/alilo-* provide an important window into the struc-

ture of the Greek stative passive, one that seems to be in line with the Voice-less account thereof considered in the previous section: *afto-/alilo-* never combine with *-men-* statives. As far as I know, this is a novel generalization.

Consider firstly the following set of minimal pairs, with (eventive) verbal reflexives given in the *a.* and stative passives in the *b.* examples. In each case, the stative passives are well-formed unless the reflexivizer *afto-* is added; they thus differ crucially from the *a.* examples, where *afto-* is perfectly acceptable forming a verbal reflexive (which has passive-like properties; see [Chapter 3](#)). In each case, care has been taken to construct plausible examples warranting the use of a stative; additionally, the *a.* examples employ nonactive perfects, to keep possible effects of stativity/perfectivity constant to the greatest extent possible.

- (398) a. O Janis eçi afto- katastrof- Ø- i me to poli potō.  
the.NOM John.NOM have.3SG REFL  $\sqrt{\text{DESTROY}}$  PFV.NACT 3SG with the much drink  
'John has destroyed himself from too much drinking.' *eventive*
- b. Toso pu pini, o Janis ine (\*afto-) katestra- men- os.  
that.much COMP drink.2SG the.NOM John.NOM be.3SG REFL  $\sqrt{\text{DESTROY}}$  PTCP NOM  
'From drinking so much, John is (self-)destroyed.' *stative*
- (399) a. Exondas metanōsi ja tis praksis tu, o đrastis omolojise  
having regret.PFV for the action.PL 3SG.M.POSS the.NOM perpetrator.NOM confess.PST.3SG  
ke ousiastika eçi afto- katađikas- θ- i se isovia kaθirksi.  
and effectively have.3SG REFL  $\sqrt{\text{CONDEMN}}$  PFV.NACT 3SG to lifelong imprisonment  
'Having regretted his actions, the perpetrator confessed and has effectively condemned himself to life in prison.' *eventive*
- b. Exondas omolojisi, o đrastis ine pleon (\*afto-) katađikas- men- os  
having confess.3SG the.NOM inmate.NOM be.3SG as.of.now REFL  $\sqrt{\text{CONDEMN}}$  PTCP NOM  
se isovia kaθirksi.  
to lifelong imprisonment  
'Having confessed, the perpetrator is now (self-)condemned to life in prison.' *stative*
- (400) a. O Janis eçi afto- điafimis- θ- i evreos sto Instagram.  
the.NOM John.NOM have.3SG REFL  $\sqrt{\text{ADVERTISE}}$  PFV.NACT 3SG widely on.the Instagram  
'John has self-advertised widely on Instagram.' *eventive*
- b. Meta apo makroxroni kambanā, o Janis ine pleon evreos (\*afto-)  
after from long.time campaign the.NOM John.NOM be.3SG as.of.now widely REFL  
điafimiz- men- os sto Instagram.  
 $\sqrt{\text{ADVERTISE}}$  PTCP NOM on.the Instagram  
'After a years-long campaign, John is now widely (self-)advertised on Instagram.' *stative*

Similar facts obtain in the domain of reciprocals, as shown in the next set of examples.

- (401) [After working with the suspects for hours, the expert interrogator has managed to turn the suspects']

*testimonies against each other. Announcing this success, she says:]*

- a. Teliosame. I ipopti exun pleon alilo- katiyori- θ- i.  
 finish.PST.1PL the.NOM.PL suspect.NOM.PL have.3PL as.of.now RECIP  $\sqrt{\text{ACCUSE}}$  PFV.NACT 3SG  
 ‘We’re done – the suspects have now accused each other.’ *eventive*
- b. Teliosame. \*I ipopti ine pleon alilo- katiyori- men- i.  
 finish.PST.1PL the.NOM.PL suspect.NOM.PL be.3PL as.of.now RECIP  $\sqrt{\text{ACCUSE}}$  PTCP NOM.PL  
 ‘We’re done. The suspects are now mutually accused.’ *stative*
- (402) a. I siraksi itan meyalı, me apotelesma i ðio iperðinamis  
 the.NOM conflict be.PST.3SG large.NOM with result the.NOM.PL two superpower.NOM.PL  
 na exun (alilo-) eksondo- θ- i.  
 COMP have.3PL RECIP  $\sqrt{\text{EXTINGUISH}}$  PFV.NACT 3SG  
 ‘The conflict was large, and as a result the two superpowers have extinguished each other.’  
*eventive*
- b. I siraksi itan meyalı, me apotelesma i ðio iperðinamis  
 the.NOM conflict be.PST.3SG large.NOM with result the.NOM.PL two superpower.NOM.PL  
 na ine (\*alilo-) eksondo- men- es.  
 COMP be.3PL RECIP  $\sqrt{\text{EXTINGUISH}}$  PTCP NOM.PL  
 ‘The conflict was large, and as a result the two superpowers are mutually extinguished.’ *stative*
- (403) a. I pelates ðe mas xriazonde. Exun iði (alilo-) eksipireti-  
 the.NOM.PL customer.NOM.PL NEG 1PL.ACC need.3PL have.3PL already RECIP service  
 θ- i.  
 PFV.NACT 3SG  
 ‘The customers don’t need us – they’ve already assisted each other.’ *eventive*
- b. I pelates ðe mas xriazonde – ine iði (\*allilo-) eksipireti-  
 the.NOM.PL customer.NOM.PL NEG 1PL.ACC need.3PL – be.3PL already RECIP  $\sqrt{\text{SERVICE}}$   
 men- i.  
 PTCP PL  
 ‘The customers don’t need us - they are already mutually assisted.’ *stative*

Examples (399)–(403) utilize a variety of Roots to clarify that the impossibility of *afto-/alilo-* in the *b.* examples is in no sense a lexical quirk of some kind. It is rather a fully systematic fact of the language that predicative stative passives in *–men–* can never undergo reflexivization/reciprocalization. Importantly, this contrast does not seem straightforwardly reducible to some sort of interpretive deviance associated with the *b.* examples: it is not clear that any deviance should follow exclusively from what it means to hold a state resulting from a self-oriented (or reciprocally oriented) event.

