

REFLEXIVITY AND EXTERNAL ARGUMENT INTRODUCTION: INSIGHTS FROM GREEK^{*}

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ABSTRACT

Greek verbal reflexives share their morphology with passives. A long-standing intuition holds that this instance of formal overlap follows from a shared syntax: reflexives look like passives and their ilk because they have the syntax thereof. Though widespread, this intuition has largely remained without direct support, with the argument structure of verbal reflexives having proven particularly difficult to probe using syntactic tests. This paper brings to light a number of novel generalizations supporting the long-standing conjecture: Greek builds verbal reflexives by means of a passive-like syntax, whereby a single syntactic argument originates low. This state of affairs is argued to follow from a view treating (verbal) reflexivity as a type of external argument introduction, supporting the existence of reflexivizing Voice.

Keywords: reflexives; Voice; unaccusativity; argument structure

1 INTRODUCTION

This paper is concerned with the relation between reflexivity and the introduction of the external argument in syntax. I approach this question through the lens of languages exhibiting a type of *Voice syncretism*, where the verbal morphology that realizes passives also realizes other structures opposed to the active, including unaccusatives, middles, experiencer verbs and, importantly, verbal reflexives and reciprocals. I focus more specifically on Modern Greek, arguably a textbook case of *Voice syncretism*, whose verbal reflexives have nonetheless eluded careful scrutiny from a syntactic point of view.

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At its broadest, the main claim of the paper is that the link between verbal reflexivity and the introduction of the external argument can be particularly intimate: in Greek(-type languages), verbal reflexivity amounts to a kind of external argument introduction.

This claim in itself is not new, as analyses linking reflexivity of one sort or another to the external argument introducer, Voice (Kratzer 1996), have proliferated in recent years (see e.g. B. T. Ahn 2015; Alexiadou 2014b; Bruening 2006; Kallulli & Roberts 2023; Kratzer 2009; Labelle 2008; McGinnis 2022; Paparounas & Akkuş forthcoming; Spathas, Alexiadou, & Schäfer 2015). Also far from novel is the recognition of the potential for the analysis of Voice syncretism to be mutually informative with that of reflexivity, (see e.g. Key 2021, to appear; Lidz 1996, 2001a; Raghotham 2022), with Greek reflexives in particular having attracted a considerable amount of attention in this connection (Alexiadou 2014b; Alexiadou & Schäfer 2014; Embick 1997, 1998, 2004; Papangeli 2004; Rivero 1992; Spathas et al. 2015; Tsimpli 1989).

What does set the present work apart, however, is the focus on explicit syntactic argumentation bringing within reach a firm conclusion on the argument structure of Greek verbal reflexives. At stake is the structure of examples like (1), where the nominative-marked surface subject of the verb is read as both agent and patient; the verb itself is prefixed with a reflexive element and suffixed with nonactive morphology, also used to express passives and passive-like structures.¹

- (1) I Maria afto- ðiafimiz- ete.
the.NOM Mary.NOM REFL advertise 3SG.NACT
‘Mary promotes herself.’

Two questions arise regarding the structure of verbal reflexives such as (1). The first concerns the status of the surface subject: in (1), what position does *Mary* originate in? The second question concerns the status of the reflexivizing element: is *afto-* in (2) an anaphoric argument bound by *Mary* in a transitive structure, or is the structure really intransitive, with *afto-* being somehow a marker of reflexivization, rather than an anaphoric argument?

Previous work on the language has not addressed these questions directly. Much work has taken (1) to follow from an intransitive unaccusative syntax (e.g. Alexiadou 2014b; Embick 1998, 2004; Spathas et al. 2015), albeit without directly diagnosing this syntax, with the presence of nonactive morphology offered as a suggestive, but arguably not conclusive, argument. The lack of syntactic argumentation here reflects the paucity of or difficulty with syntactic diagnostics of the relevant type in Greek (see e.g. Alexiadou and Anagnostopoulou 1999, and cf. Alexiadou and Schäfer 2014). As a result, differing analyses have also been proposed, again without explicit argumentation on the position of the surface subject or the transitivity of the verb: other works thus take Greek reflexive verbs to be ‘hidden transitives’ where the reflexivizer is an internal argument (Rivero 1992, and to some extent Embick 1997); transitives where the surface subject is an internal argument and *afto-* is a reflexive clitic (Tsimpli 1989); or intransitive unergatives (Papangeli 2004).

¹Judgments are the native speaker author’s, and have been confirmed with four native speaker consultants, all non-linguists; the crucial examples have also been verified by several Greek-speaking audience members at major linguistics conferences. Points of divergence in judgments between consultants are noted where they occur; it is worth noting that judgments have generally been remarkably uniform across consultants.

Bringing to light a range of novel empirical generalizations, this paper makes possible a more sure-footed investigation than was previously possible of what reflexive verbs in systems with Voice syncretism might entail for the theory of verbal reflexivity more broadly. The result of this investigation clarify the empirical picture in the direction of what, in much previous work on the language, had remained largely at the level of conjecture: Greek verbal reflexives instantiate a case of a true unaccusative reflexive. Their surface subject thus originates *v*P-internally; additionally, it is the only syntactically realized argument in the structure, with *afto*- itself being a reflexivizing morpheme, not an argument in itself.

Reflexives in Greek, then, bear the morphology also borne by passives and (many) unaccusatives because they have the syntax of passives and unaccusatives.² I thus argue that, like passivization, unaccusativity, and their ilk, reflexivity is a type of argument structure: in particular, the external argument-introducing functional head, Voice, must be able to effect reflexivization without introducing a syntactic argument.

Though advanced here specifically for the case of Greek, this analysis has consequences for a range of broader issues concerning Voice, reflexivity, and the relationship between the two. Notably, it enriches the typology of Voice from the perspective of verbal reflexives; informs the proper analysis of Greek-type Voice syncretism; and reinforces the conclusion that verbal reflexivity is dissociable from pronominal reflexivity. I elaborate on these broader conclusions in [section 5](#).