The implications of these facts should be clear: if *afto-/alilo-* are Voice elements, then their impossibility in the stative passive furnishes an argument against the inclusion of Voice in the stative passive.

This argument is admittedly only as reliable as its potential to remain probative in the face of the various challenges raised for Voice-related diagnostics in stative passives in the previous section. In particular, it is

crucial to determine *afto-* and *alilo-* could simply turn out to be impossible in the above examples for reasons that, again, pertain to state relevance.

Some first facts suggest that this cannot be the case. Even in contexts where self-action or reciprocal action is evidenced from the state, *afto-/alilo-* modified statives are judged as deviant:

(404) a. [We see customers leaving the self-checkout line.]

Afti i pelates ine (\*afto-) eksipiretimeni.  
DEM.NOM.PL the.NOM.PL customer.NOM.PL be.3PL REFL  $\sqrt{\text{SERVICE.PTCPPL}}$

‘These customers are self-serviced.’

b. [The two enemies are lying on the ground, each holding the sword that has pierced the other’s armor.]

I ðio exθri ine (\*alilo-) eksondomeni.  
the.NOM.PL enemy.NOM.PL be.3PL REFL  $\sqrt{\text{EXTINGUISH.PTCP.PL}}$

‘The two enemies are mutually extinguished.’

If these generalizations are correct, the inclusion of Voice in Greek stative passives is counterevidenced independently of the discussion in the last section.<sup>110</sup>

#### 4.6.1.1 Excursus: *-t-* is different

Interestingly, we do find a handful of instances where a predicative stative passive in *-t-* appears with *afto-*. I have been able to identify exactly three such forms, their small number suggesting that the phenomenon at hand here is severely restricted.

The three forms are given in the following examples. In each case, the *a.* examples give a simple (non-*afto-*-prefixed) *-men-* stative formed by the relevant Root; the *b.* examples show that *afto-* cannot attach to this *-men-* stative, in keeping with the state of affairs in the previous section, but that it can combine with the *-t-* stative formed from the same Root.

(405) a. Apolita ðiðay- menos apo tin travmatiki embiria ton telikon  
completely  $\sqrt{\text{TEACH.PTCP}}$  from the traumatic experience the.GEN final.PL.GEN  
emfanistike o LeBron James.  
appear.PST.3SG the.NOM LeBron James  
‘LeBron James appeared completely taught by the traumatic experience of the finals.’ (short-

<sup>110</sup>It is worth clarifying that the inclusion of Reflexive Voice as understood in Chapter 3 would not cause problems for the interpretation of the stative passive, and the reason for the absence of Voice must thus be structural. In particular, recall from Chapter 3 that reflexive Voice does not introduce a new entity variable, but merely asserts that the theme and the agent role are identified. While it is true, that, as argued in section 4.4.3, stative passives in Greek seem to lack a theme role in the narrow sense, the state-holder is eventually understood as a theme in the vast majority of cases.

- ened from <https://tinyurl.com/bdwddnvx>)
- (405) b. Poli aynooun oti i Maria ine afto- ðiðax- { ti / \*meni }  
 many.NOM ignore.3PL COMP the.NOM Mary.NOM be.3SG REFL?  $\sqrt{\text{TEACH}}$  PTCP PTCP  
 sto pçano.  
 on.the piano  
 ‘Many are unaware that Mary is self-taught on the piano.’
- (406) a. O jos tu ine eksoris- menos ke o yamos tu  
 the.NOM son.NOM 3SG.M.GEN be.3SG  $\sqrt{\text{EXILE}}$  PTCP and the.NOM marriage.NOM 3SG.M.GEN  
 pernai krisi.  
 pass.3SG crisis  
 ‘His son is exiled and his marriage is in crisis.’ (<https://tinyurl.com/yckzhacv>)
- b. Eksetias tu skanðalu, o Yanis ine afto- eksoris- { tos / \*menos }.  
 due.to the.GEN scandal.GEN the.NOM John.NOM be.3SG REFL?  $\sqrt{\text{EXILE}}$  PTCP PTCP  
 ‘Because of the scandal, John is self-exiled.’
- (407) a. I ðeoria sinomosias ine ksekaθara ðimiurji- meni apo trolls tu  
 the.NOM theory.NOM conspiracy.GEN be.3SG clearly  $\sqrt{\text{CREATE}}$  PTCP from trolls the.GEN  
 internet.  
 internet  
 ‘The conspiracy theory is clearly created by internet trolls.’
- b. I foroljici tu dilosi apokalipse oti o proeðros ðen  
 the.NOM tax his declaration.NOM reveal.PST.3SG COMP the.NOM president.NOM NEG  
 ine afto- ðimiurji- { tos / \*menos }.  
 be.3SG REFL?  $\sqrt{\text{CREATE}}$  PTCP PTCP  
 ‘His tax return revealed that the president is not self-made.’

It bears emphasizing that the *b.* examples here illustrate the exception rather than the rule: outside of the Roots  $\sqrt{\text{EXILE}}$ ,  $\sqrt{\text{TEACH}}$  and  $\sqrt{\text{CREATE}}$ , *afto-* cannot attach to a predicative *-t-* stative.

Besides being few in number, these examples of *afto-*prefixed *-t-* statives have properties that set them apart from what we expect the normal output of *afto-* prefixation to be. The grammatical versions of the *b.* examples above are not merely reflexive statives; rather, they signify what we may pre-theoretically classify as ‘kind’-type situations, and the role of *afto-* seems less reflexive and more anti-assistive. For instance, in (405b), it seems to be asserted that Mary is a pianist of the self-taught kind, presumably in contrast to the majority of pianists. It is certainly entailed that Mary taught herself, but this is hardly central; what seems more at stake is rather that nobody else has taught Mary how to play. Similarly, in (406b), what seems central is that John voluntarily underwent exile, as opposed to the arguably prevalent situation where exile is forced upon its subject; and in (407b), what is asserted (or, in this case, negated) is the rise to high status in the absence of external help.

These observations are somewhat loose, but they are strengthened against the background of the discus-

sion in section 3.7. There, it was noted that (an element surfacing as) *afto-* contributes not systematically reflexive, plausibly anti-assistive meanings when attached to structurally small nominals. From this perspective, (405)–(407) illustrate the same generalization, this time from the domain of participles. Moreover, a compelling English parallel can be found, just as in the case of English *self-* nominals discussed in section 3.7: the English *-ed* formations below all involve anti-assistive readings of *self*, as do the English translations of (405)–(407).

- (408) a. This campaign is self-funded.  
b. The tour was self-guided.

Two final observations lend further support to the position that the examples in (405)–(407) involve anti-assistive readings of *afto-*.

Firstly, the *afto-*prefixed *-t-* participles above license degree modification targeting the anti-assistive reading. Degree modification is more generally possible in stative passives, on readings where the modifier targets the overall state: thus, the examples in (409) assert the degree, partial or complete, to which the relevant state holds.

- (409) a. O tixos ine merikos vamenos.  
the.NOM wall.NOM be.3SG partially paint.PTCP  
'The wall is partially painted.'  
b. To ceik ine endelos kameno.  
the.NOM cake.NOM be.3SG completely burn.PTCP  
'The cake is totally burnt.'

Compare (409) to (410), where the *afto-* prefixed *-t-* states noted above undergo degree modification. Here, the salient reading is one where the modifier targets not the overall state, but the anti-assistive interpretation contributed by *afto-*: thus, as the continuations in (410) clarify, (410a) seems to assert that the extent to which Mary learned to piano without instruction is total, just as (410b) asserts that the president's ascent was not entirely without help.

- (410) a. I Maria ine endelos afto- ðiðakti sto pçano. ðen ekane  
the.NOM Mary.NOM be.3SG completely REFL? teach.PTCP on.the piano NEG do.PST.3SG  
pote maθimata.  
never lesson.ACC.PL  
'Mary is completely self-taught on the piano. She never took lessons.'  
b. O proeðros ine merikos afto- ðimiurjitos. Elave ena  
the.NOM president.NOM be.3SG partially REFL? create.PTCP receive.PST.3SG one.ACC  
mikro ðanio apo ton patera tu.  
small.ACC loan.ACC from the father 3SG.M.GEN  
'The president is partially self-made. He received a small loan from his father.'

A second important observation concerns the fact that, although *afto-* can attach to the *-t-* statives formed by the Roots in (405)–(407), *alilo-* cannot, as shown in (411). The situation here thus again parallels the observations made for nominals in section 3.7, where it was shown that, unlike *afto-*, *alilo-* never attaches to small nominals, since it lacks the anti-assistive uses found with *afto-* in those environments.

- (411) a. O Janis ke i Maria ine { *afto-* / \**alilo-* } *ðiðax-* t-  
 the.NOM John.NOM and the.NOM Mary.NOM be.3PL self each.other  $\sqrt{\text{TEACH}}$  PTCP  
 i sto pçano.  
 NOM.PL on.the piano  
 ‘John and Mary are self taught/\*mutually taught on the piano.’
- b. I ðio ritores efijan apo tin aθina os { *afto-* / \**alilo-* }  
 the.NOM.PL two orator.NOM.PL leave.PST.3SG from the Athens as self each.other  
 eksoris- t- i.  
 $\sqrt{\text{EXILE}}$  PTCP NOM.PL  
 ‘The two-orators left Athens as self-exiled/\*mutually exiled.’
- c. I ðio aðerfes, pleon epitiçimenes epiçirimaties, ine  
 the.NOM.PL two sister.NOM.PL from.now.on succesful.F.PL businesswoman.PL be.3PL  
 pliros { *afto-* / \**alilo-* } *ðimiurji-* t- es.  
 completely self each.other  $\sqrt{\text{CREATE}}$  PTCP F.PL  
 ‘The two sisters, now successful businesswomen, are entirely self-made/\*mutually made.’