The paper is structured as follows. [Section 2](#) provides essential background on Greek voice syncretism, before introducing Greek verbal reflexives and the unaccusative analysis of reflexives in its classical form. [Section 3](#) motivates at length a particular implementation of this analysis for the case of Greek, providing a range of novel empirical arguments suggesting that *i*) Greek verbal reflexives have a single syntactic argument, and *ii*) this argument originates as a deep object. [Section 4](#) shows how the syntax, morphology and interpretation of Greek verbal reflexives follow from the presence of a reflexivizing Voice head, and argues that further support for the presence of this element comes from the thematic restrictions obeyed by *afto*- reflexives; [Section 4](#) also offers explicit arguments against an ‘incorporation’ analysis of the reflexivizer *afto*-. [Section 5](#) concludes and discusses broader implications of this study.

2 BACKGROUND: REFLEXIVES IN VOICE SYNCRETISM

2.1 VOICE SYNCRETISM

In Greek, verbal morphology is intimately tied to syntactic argument structure. For instance, the language uses verbal morphology to set apart active from passive structures, as shown in (2). (2a) is a typical active transitive; (2b) is the corresponding passive, showing promotion of the theme to surface subject and optional expression of the agent as a *by*-phrase (for Greek passives, see among

²This paper thus builds on the insights of Alexiadou (2014b), Embick (1998, 2004), Spathas et al. (2015), but offers for the first time concrete empirical arguments in favor of the unaccusative analysis for Greek. At the same time, this paper takes a sharply different stance from Alexiadou (2014b) and Spathas et al. (2015) in taking *afto*- to be a proper reflexivizer (see [section 4.2](#)).

many others Alexiadou, Anagnostopoulou, & Schäfer 2015; Alexiadou & Doron 2012; Lascaratou & Philippaki-Warbuton 1983; Manzini, Roussou, & Savoia 2016; Smirniotopoulos 1991; Warbuton 1975). Importantly, the change from active to passive syntax is accompanied by a change in morphology: the passive is set apart from active morphology by means of a distinct set of *nonactive* exponents. In the case of (2), the active/nonactive distinction surfaces on the agreement exponents.³

(2) *Active vs. passive*

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

Voice syncretism amounts to a crucial observation regarding the distribution of non-active morphology: alongside passives (2b), nonactive morphology is also recruited to express other structures opposed to the active (see among others Alexiadou et al. 2015; Embick 1998, 2004; Oikonomou and Alexiadou 2022; Paparounas forthcoming-b; Rivero 1990; Tsimpli 1989). Thus, (many) unaccusative verbs look morphologically identical to passives (3), as do dispositional middles (4) and subject experiencer verbs (5).

(3) *Unaccusative*

- Ta fita ðen anaptis- onde apo mona tus.
the.PL.NOM plant.PL.NOM NEG $\sqrt{\text{DEVELOP}}$ 3PL.**NACT** from alone.PL their
'Plants don't grow on their own.'

(4) *Middle*

- Afta ta vivlia ðiavaz- onde efkola.
this.PL.NOM the.PL.NOM book.PL.NOM $\sqrt{\text{READ}}$ - 3PL.**NACT** easily
'These books read easily.'

(5) *Experiencer verb*

- Ta peðja fov- unde to skotaði.
the.PL.NOM child.PL.NOM $\sqrt{\text{FEAR}}$ 3PL.**NACT** the.ACC dark.ACC

³ Note that the Greek active/non-active distinction is never realized directly on the head Voice where it originates, surfacing instead on peripheral suffixes through *allomorphy*; see Paparounas forthcoming-a for details and analysis. As shown therein, analytically, the 'active' exponents are really defaults, with only the nonactive exponents being true Voice-sensitive allomorphs. In examples, I consistently underline the language's 'active' exponents and bold the nonactive ones.

119 ‘Children are afraid of the dark.’

120 This type of Voice syncretism, where the morphology neutralizes a range of fine-grained syntactic dis-
121 tinctions into a binary active/non-active opposition, is cross-linguistically very common, with some
122 variation on the exact subset of categories being realized as non-active (see Bahrt 2021; Geniušienė
123 1987; Haspelmath 1987, 1990).

124 From a grammatical perspective, Voice syncretism has been understood as an instance of natural
125 class behavior: nonactive morphology seems to realize structures that lack a thematic subject. Pas-
126 sives (2b) and unaccusatives (3) are the prototypical categories with this property ; Greek middles
127 are typically taken to be unaccusative-like in their syntax (see e.g. Lekakou 2005, Schäfer 2008: ch.
128 6); and subject experiencer verbs of the *frighten* type in Greek have been shown to lack canonical
129 external arguments, thus being distinct from transitives in various respects (Anagnostopoulou 1999;
130 see also e.g. Alexiadou 2018; Alexiadou and Iordachioaia 2014; Zombolou and Alexiadou 2014, and
131 cf. Belletti and Rizzi 1988; Grimshaw 1990; Pesetsky 1995).

132 From this perspective, then, the distribution of nonactive morphology seems to be structurally
133 unified, as summarized in (6).⁴

134 (6) *The distribution of nonactive morphology*

135 Nonactive morphology realizes structures lacking a thematic subject.

136 For concreteness, I will adopt the realizational implementation of this generalization proposed in
137 Embick (1997) (with antecedents in e.g. Babby 1975; Babby and Brecht 1975; Cranmer 1976) and
138 subsequently adopted in a large literature on the Voice system of Greek and languages like it (see

⁴Greek shows two classes of verbs that ostensibly raise complications for this generalization; as argued at length in Paparounas (forthcoming-b), neither in fact constitutes a true counterexample.

Firstly, there exist two-argument verbs surfacing with nonactive morphology, known as deponent verbs (see Embick 1997 for deponents in Greek-type voice systems). However, deponents in Modern Greek do not passivize (see section 4.1). They thus pattern with the language’s subject experiencer predicates and suggesting that they lack a canonical external argument; in this sense they ultimately emerge as being in line with (7) (*contra* Angelopoulos, Collins, and Terzi 2020, and to some extent Kallulli 2013). See also Grestenberger 2018; Zombolou and Alexiadou 2014 for this same conclusion from slightly different perspectives.