#### 4.7 FOR THE FUTURE: ATTRIBUTIVE/PREDICATIVE CONTRASTS

In this final section, I lay out some new, striking observations on the behavior of stative passives in Greek, and outline why they deserve to be taken into account by future accounts of the stative passive. The data, to my knowledge noted here for Greek for the first time, involve striking contrasts in the modification possibilities and interpretation of stative passives along the lines defined by the attributive/predicative distinction. Such contrasts have been recently noted for English in Biggs and Embick (2023). The brief discussion here is focussed on showing that Greek *a)* behaves on a par with English with respect to these predicative/attributive contrasts, and *b)* furnishes a third environment additional to the predicative/attributive dichotomy in which the relevant modification possibilities can be tested.

Though I am not able to offer a comprehensive analysis here, I show that both observations *a)* and *b)* will have to be crucial in arriving at an analysis of this kind. *a)* crucially circumscribes the shape of the overall analysis by clarifying that the account of the contrasts in question must be general enough to transcend incidental differences between Greek and English; in particular, since both languages show the basic contrasts, the eventual analysis should not crucially capitalize on the fact that, for example, English uses participles for both eventive and stative passives while Greek does not. Observation *b)* is, as far as I know, entirely novel, and suggests that, as we will see, the eventual analysis cannot account for the exceptional behavior of the

attributive position by making reference to a simple notion of ‘DP-internality’, at least not in the superficial sense.

#### 4.7.1 THE BASIC CONTRAST

To set the stage, consider in brief the gist of the striking observations brought to light in Biggs and Embick (2023), simplified considerably for reasons of space. The basic observation is as follows: though stative passives in English are known to generally not permit event-oriented modification, this generalization in fact only seems to obtain in predicative position (412a). In attributive position (412b), event-oriented modifiers are perfectly acceptable.

- (412) a. The door is #(recently/quickly/secretly) opened.  
 b. The (recently/quickly/secretly) opened door

The contrasts noted by Biggs and Embick (2023) are in fact far more wide-ranging, and there is considerable background I cannot do justice to here. As a further example, however, consider (413), showing that, while activity-derived predicative statives are odd out of the blue (requiring a job-is-done context, as noted repeatedly above), they become significantly more acceptable in attributive position.

- (413) a. #This box is (recently) kicked.  
 b. The (recently) kicked box

Greek evidences the same basic picture; (414a) is repeated from (382a) above, but its attributive counterpart (414b) permits the adverb to attach unproblematically.

- (414) a. I porta ine aniymeni (#yriyora).  
 the.NOM door.NOM be.3SG  $\sqrt{\text{OPEN}}$ .PTCP.F.NOM fast  
 ‘The door is opened fast.’  
 b. I (yriyora) aniymeni porta.  
 the.NOM fast  $\sqrt{\text{OPEN}}$ .PTCP.F.NOM door.NOM  
 ‘The fast opened door.’

The behavior of approximative adverbials is particularly probative here. Recall from section 4.4.1 that *sçeðon* ‘almost’ can only yield the state-modifying scalar reading, but not the event-modifying counterfactual reading, when it modifies a predicative stative passive:

- (415) a. To milo ine sçeðon fayō- men- o.  
 the.NOM apple.NOM be.3SG almost  $\sqrt{\text{EAT}}$  PTCP N.NOM  
 ‘The apple is almost eaten.’ ✗counterfactual ✓scalar



- b. To milo itan sçeðon fayō- men- o.  
 the.NOM apple.NOM be.PST.3SG almost  $\sqrt{\text{EAT}}$  PTCP N.NOM  
 ‘The apple was almost eaten.’ ✗counterfactual ✓scalar

Strikingly, the counterfactual reading becomes possible in the attributive position. (416) illustrates by showing that a *sçeðon*-modified attributive stative can felicitously license two distinct continuations: (416a) is a scalar-facilitating continuation, clarifying that the eating event was, in fact, initiated (but presumably not completed), whereas (416b) is a counterfactual-facilitating continuation. The availability of (416b) clarifies that the basic example in (416) can be construed as counterfactual; note from the English translations of (415) and (416) that English behaves the same way.

- (416) I nani eθapsan to sçeðon fayō- men- o milo ston cipo...  
 the.NOM.PL dwarf.NOM.PL bury.PST.3SG the.ACC almost  $\sqrt{\text{EAT}}$  PTCP N apple.ACC in.the garden  
 ‘The dwarves buried the almost eaten apple in the garden...’
- a. ...oste na min paθi kanis alos afto pu epaθe i çionati.  
 so.that COMP NEG suffer.3SG nobody.NOM else that.ACC which suffer.PST.3SG the Snow.White  
 ‘...so that what happened to Snow White wouldn’t happen to anyone else.’
- b. ...oste na paramini aðagoto.  
 so.that COMP remain.3SG unbitten  
 ‘...so that it remains unbitten.’