Secondly, the language shows so-called unmarked unaccusatives, which surface with ‘active’ morphology despite lacking an agent. These have sometimes been taken as raising issues for (7) (e.g. Kallulli 2013: p. 347). In fact, following Alexiadou et al. (2015), Schäfer (2008), these can be plausibly analyzed as Voice-less unaccusatives, which, lacking the target of (7), do not receive the diacritic [NACT]; they thus differ from Voiced unaccusatives, which are built with expletive Voice (Schäfer 2008), which does not contribute agentive semantics but does participate in (7). Direct syntactic diagnosis of the Voiced/Voice-less unaccusative divide remains outstanding for Greek; at the same time, as noted in Paparounas (forthcoming-b), this analysis conforms with the (independently diagnosable) default status of ‘active’ morphology in Greek (see Paparounas forthcoming-a and main text above): since ‘active’ is in fact an elsewhere realization of heads external to Voice, it can emerge unproblematically in the absence of a Voice head in the structure, deriving unmarked unaccusatives.

Note that the same conclusion – that ‘active’ is in fact a default – correctly predicts a range of other generalizations concerning the realization of Voice in Greek, including the important observation that, although the language shows deponents, it does not show a single instance of an ‘anti-deponent’, that is, a passive surfacing with ‘active’ morphology (Embick 1997).

e.g. Alexiadou et al. 2015; Embick 1998, 2004; Grestenberger 2018; Key to appear; Oikonomou and Alexiadou 2022; Paparounas forthcoming-b; Schäfer 2008; Spathas et al. 2015).⁵

According to this type of approach, schematized in (7), nonactive morphology is the realization of a Voice head that lacks a specifier. On the assumption that the canonical external argument is introduced by Voice in its specifier (Kratzer 1996), the purpose of a post-syntactic but pre-Vocabulary Insertion enrichment rule like (7) is to guarantee that Voice heads that fail to introduce an external argument will be collapsed for the purposes of realization, subsumed under the diacritic feature [NACT]. The underlying intuition is that there may be more than one ‘flavor’ of Voice, but all Voice heads sharing the particular structural property of failing to introduce an external argument will participate in the syncretism.

(7) Voice \rightarrow Voice_[NACT] / No DP specifier ____
(Alexiadou et al. 2015; Embick 1997, 1998, 2004; Paparounas forthcoming-b)

(7) is given here in a purposefully underspecified form, and two notes are in order regarding what is crucial in this rule, and what is incidental.

The context of (7) is left purposefully vague to clarify that the type of rule given in (7) should be compatible with different conceptions of the mechanics of specifier introduction. For instance, in a system where external Merge of a specifier corresponds to the presence of a structure-building [D] feature, [NACT] may plausibly amount to a transduction of this feature into a PF-legible diacritic; see e.g. Grestenberger (2019) for such an approach, and cf. Alexiadou et al. (2015), Schäfer (2008) for related points of view. Since the mechanics are not germane to what follows, I avoid committing to a particular implementation here.⁶

Perhaps more interestingly, (7) entails that the nonactive is marked: there exists, at the point of realization, a feature [NACT] capable of acting as the target and context for Vocabulary Insertion (in Greek, it only ever acts as the context; see footnote 3). This point of view entails that nonactive does not correspond to an elsewhere realization of Voice, a conclusion that is independently supported (see e.g. Embick 1997 for Latin and Classical Greek, and Paparounas forthcoming-a for Modern Greek). In other words, nonactive in Greek(-type languages) indeed corresponds to a specific real-

⁵I follow the literature cited in the main text in eschewing a treatment of nonactive Voice as being an argument in itself (Rivero 1990; Tsimpli 1989; cf. Baker, Johnson, and Roberts 1989), taking it that the arguments against this position for Greek-type languages in Embick (1998) continue to hold. See also section 3.1 for arguments that the language’s reflexivizing morphology is not an argument.

A separate question concerns whether, in place of an approach where nonactive morphology is ‘reflective’, flagging the presence of a certain type of structure, one could take it to be ‘causal’, corresponding to a feature that ‘drives’ the syntactic derivation, and in particular forces the creation of a passive-like structure. As far as I can tell, nothing in what follows would clearly help us distinguish between these two alternatives; but since a proper comparison would involve larger architectural considerations, I leave it for future work. See also Embick (1997) for an argument in favor of the ‘reflective’ approach from languages with Voice syncretism, based to some extent on the behavior of deponent verbs; the crucial considerations therein do not straightforwardly apply to Modern Greek, because deponents in this language turn out not to passivize, suggesting they are not proper transitives (see section 4.1 and footnote 4).

⁶Clearly, no sensible formalization of (7) will involve negative universal quantification over structural descriptions; that is to say, ‘No DP specifier’ is the effect, but not the description, of the appropriate featural implementation of (7). I thank Jason Merchant (p.c.) for discussion on this point.

166 ization of Voice, appearing in a syntactically well-defined environment.

167 2.2 THE PUZZLE: REFLEXIVES IN VOICE SYNCRETISM

168 Consider now an observation surprising from the perspective of (6)/(7): in Greek, reflexive and
169 reciprocal verbs also participate in Voice syncretism.

170 Greek reflexive verbs come in two varieties. Derived reflexives, as in (8), represent the lan-
171 guage's productive verbal reflexivization strategy; they are built by means of the prefixal⁷ reflex-
172 ivizer *afto-* alongside nonactive morphology. Certain Roots, notably involving those denoting body-
173 action events such as grooming and motion (Geniušienė 1987; Kemmer 1993), can describe reflexive
174 events without the prefixation of *afto-* when inflected with nonactive morphology; (9) illustrates with
175 $\sqrt{\text{WASH}}$. Call such verbs Naturally Reflexive Verbs (NRVs) for convenience.

- 176 (8) O Janis afto- $\delta\iota\alpha\text{fimis-}$ $\theta\text{-}$ ik- e.
the.NOM John.NOM self $\sqrt{\text{ADVERTISE}}$ PFV.NACT PST.NACT 3SG
177 'John advertised himself.' (derived reflexive)
- 178 (9) I Maria pli- $\theta\text{-}$ ik- e.
the.NOM Mary.NOM $\sqrt{\text{WASH}}$ PFV.NACT PST.NACT 3SG
179 'Mary washed.' (inherent reflexive)

180 These facts from reflexives find a perfect parallel in the domain of reciprocals. The language produc-
181 tively builds verbal reciprocals by prefixing a Root with the reciprocal prefix *alilo-*, and inflecting the

⁷Note that *afto-* is not a (morphophonological) clitic, under any sensible construal of the term; this conclusion can be illustrated by comparing *afto-* to pronominal clitics. The latter are host-insensitive, in that they surface on the verb in synthetic verb forms (ia) but on the auxiliary in compound tenses (ib)-(ic); *afto-* always remains on the main verb (ii). Moreover, pronominal clitics are mobile: normally proclitic (ia-b), they surface as enclitics in situations where the verb is syntactically high, such as imperatives (iii); *afto-* again behaves as more closely integrated with the verb (iv).

- | | |
|--|---|
| <p>(i) a. Ton= eksorisa.
3SG.M.ACC exile.PST.3SG
'I exiled him.'</p> <p>b. Ton= exo eksorisi.
3SG.M.ACC have.1SG exile.PFV
'I have exiled him.'</p> <p>c. *exo ton= eksorisi
have.1SG 3SG.M.ACC exile.PFV</p> | <p>(iii) a. Eksorise =ton!
exile.IMP.2SG 3SG.M.ACC
'Exile him!'</p> <p>b. *ton= eksorise!
3SG.M.ACC exile.IMP.2SG</p> |
| <p>(ii) a. afto- eksorisθika.
REFL exile.NACT.PST.1SG
'I self-exiled.'</p> <p>b. exo afto- eksorisθi
have.1SG REFL exile.NACT.PFV
'I have self-exiled.'</p> <p>c. *afto- exo eksorisθi.
REFL have.1SG exile.NACT.PFV</p> | <p>(iv) a. afto- eksorisu!
REFL exile.NACT.2SG
'Self-exile!'</p> <p>b. *eksorisu- afto!
exile.NACT.2SG REFL</p> |

182 result with nonactive morphology (10). So-called naturally reciprocal Roots – those denoting events
 183 that can be construed as prototypically reciprocal or symmetrical – can yield verbal reciprocals by
 184 means of nonactive morphology alone, without *alilo-* (11).

185 (10) I Maria ke o Janis alilo- ipostirix- θ- ik-
 the.NOM Mary.NOM and the.NOM John.NOM each.other $\sqrt{\text{SUPPORT}}$ PFV.NACT PST.NACT
 186 an.
 3PL
 187 ‘Mary and John supported each other.’ (derived reciprocal)

188 (11) I Maria ke o Janis angalias- θ- ik- an.
 the.NOM Mary.NOM and the.NOM John.NOM $\sqrt{\text{HUG}}$ PFV.NACT PST.NACT 3PL
 189 ‘Mary and John hugged.’ (inherent reciprocal)

190 Importantly, it is not merely the case that reflexives and reciprocals *can* occur with nonactive mor-
 191 phology; rather, they *must* do so. Hence, the counterparts of (9) and (11) with active morphology
 192 may have at most a transitive reading with a null object, but lack a reflexive reading, see (12) and (14);
 193 moreover, derived reflexives and reciprocals with active morphology are altogether ungrammatical,
 194 see (13) and (15).

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

198 (13) *O Janis afto- ðiafimi- s- e (ton eafto tu / ti
 the.NOM John.NOM self $\sqrt{\text{ADVERTISE}}$ PFV.ACT 3SG the.ACC self.ACC 3SG.M.GEN the.ACC
 199 Maria).
 Mary.ACC

200 (14) I Maria ke o Janis angalia- s- an.
 the.NOM Mary.NOM and the.NOM John.NOM $\sqrt{\text{HUG}}$ PFV.ACT 3PL
 201 ?‘Mary and John hugged someone’ (fine in a context with a salient object of hugging)
 202 ✗ ‘Mary and John washed each other’

203 (15) *I Maria ke o Janis alilo- ipostirix- s- an (o
 the.NOM Mary.NOM and the.NOM John.NOM each.other $\sqrt{\text{SUPPORT}}$ PFV.ACT 3PL the.NOM
 204 enas ton alo).
 one.NOM the.ACC other.ACC

205 In Greek, then, reflexives and reciprocals are *Voice-selective*: they only occur with nonactive Voice
 206 morphology, thereby mirroring the language’s nonactive category *par excellence*, the passive.

207 Note that, with the majority of Roots in the language, the presence of nonactive morphology is
 208 necessary, but not sufficient, to yield a reflexive or reciprocal reading. This fact is illustrated in (16),
 209 where the nonactive form can only be interpreted as a passive (‘Mary was accused’), as opposed to

210 having the stronger, contextually appropriate reflexive reading ('Mary was accused *by Mary*').

- 212 (16) [*Mary testifies against herself in court.*]
 213 #I Maria katiyori- θ- ik- e.
 the Mary.NOM $\sqrt{\text{ACCUSE}}$ PFV.NACT PST.NACT 3SG
 214 Intended: 'Mary accused herself'

215 The only verbs capable of yielding reflexive readings in the absence of *afto-* are NRVs, as in (9). These
 216 Roots are said to be able to carry out reflexivity 'on their own'; an important clue to this end comes
 217 from the observation that these Roots are generally incompatible with *afto-* (17a). Such combinations
 218 are only felicitous in a contrastive context with focus on the reflexivizer, and are judged as somewhat
 219 marked even then (17b).

- 220 (17) a. #I Maria afto- pliθike.
 the.NOM Mary.NOM REFL wash.NACT.PST.3SG
 221 'Mary washed.'
 222 b. Q: Someone else washed little Mary, right?
 223 A: ?Oçi, i Maria AFTO- pliθike.
 no the.NOM Mary.NOM REFL wash.NACT.PST.3SG
 224 'No, Mary self-washed.'

225 Note, finally, that verbal reflexives in Greek are distinct from pronominal anaphora proper; in
 226 (18), which is to be contrasted with (8), the transitive verb taking a pronominal anaphoric object is
 227 in the active transitive form.

- 228 (18) O Janis diafimi- s- e ton eafto tu.
 the.NOM John.NOM advertise PFV.ACT 3SG the.ACC self.ACC 3SG.M.GEN
 229 'John advertised himself.'