For completeness, recall also the modifier *paraliyo*, which was shown in section 4.4.1 to only ever yield the counterfactual reading:

- (417) a. O Janis paraliyo efaje to milo.  
 the.NOM John.NOM nearly eat.PST.3SG the.ACC apple.ACC  
 ‘John nearly ate the apple.’ ✓counterfactual ✗scalar
- b. To milo paraliyo fayōθike apo to Jani.  
 the.NOM apple.NOM nearly eat.NACT.PST.3SG from the John  
 ‘The apple was nearly eaten by John.’ ✓counterfactual ✗scalar

Recall further that *paraliyo*-modified statives are odd in predicative position, a fact noted as crucial in section 4.4.1:

- (418) #To milo ine / itan paraliyo fayō- men- o.  
 the.NOM apple.NOM be.3SG be.PST.3SG nearly  $\sqrt{\text{EAT}}$  PTCP N.NOM  
 ‘The apple is all but eaten.’

But things get considerably better in attributive position; namely, the counterfactual reading once again returns. This is a striking effect.

- (419) a. To paraliyo fayō- men- o milo θaftike vaθia sti ji apo tus  
 the.NOM nearly  $\sqrt{\text{EAT}}$  PTCP N apple.NOM bury.NACT.3SG deeply in.the earth from the  
 nanus.  
 dwarf.PL  
 ‘The almost eaten apple was buried deep in the earth by the dwarves.’
- b. To paraliyo fayō- meno milo ine sto trapezi – eftixos ðen to  
 the.NOM nearly  $\sqrt{\text{EAT}}$  PTCP apple.NOM be.3SG on.the table thankfully NEG 3SG.N.ACC  
 efaye kanis telika.  
 eat.PST.3SG nobody.NOM finally  
 ‘The almost eaten apple is on the table – thankfully nobody ate it after all.’

So far, Greek has been shown to pattern like English as described in Biggs and Embick (2023); the approximate facts, noted here for both languages, reinforce the observations of Biggs and Embick. But Greek is crucial to the overall picture in allowing a particularly illuminating structural possibility that can be exploited to further understand the different behavior of attributive and predicative statives, one that is not found in English.

#### 4.7.2 BRINGING IN POLYDEFINITES

Greek is known to exhibit an interesting *polydefinite* construction, also sometimes labelled *determiner spreading* (see among many others Alexiadou 2014b; Alexiadou and Wilder 1998; Kolliakou 1995, 2004; Lekakou and Szendrői 2012; Tsiakmakis, Borràs-Comes, and Espinal 2021). Polydefinites arise under adjectival modification: the canonical position for adjectives is prenominal (420a), but postnominal adjectives become available when a second determiner is added (420b), and the second determiner can also occur with (ostensibly) prenominal adjectives (420c).

- (420) a. To nostimo milo  
 the delicious apple
- b. To milo \*(to) nostimo  
 the apple the delicious
- c. To nostimo to milo  
 the delicious the apple

Simple definites and polydefinites are known to license distinct interpretive possibilities reminiscent of pre/post-nominal modification asymmetries in Romance and Germanic (see e.g. Cinque 2010).

A first distinction is between restrictive and non-restrictive readings under quantification, illustrated by means of (421), inspired by Kolliakou 2004: 270ff. The simple definite in (421a) is ambiguous between a reading where the set of experienced researchers is coextensive with the set of researchers more generally, and a reading where there is a proper subsethood relation between the two sets. The polydefinite in (421b),

however, only allows the restrictive reading.

- (421) a. Oli i embiri erevnites mas prepī na  
 all.NOM the.NOM.PL experienced.NOM.PL researcher.NOM.PL 1PL.POSS must.3SG COMP  
 sindaksioðotiθun.  
 retire.NACT.3PL  
 ‘All our experienced researchers must retire.’  
 ✓ *experienced*  $\subset$  *all* restrictive  
 ✓ *experienced* = *all* non-restrictive
- b. Oli i embiri i erevnites mas prepī  
 all.NOM the.NOM.PL experienced.NOM.PL the.NOM.PL researcher.NOM.PL 1PL.POSS must.3SG  
 na sindaksioðotiθun.  
 COMP retire.NACT.3PL  
 ‘All our experienced researchers must retire.’ ✓ restrictive ✗ non-restrictive

(422) and (423) provide disambiguating contexts helping to bring out the distinction.

- (422) [Our lab consists of both experienced and inexperienced researchers. Due to a new law of maximum employment age, all and only the experienced ones must retire.]  
 a. (421a): ✓  
 b. (421b): ✓
- (423) [Our lab consists of only experienced researchers. Due to a new law of maximum employment age, all of them must retire, and we must restaff the entire lab.]  
 a. (421a): ✓  
 b. (421b): #

Note for completeness the unsurprising fact that the predicative position only yields restrictive readings:

- (424) Oli i erevnites mas ine embiri.  
 all.NOM the.NOM.PL researcher.NOM.PL 1PL.POSS be.3PL experienced.NOM.PL  
 ‘All our researchers are experienced.’ ✓ restrictive ✗ non-restrictive

That polydefinites allow only a restricted set of interpretive possibilities relative to simple definites can also be seen using non-predicative adjectives. (425) illustrates, using the adjectives *alleged* and *former*:

- (425) a. O ipotiθemenos ðolofonos.  
 the.NOM alleged.NOM murderer.NOM  
 ‘The alleged murderer’



*intact. The dwarves find Snow White lying next to the two apples.]*

To        sçeðon fayomeno to        milo        prepi na        itan        ðilitiriameno.  
the.NOM almost eat.PTCP   the.NOM apple.NOM must COMP be.PST.3SG poison.PTCP

‘The almost eaten apple must have been poisoned.’