230 The participation of verbal reflexives and reciprocals in Voice syncretism raises an important
 231 challenge for the view of this phenomenon outlined in Section 2.1. The core syncretizing verb classes
 232 – passives, unaccusatives, middles and subject experiencer verbs – all show a surface subject that is
 233 not interpreted as an agent. Unaccusatives and experiencer verbs lack agent entailments entirely;
 234 passives and (arguably) middles do involve agentive semantics, but this semantics is clearly never
 235 associated with their surface subject. These core verb classes are therefore amenable to an analysis
 236 of Voice syncretism where the factor responsible for the emergence of nonactive morphology is the
 237 absence of a base-generated agent.

238 For reflexives and reciprocals, however, this is less straightforwardly the case. Unlike all the other
 239 verb classes participating in the syncretism, reflexives do involve a surface subject that comes to be
 240 associated with the agentive entailment. In (8), for instance, John is understood as both the agent
 241 and the theme of an advertising event, just as Mary seems to be both the agent and the patient of the
 242 reflexive event in (9). Similarly, each of Mary and John are both patients and agents in the reciprocal
 243 hugging and supporting events of (10) and (11). In fact, as will be shown in section 4.1, the link

between verbal reflexivization/reciprocalization and agentivity runs particularly deep in Greek.

To approach the relation between verbal reflexives and the other categories participating in the Greek Voice syncretism is thus to reckon with a dilemma. On the one hand, verbal reflexives clearly participate in the syncretism: there is a deep-seated link between verbal reflexivization and nonactive morphology. On the other hand, reflexives seem crucially different to the other categories participating in the syncretism. In the case of the other syncretizing categories, the fact that their surface subject is never an agent is precisely what lends credence to the view that the syncretism targets the structural absence of a syntactically projected agent; the surface subject of reflexives, however, is clearly ultimately interpreted as an agent.

It is possible to respond to this dilemma by abandoning the view of Voice syncretism outlined in [section 2.1](#), or even by declaring that the distribution of Voice morphology in Greek (and, perhaps, the many languages like it in the relevant respects) must simply be non-uniform, with the apparent natural class behavior of the core syncretizing categories being an illusion.

But to take this stance without attempting to first elucidate the syntax of the apparently recalcitrant reflexives would be premature. Instead, I show below that, once the task of diagnosing the syntax of the surface subject of reflexives is undertaken, their behavior turns out to be fully in line with the analysis of Voice syncretism as related to the absence of a deep subject, and to in fact reinforce this type of analysis. To see why, consider first one possible approach to the syntax of verbal reflexives.

2.3 A POSSIBLE SOLUTION: UNACCUSATIVE REFLEXIVES

It has been noted by many authors that the participation of verbal reflexives in Greek Voice syncretism follows straightforwardly if these verbs turn out to be unaccusative reflexives ([Alexiadou 2014b](#); [Alexiadou et al. 2015](#); [Alexiadou & Schäfer 2014](#); [Embick 1998, 2004](#); [Spathas et al. 2015](#)). It is thus important to make precise exactly what type of syntax is typically intended here.

The unaccusative analysis was initially developed for Romance reflexives formed with the clitic *se/si* (see e.g. [Burzio 1986](#); [Embick 2004](#); [Kayne 1988](#); [Marantz 1984](#): 152ff; [McGinnis 2004, 2022](#); [Pesetsky 1995](#): 102ff; [Sportiche 1998](#): 152ff). Previous literature on Voice syncretism has conjectured that this type of analysis should extend to systems where reflexives participate in Voice syncretism, like Greek, but has shied away from specifying how closely Greek should be assimilated to the proposed analysis of Romance, and from offering clear arguments in favor of this assimilation.

It is important to note that, although widely defended, the unaccusative analysis of Romance reflexives is by no means universally espoused (see esp. [Labelle 2008](#); [Reinhart 2016](#); [Reinhart & Siloni 2004, 2005](#); [Sportiche 2014](#)), with the correct analysis of these verbs remaining controversial. The state of things in Romance is, strictly speaking, orthogonal to the claims in this paper. However, [section 3.1](#) suggests that any parallels between Greek and Romance must be at most partial: the two behave crucially differently with respect to arity diagnostics, with Romance reflexives being dyadic (see esp. [Labelle 2008](#); [Sportiche 2014](#)), unlike their Greek counterparts.

In its simplest form, the unaccusative analysis posits that a reflexive sentence like (19) has the structure in (20). Here, the reflexive clitic originates as the external argument (anachronistically

introduced by Voice), with the full DP *Jean* moving across it to become the surface subject. In this respect, the argument relations in Romance reflexive sentences like (19) are effectively the inverse of those found in surface-similar sentences involving a non-reflexive clitic (21)-(22). The difference between (20) and (22) successfully accounts for the numerous striking differences between the two types of sentences first identified in Kayne (1975: 375ff).

- | | |
|--|--|
| <p>(19) Jean se voit.
 Jean.NOM REFL see.3SG
 ‘John sees himself.’</p> <p>(20) Jean_i [VOICEP se_i [VP voit t_i]]</p> <p style="text-align: center;">↑</p> | <p>(21) Jean me voit.
 Jean.NOM 1SG see.3SG
 ‘John sees me.’</p> <p>(22) Jean_i [VOICEP t_i [VP voit me]]</p> <p style="text-align: center;">↑</p> |
|--|--|

It suffices to compare (20) with (22) to see why the former was dubbed the unaccusative analysis. (22) instantiates the derivation of a transitive (or, for that matter, unergative) verb in French, with the thematic subject promoted to become the grammatical subject. in (20), by contrast, the surface subject originates as an *internal* argument, with the step of movement relating the two positions thus paralleling the standard analysis of passives and unaccusatives.

At the same time, there is a clear sense in which the term ‘unaccusative’ as applied to (20) is a misnomer, at least to the extent that the term ‘unaccusative’ is reserved for intransitive, single-argument structures: in the form given, (20) is a two-argument structure. In other words, what is standardly referred to as the unaccusative analysis of (Romance) reflexives in fact has two parts, schematized in (23) below.

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

Consider each component in turn. Beginning with (23a), note that this component of the analysis is properly independent from (23b). It is perfectly possible to imagine a language where the full DP argument of verbal reflexives is underlyingly internal, but whose reflexive element does not have the status of an anaphoric nominal; in such a language, (23a) would hold, but (23b) would not, at least not in the form given above.

Now consider this second part more closely. For Romance, (23b) was classically taken to follow from a strong restriction on the occurrence of reflexive clitics (see e.g. Kayne 1988; Pesetsky 1995, which I dub the *External Argument Generalization*, following McGinnis (2004):

- (24) *The External Argument Generalization*
(Romance) reflexive clitics are obligatorily merged as external arguments.

The role of (24) is to enforce the syntax shown in (20) exactly when a reflexive clitic is present; to

exemplify this reasoning, let us once again anachronistically employ technology that antecedes the original unaccusative analysis. Suppose (24) applies to all derivations resulting from a numeration involving a reflexive clitic. If any derivation with the clitic is to involve another argument in addition and still comply with (24), that argument must be generated elsewhere; in other words, *Jean* in (19) must be generated in the internal argument position in order to comply with (24). Movement of *Jean*, the reasoning goes, is necessary to subsequently ensure that the structure is binding-theoretically licit: unless the external argument clitic anaphor is locally bound, the basic structure enforced by (24) will incur a violation of Condition A of the Binding Theory. Thus, the complete picture shown in (20) arises.

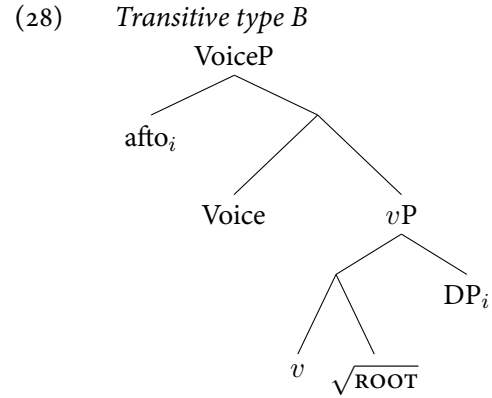
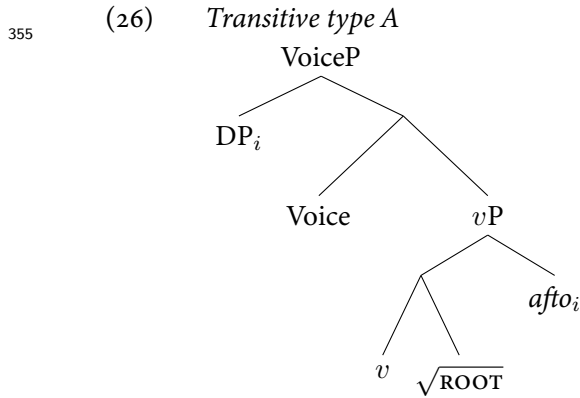
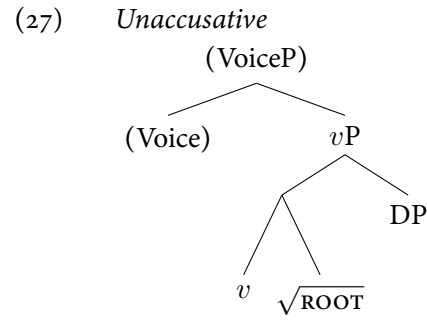
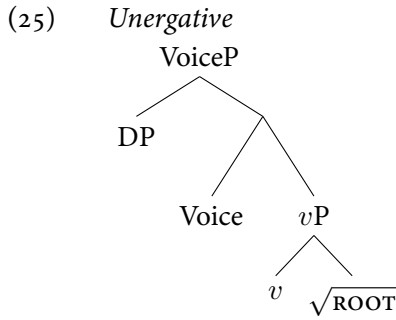
Many questions beyond the focus of this paper can be asked regarding (24), on both theoretical and empirical fronts. Theoretically, an important question concerns how exactly (24) is to be implemented, and, more broadly, what kinds of grammatical architectures this type of restriction is compatible with. Empirically, the crucial question concerns whether the syntax that (24) is meant to enforce ultimately corresponds to the correct analysis of Romance reflexives; the debate on this point endures, as noted above.

What follows amounts to a recasting of the unaccusative analysis through the lens of Greek. In what follows, I begin by motivating (23a) for this language, identifying a range of novel generalizations that support a low origin for the full DP argument of Greek reflexives. I will also argue that, at least for Greek, (23b) must be recast: the Greek reflexivizer *afto-* (and its reciprocal counterpart *alilo-*) behave wholly unlike full anaphoric DPs in all conceivable respects.

This latter conclusion will motivate a rethinking of the External Argument Generalization for the case of Greek. The crucial intuition underpinning (24) will very much be retained: what (24) ultimately states is that reflexivity is intimately tied to the introduction of the external argument. In what follows, I propose that this intimate link follows in Greek not because the reflexivizer is an argument in itself, as (23b) posits for Romance; but rather because the Greek reflexivizer realizes a reflexivizing flavor of the external argument introducer, Voice. Among many upshots to this argument is an insightful understanding of why Greek reflexives participate in the language's Voice syncretism.

3 DIAGNOSING UNACCUSATIVE SYNTAX

Verbal reflexives in Greek are descriptively intransitive verbs, with what appears to be the sole argument DP 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 in principle attainable via a broad range of structures, with the main options schematically illustrated below.



(25) 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 2006; 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 (27), 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, Schäfer, and Spathas 2014; Embick 2004; Spathas et al. 2015; cf. Alexiadou and Schäfer 2014 and Alexiadou 2014b 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 2004; 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).⁸

⁸Tsimpli (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

374 Additionally, whereas compositional semantic analyses for the unergative approach have been
 375 explicitly proposed for other languages (see references above), the same is not true of either camp in
 376 the case of Greek (with the clear exception of Spathas et al. 2015, on which see section 4.2). Previous
 377 work on Greek reflexives thus leaves much room both for empirical argumentation aimed at distin-
 378 guishing between (25) and (27), and for discussion of how the appropriate structure would derive
 379 reflexivity in the semantics.