Consider now a second, minimally different context, given in (429). This time, we assert that there are two apples at play, and that one of them almost underwent an eating event, thereby pointing towards the counterfactual reading. In this case, the polydefinite stative is degraded.

(429) *[Snow White was given two apples: a poisoned one from the Evil Queen, and a normal one as a gift from Grouchy. She nearly bit into the poisoned one but the dwarves managed to stop her. She later ate Grouchy’s non-poisoned apple, and buried the Evil Queen’s poisoned one.]*

#To        sçeðon fayomeno to        milo        ine        θameno        ston kipo.  
the.NOM almost eat.PTCP   the.NOM apple.NOM be.3SG bury.PTCP in.the garden

‘The almost eaten apple is buried in the garden.’

The facts in (428)-(429) are to be contrasted with (416). (416) showed us that the counterfactual reading, impossible with stative passives in predicative position, becomes possible in attributive modification. (428)-(429) nuance this picture in a crucial way, by showing that the counterfactual reading becomes impossible once again in the polydefinite construction.

Consider, finally, what we expect given the striking observation in (428)-(429) for the behavior in polydefinites of the exclusively counterfactual modifier *paraliyo*. This element was shown to be altogether infelicitous in predicative position (see (418) and section 4.4.1), and we saw in (419) that it becomes felicitous in predicative position. Given what we just observed concerning the behavior of *akoma* ‘almost’, we expect *paraliyo* in the polydefinite to revert to its behavior in the predicative, being infelicitous. And this is, indeed, what we find.

(430) *[Snow White was given two apples: a poisoned one from the Evil Queen, and a normal one as a gift from Grouchy. She nearly bit into the poisoned one but the dwarves managed to stop her. She later ate Grouchy’s non-poisoned apple, and buried the Evil Queen’s poisoned one.]*

#To        paraliyo fayomeno to        milo        θaftike        ston kipo.  
the.NOM nearly eat.PTCP   the.NOM apple.NOM bury.PST.NACT in.the garden

‘The nearly eaten apple is buried in the garden.’        *Consultant comment: ‘This one is [expletive]’*

### 4.7.3 SOME FIRST CONCLUSIONS

Though I am not able to offer a full analysis of the striking facts just noted, a few first remarks can be made with relative safety. We may summarize the generalization at hand as follows:

(431) *Summary: Event-oriented readings in the Greek stative passive*

The event in the Greek stative passive is:

- a. inaccessible for modification in the predicative and polydefinite positions; and
- b. accessible in the attributive position.

Note firstly that the basic attributive/predicative contrast obtains in both Greek and English. If this is so, the eventual analysis cannot crucially hinge on differences between the two languages that seem not to affect the overall pattern, such as, for instance, the fact that the participle in Greek is limited to the stative passive, whereas in English it also appears in the eventive.

Secondly, note that (431) clarifies that the attributive position is, in a sense, the odd one out in terms of modification possibilities. I take it that this is a fact to be explained. In particular, the fact that the polydefinite patterns with the predicative, not the attributive, clarifies that the factor governing the basic attributive/predicative split identified by Biggs and Embick (2023) cannot be that the former position is clausal, while the latter is DP-internal. If polydefinite is also a nominal position, then, surely, some other factor has to be at play.

Admittedly, (431) is not an analysis anymore than ‘predicative’, ‘polydefinite’ and ‘attributive’ are; these are descriptive labels, and their proper analysis will inform that of the overall pattern here. In particular, if analyses reducing polydefinite modification to the formation of reduced relative clauses (for Greek, see especially Alexiadou and Wilder 1998; cf. Cinque 2010) are correct, then the patterning together of polydefinites and predicative statives is not unexpected; in any case, the facts clarify that *attributive* adjectives should not be reduced to reduced relative clauses.

Finally, the facts discussed in this section may turn out to have important implications for our understanding of the ‘small’ analysis of stative passives proposed in this section vis-à-vis lexicalist solutions. The facts discussed here seem to call for an analysis flexible enough to accommodate event-oriented modification in the stative passive under a restricted set of circumstances, namely, in the attributive, and not otherwise. It is not clear to me that a lexical solution would afford the necessary flexibility: if the stative passive is but a syntactic terminal, it is not obvious why it should show distinct behaviors under modification in distinct positions. By contrast, the fact that the complex head analysis does decompose the stative syntactically, thereby positing an eventive projection that is syntactically present, may at least afford a chance to understand the facts set out here (cf. Biggs and Embick 2023, who do take steps towards an analysis of this kind). But much remains to be said and understood before these first remarks can be turned into conclusions.

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## CONCLUSION

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5.1	SUMMARY OF FINDINGS . . . . .	233
5.2	RECURRING THEMES . . . . .	234

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### 5.1 SUMMARY OF FINDINGS

At the center of this thesis has been the claim that the Voice syncretism found in Greek, as in many other languages, derives from the sensitivity of voice morphology to the presence/absence of a thematic subject. In making this claim precise, over the course of [Chapter 2](#), the analysis of a seemingly separate phenomenon, Voice displacement, has been crucial: it has allowed us to discern that ‘active’ voice has no morphological status of its own, instead corresponding to elsewhere realizations of the relevant categories. This observation has enabled an analysis whereby the *negative* setting of a formal feature – [-D]<sub>VOICE</sub> in [Chapter 2](#) – comes to be referred to as the specific case for the purposes of realization, by virtue of being transduced into a morphologically relevant diacritic, [NACT].