380 The task is further compounded by the availability of at least two more structures to consider,
 381 schematized in (26) and (28). Both structures treat reflexives as ‘hidden transitives’, such that the
 382 single overt DP is one primary argument, and what appears to be a reflexivizing morpheme is in
 383 fact also an argument itself, one that is coindexed with the overt DP. Under this type of thinking,
 384 *afto-* can in principle be taken to be either the internal (26) or the external (28) argument. (28) is
 385 in fact the structure referred to as the unaccusative analysis of reflexives, as discussed in section 2.3;
 386 developed primarily for Romance clitic reflexives, this type of analysis has sometimes extended to
 387 Greek *afto-* (e.g. Embick 2004). (26) inverts the argument relations, with the reflexivizing element
 388 being the *internal* argument; this is the situation explicitly denied by many authors for Romance
 389 (see section 2.3 above), but proposed for other languages (e.g. Wood 2014, 2015 for Icelandic figure
 390 reflexives; cf. Key to appear for Turkish), including Greek (with subsequent ‘incorporation’ of the
 391 internal argument) in Rivero (1992); cf. Embick 1997: 38ff.

392 In what follows, I argue that Greek *afto-* verbs instantiate an unaccusative structure, with the final
 393 analysis combining aspects of (27) and (28): the single argument of these verbs is internal, and *afto-*
 394 originates in a high position in the verbal shell. Departing from (28), I will take this position to be
 395 not an argument position, but rather the Voice head itself.

396 The argumentation of this section thus proceeds in two stages. First, in section 3.1, I provide
 397 syntactic and interpretive diagnostics suggesting that *afto-* verbs are syntactically intransitive in the
 398 deep sense, thereby arguing against (26) and (28): *afto-* verbs have a single argument, the sole overt
 399 DP. Subsequently, in section 3.2, I provide a range of diagnostics suggesting that this single argument
 400 originates as a deep object, thereby deciding in favor of (27) over (25).

401 3.1 INTRANSITIVITY

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

405 But the surface facts may well be deceptive, witness the availability of analyses of the ‘secret tran-
 406 sitive’ type (26) and (28). Broadly, this type of analysis is guided by the intuition that reflexive in-
 407 terpretations in the case of ostensibly intransitive reflexives come about in just the same way as they
 408 do when transitive verbs take pronominal anaphoric arguments, namely, via anaphoric binding. As

priori that competing analyses cannot assign agentive semantics to the single argument of reflexives (see also Alexiadou 2014b: pp. 77–78); 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).

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 (but see section 4.3 for evidence that this overlap is not grammatically significant, at least synchronically).

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 verbal reflexives across different languages (see Reuland 2018 for recent summary; cf. Dimitriadis and Everaert 2014; Doron 2003; Jackendoff 1992; Labelle 2008; Lidz 2001a; 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 and other languages. 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 3.1.7.

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), the interpretive identity between a reflexive pronoun and its antecedent need not be total. In a sentence like (29a), 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 Lidz 2001a; Reuland and Winter 2009; Safir 2004; Sells, Zaenen, and Zec 1987; and for a recent in-depth study, Raghotham 2022). As a case in point, the natural reflexive *wash* in (29b) does not felicitously yield the proxy reading. Such verbs are thus infelicitous in a proxy-favoring context (30).

(29) On a visit to Madame Tussaud’s wax museum...

- | | | |
|----|-----------------------|---------------------------------|
| a. | Ringo washed himself. | ✓ <i>person</i> ✓ <i>statue</i> |
| b. | Ringo washed. | ✓ <i>person</i> ✗ <i>statue</i> |

(30) 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. |
| b. | #Ringo shaved. |

Greek shows the same basic asymmetry. In the proxy-favoring context in (31), the object reflexive

pronoun is felicitous, but the natural reflexive *shave* in the nonactive is not:

- (31) 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 his
‘Ringo started shaving himself.’
- b. #O Ringo arçise na ksiriz- ete.
the.NOM Ringo.NOM begin.PST.3SG COMP $\sqrt{\text{SHAVE}}$ 3SG.NACT
‘Ringo started shaving.’

It is worth noting that non-linguist consultants find examples like (31a) to be marked, which we may expect for instances of metonymy more generally. What is instructive, then, is the contrast between (31a) and (31b); the later is uniformly judged as severely degraded relative to (31a), and even speakers who initially find (31a) to be marked report that this type of example is in fact readily admissible when subsequently presented with (31b).

Crucially, as noted also in Oikonomou (2014), *afto-* verbs pattern with the natural reflexives here. In (32), the only appropriate rendering of the human-photographs-statue situation utilizes the full reflexive pronoun, and the *afto-* verb is infelicitous.

- (32) [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 his
‘Ringo took a picture of himself.’
- b. #O Ringo afto- fotoyraf- θ- 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 3.1.7). 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 – see 3.1.7.

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 3.1.3 below), gapping can also be employed.

To see the rationale of the test, consider first English. In (33a), 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 (33b), with the naturally reflexive use of *shave*.

- (33) a. John shaved himself, and Bill Fred.
b. *John shaved, and Bill Fred.

The ungrammaticality of (33b) is unexpected if this instance of *shave* is transitive, taking, say, a null object. Part of what licenses nonpronunciation of the verb in (33a) is arguably the fact that both the antecedent and the elided verb are transitive; if the pronounced verb in (33b) 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 (33b) cannot straightforwardly be attributed to a surface-oriented parallelism requiring that the object in the antecedent clause be pronounced.⁹ Syntactically projected but silent elements arguably do license gapping, as in Greek subject *pro*-drop (34) and nominal ellipsis (35), where strikethrough indicates non-pronunciation (and cf. Merchant 2018; Paparounas 2019).

- (34) 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.'
- (35) 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 keraşca.
eat.PST.3SG and the.NOM John.NOM cherry.ACC.PL
'She did – and John cherries.'

Turning to Greek reflexives, consider first (36), suggesting that Greek natural reflexives behave on a par with their English counterparts in (33).

- (36) 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 his and the.NOM Bill.NOM
ti Maria.
the.ACC Mary.ACC
'John shaved himself, and Bill Mary.'
b. *O Janis ksiris- θ - ik- e, ke o Vasilis ti
the.NOM John.NOM $\sqrt{\text{SHAVE}}$ PFV.NACT PST.NACT 3SG and the.NOM Bill.NOM the.ACC
Maria.
Mary.ACC
'John shaved, and Bill Mary.'