Verbal reflexives constitute the most challenging case for the analysis of Voice syncretism defended in [Chapter 2](#). Unlike in the other syncretizing categories, in reflexives the surface subject is undeniably associated with agent role; yet the link between verbal reflexivity and nonactive morphology is fully systematic. [Chapter 3](#) has shown that the tension dissolves once we manage to diagnose Greek verbal reflexives as having the structure of unaccusatives/passives, with a single argument that originates *vP*-internally. The ensuing discussion thus identifies a Voice-based type of reflexivity, one that must be understood as different kind from

pronominal reflexivity, by virtue of being syntactically intransitive, semantically monadic, and thematically restricted.

Chapter 4 has taken up two issues in the domain of Greek passives. The first involves diagnosing the properties of the passive agent, both in cases where the agent is implicit and when it is identified with the content contributed by a *by*-phrase. The implicit agent of Greek passives has been shown to be implicit in the deep sense, not patterning on a par with syntactically projected elements; and recent claims that the *by*-phrase in the Greek passive be treated on a par with the external argument of actives have been found to be premature. Against the background of these basic properties of the eventive passive, the rest of Chapter 4 has shown that the Greek stative passive patterns differently from its eventive counterpart, in a way that warrants countenancing phrasal structure in the eventive, but not the stative.

## 5.2 RECURRING THEMES

### 5.2.1 SYNTACTIC VERSUS MORPHOLOGICAL RELATIONS

The theory assumed in this dissertation – a version of Distributed Morphology, introduced briefly in section 1.2 – encompasses a syntactically oriented view of morphology: there is no pre-syntactic lexicon, and the syntax manipulates (abstract) morphemes, thereby playing a crucial role in their arrangement and feeding their pronunciation. At the same time, this is in no sense a ‘syntax-only’ theory: instead, the theory posits several operations mediating between the output of the syntax narrowly construed and the level of pronunciation proper. It is then instructive to ask what status this type of operation has vis-à-vis the phenomena discussed here: are these phenomena simply compatible with the type of theory assumed here, or can they be taken to necessitate a theory with these properties over conceivable alternatives?

At stake here is the larger question of whether, in a theory with syntactic word formation, the syntax could be taken to supply the entirety of the relations relevant for what is traditionally taken to be morphology. Though this question is not necessarily new, it has recently resurfaced, owing largely to the emergence of theories that eschew postsyntactic mechanisms, or at least purport to do so: among these is Nanosyntax, see Caha 2020 for overview; and Morphology-as-Syntax, see Collins and Kayne 2023.

These theories differ from each other in important ways; they share, however, a foundational hypothesis that I will here call *morphological reductionism*, or *m-reductionism* for the sake of brevity.

(432) *M-reductionism* (to be revised)  
All morphological relations and operations reduce to syntactic relations and operations.

To adopt (432) is to proscribe analyses of linguistic phenomena positing relations between elements, or operations, that are in some sense morphology-specific; for a theory of syntactic word-formation, this amounts to positing a theory devoid of an (active) postsyntactic component (see the so-called principle of No Mor-



phology in Caha 2020: p. 8; cf. Collins and Kayne 2023: p. 1).

It is no simple matter to decide whether the accomplishment of (432) is a true architectural feature of these frameworks, as opposed to a mere aspirational goal or, less, a purely rhetorical device. Complexity here arises from the fact that (432) can only be unequivocally falsified given an undisputed understanding of what constitutes a syntactic relation/operation; and, as Caha (2020) correctly notes, discussion on this front is likely not fully settled. However, unless we take seriously the parts of the discussion that *are* settled, satisfying (432) becomes fully trivial: it requires little more than engaging in the theoretical exercise of placing morphologically-specific operations in the same bag as syntactic ones, deciding to attach the label ‘syntax’ to the result, and declaring that all this yields a theory that is somehow inherently more parsimonious than conceivable alternatives.<sup>111</sup>

In other words, (432) is not really what is at stake in discussions of the role of syntax in morphology, insofar as it risks forcing such discussion to devolve into trivial problems of naming. Rather, what is at stake is the minimally but crucially different (433).

(433) *M-reductionism* (revised)  
All morphological relations and operations reduce to *principled* syntactic relations and operations.

Certain analyses employed in this dissertation, and argued to be necessitated by the Greek facts, seem to cast doubt on the viability of (433).

The first type of phenomenon involves cases where a relation seemingly crucial relevant for the purposes of realization has no clear counterpart in the array of principled syntactic relations. This consideration arose in the discussion of Voice displacement in section 2.2: there, it was argued that the sensitivity of the Greek agreement suffixes to Voice was modulated by a rather superficial sort of adjacency, manifesting itself in the generalization that, whenever an overt exponent intervened between Voice and the dissociated morpheme Agr, the realization of the latter retreated to an elsewhere exponent. This type of interaction seems natural from a perspective on the inner workings of allomorphy that recognizes such a thing as an allomorphic relation distinct from primitive syntactic ones. But from the perspective of M-reductionism, things do not seem so straightforward. In the case at hand, an approach adopting M-reductionism would be forced to specify a principled syntactic relation holding between Voice and Agr that would supply the correct conditions for

<sup>111</sup> Consider, for instance, the so-called spellout-driven movements of nanosyntax, whose properties Caha (2020: p. 28) lists as follows: ‘the absence of traces is a general property of spellout movement...This is in turn related to the fact that spellout-driven movement never shows any reconstruction effects, and so there is never any evidence for two different interpretive positions.’ In effect, the theory thus described posits so-called syntactic operations completely unrelated to any component of the grammar apart from pronounced form, by definition undiagnosable using anything but the output it was designed to generate, namely, form itself. Such moves clearly amount to using the ‘syntax’ as a sort of diacritic for pronunciation; and it is thus unclear if the overall theory is ‘syntax-only’ in any sense other than the nominal one. For opposing perspectives on this issue, compare for instance Caha (2018) and Embick (2017). Note that Caha (2020) attempts to argue that (some) constituent orders generated by spellout-driven movements are independently necessary; but the argument is unfortunate, as it is predicated on a controversial domain (see Cinque 2005 versus Abels and Neeleman 2009).

allomorphy to piggyback on; it is not obvious what the right kind of relation would be. For instance, it could be that T/Agr inherits the features of Voice by agreement, a *bona fide* syntactic relation, and comes to index the features of Voice that way; but this dependency would need to be interrupted whenever Asp probed Voice instead, since it is always the overt affix closest to Voice that is allomorphically sensitive to it.<sup>112</sup>

The point is not necessarily that principled syntactic relations of the right kind may not be found; I have not devoted the space necessary to do the issue justice here, and so this may well turn out to be the case. The point is rather that seeking out such relations will involve seeking their empirical signature, in a way that justifies including the term *principled* in (433) in the first place.

The second type of analysis crucial to this dissertation has been premised on the idea that there exists a dynamic realizational component of grammar, one that actively mediates between abstract syntactic structure and pronounceable form. Particularly central was the idea in section 2.3 that Voice syncretism of the Greek type involves reference to a syntactic feature that is transduced to a morphological one at PF: restated briefly, the argument supported such an analysis was that, though the syncretism has clear syntactic roots, targeting the feature [-D] on Voice, direct reference to purely formal features of this kind at PF had better not be allowed, since the opposite value [+D] is demonstrably never referred to by the morphology of Greek. The overall analysis was one where an active PF component allows [-D] to survive to the level of realization, by transducing this purely formal feature to a morphological diacritic. To the extent that this analysis is, in fact, necessitated by the Greek facts, it speaks against the spirit of *M-reductionism*, which allows no transduction operations.

### 5.2.2 TWO THINGS VERSUS ONE

At different points of the dissertation, the analysis has taken a move away from absolute uniformity, with detailed examination of the facts seeming to motivate a situation where two *prima facie* similar phenomena in fact show widely different properties. Chapter 3, for instance, argued for a distinction in kind between pronominal and verbal reflexivity, in a way palpably in tension with a theory that would seek to reduce all instances of (pretheoretical) reflexivity to the same structural source. Similar conclusions were reached in Chapter 4, where Greek stative passives were found to have sharply different properties from their eventive counterparts, in tensions with theories that would posit the structure of the eventive passive within the stative.

At a minimum, these conclusions, if correct, highlight a methodological takeaway that is hardly controversial, namely, that intuitions on what ought to be uniform need not always align with what the workings of grammar actually produce. Perhaps of more interest is the point that the non-uniform picture emerged in each case by taking into account a variety of considerations, examining, to the extent possible, the phenomena at hand along syntactic, morphophonological, and interpretive dimensions. To the extent that this endeavor is judged as successful, it reinforces a view of grammar as a system built up of potentially interacting components; for the practicing linguist, it means that, like most other phenomena, voice alternations cannot

<sup>112</sup>See Leu (2020) for a movement-based analysis of related facts.

be approached in a vacuum, insulated from other types of considerations.

### 5.2.3 'LEXICAL' VERSUS SYNTACTIC SOLUTIONS

Finally, at different junctures of the dissertation, the evaluation of the analyses proposed has encompassed comparisons between the syntax-forward solutions proposed here and conceivable alternatives based on lexical operations. Such discussions arose when distinguishing verbal reflexivity from anaphoric binding in [Chapter 3](#), and when proposing that stative passives be assigned an analysis different in important respects from that appropriate for eventive passives in [Chapter 4](#).

In both cases, arguments were advanced that could be seen to be compatible with 'lexical' lines of thinking, at least when compared to conceivable syntax-centric alternatives. For instance, the reduction of verbal reflexivity to anaphoric binding was argued not to be the correct approach for the facts tackled in [Chapter 3](#), and the position that stative passives embed the structure of eventive passives in Greek was found to make predictions in tension with the facts on the ground. At the same time, accounts employing syntactic word formation were found to ultimately be preferable in many cases, with lexicalist accounts facing issues of different sorts. In the case of reflexives, a syntactic analysis was shown to be able to unify the behavior of reflexives with that of passives; in the case of stative passives, the striking predicative/attributive contrasts summarized in [section 4.7.3](#) were conjectured to point towards a syntactic solution, though much remains to be said on that front.

At the very least, these discussions illustrate that disentangling the predictions of 'lexicalist' theories from syntactic ones is far from trivial; and it is thus no wonder that work in this domain continues to take this matter seriously regardless of starting perspective. If the arguments made here can be generalized to the effect that word formation, even though syntactic, need not involve phrasal syntax, seriousness of the relevant type will be necessary once again, to further specify what a suitably nuanced syntactic approach would look like.

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