Against this background, consider *afto*- verbs, which turn out to behave exactly in the same way as natural reflexives:

⁹Thanks to Dominique Sportiche (p.c.) for alerting me to this possible confound.

- 505 (37) a. O Janis katestref- s- e ton eafto tu, ke o
the.NOM John.NOM $\sqrt{\text{DESTROY}}$ PFV.ACT 3SG the.ACC self.ACC his and the.NOM
506 Vasilis ti Maria.
Bill.NOM the.ACC Mary.ACC
507 ‘John destroyed himself, and Bill Mary.’
508 b. *O Janis afto- katastraf- ik- e, ke o Vasilis ti
the.NOM John.NOM self $\sqrt{\text{DESTROY}}$ PST.NACT 3SG and the.NOM Bill.NOM the.ACC
509 Maria.
Mary.ACC
510 ‘John self-destroyed, and Bill Mary.’

511 The argument should be clear: if *afto-* were an argument anaphor, it should license gapping in the
512 same way as its putative full reflexive counterpart in (37a), contrary to fact. Note that the ungram-
513 maticality of (37b) is unexpected, *ceteris paribus*, on both the *afto-*-as-internal-argument analysis in
514 (26) and the *afto-*-as-external-argument analysis in (28): either way, there should be an internal ar-
515 gument in the antecedent clause licensing gapping in the second conjunct. The gapping facts thus
516 suggest that *afto-* verbs should be treated on a par with the even more clearly intransitive structures
517 in (33) and (36).

518 3.1.3 COMPARATIVE ELLIPSIS

519 The next two diagnostics target a specific aspect of the interpretation of reflexive structures, namely
520 their ability to license bound/free variable ambiguities. Comparative ellipsis is a first standard test to
521 this end (Dimitriadis & Everaert 2014; Lidz 2001a; Sells et al. 1987; Zec 1985).

522 Consider once again English argumental reflexives versus natural reflexives. (38a) exhibits a
523 well-known strict/sloppy ambiguity: it may assert either that Ringo washes Ringo more often than
524 John washes Ringo, or that Ringo washes Ringo more often than John washes John. This ambigu-
525 ity is arguably rendered possible by the transitive structure of the antecedent clause: by the identity
526 condition on ellipsis, the ellipsis-containing clause is likewise interpreted as transitive, and its un-
527 pronounced object can be construed in two ways. If the unpronounced DP is interpreted as sharing
528 the index of Ringo, the object comparison reading ensues; if it bears the index of John, we derive the
529 subject comparison reading.¹⁰

- 530 (38) a. Ringo_i washes himself_i more often than John_j.
531 ✓object comparison: ‘...than John_j washes DP_i.’
532 ✓subject comparison: ‘...than John_j washes DP_j.’
533 b. Ringo_i washes more often than John_j.
534 ✗object ✓subject

¹⁰I use an index-bearing DP in (38) for expository purposes, putting to the side the question (intensively researched since Bach, Bresnan, and Wasow 1974) of whether these constructions truly involve a null pronominal or clausal ellipsis of some kind.

535 Consider now the natural reflexive counterpart (38b). Unlike (38a), this example is unambiguous,
 536 and only furnishes the subject comparison reading. If the antecedent clause *John washed* is truly in-
 537 transitive, this observation follows straightforwardly: there is simply no object DP in the antecedent
 538 clause, and therefore, by the identity condition, no object DP capable of bearing two different indices
 539 (or, more generally, two distinct transitive fragments) to be reconstructed in the ellipsis site. Once
 540 again, if *John washed* is secretly transitive, the facts seem mysterious.

541 Greek natural reflexives again behave on a par with their English counterparts.

- 542 (39) a. Aftos o kureas ksiriz- i ton eafto tu pio yriyora
 543 this.NOM the.NOM barber.NOM $\sqrt{\text{SHAVE}}$ 3SG.ACT the.ACC self.ACC his more fast
 544 apo to Jani.
 545 from the John.ACC
 546 ‘This barber shaves himself faster than John.’ ✓object ✓subject
- 542 b. Aftos o kureas ksiriz- ete pio yriyora apo to Jani.
 543 this.NOM the.NOM barber.NOM $\sqrt{\text{SHAVE}}$ 3SG.NACT more fast from the John.ACC
 544 ‘This barber shaves faster than John.’ ✗object ✓subject

547 Crucially, *afto*- reflexives once again parallel exactly the behavior of the above reliably intransitive
 548 reflexives. (40b) lacks the object comparison reading; the example can only mean that the football
 549 player advertises himself more than the sponsor advertises itself. For reasons familiar by now, the
 550 contrast between (40a) and (40b) favors an intransitive analysis of *afto*- verbs.

- 551 (40) a. Aftos o podosferistis diafimiz- i ton eafto tu
 552 this.NOM the.NOM footballer.NOM $\sqrt{\text{ADVERTISE}}$ 3SG.ACT the.ACC self.ACC his
 553 perisotero apo ton xoriyo tu.
 554 more from the sponsor.ACC his
 555 ‘This football player advertises himself more than his sponsor.’ ✓object ✓subject
- 551 b. Aftos o podosferistis afto- diafimiz- ete perisotero apo ton
 552 this.NOM the.NOM footballer.NOM self $\sqrt{\text{ADVERTISE}}$ 3SG.NACT more from the
 553 xoriyo tu.
 554 sponsor.ACC his
 555 ‘This football player self-advertises more than his sponsor.’ ✗object ✓subject

557 3.1.4 FOCUS ALTERNATIVES

558 The previous subsection established that Greek *afto*- reflexives, unlike their pronominal counter-
 559 parts, allow bound but not free variable readings; they hence allow only sloppy construals under
 560 ellipsis. The same difference regarding bound/free readings can be glimpsed outside the domain of
 561 ellipsis, by considering the behavior of focus-sensitive operators in reflexive contexts (Haiden 2019;
 562 Sportiche 2014).

563 To see the reasoning of this test, consider the English (41), which can be felicitously denied in

two distinct ways, (41a) and (41b). (41) can be read in two distinct ways, corresponding to distinct association possibilities of *only*. Thus, (41) 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, (41a) 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 (41b) denies the bound reading by asserting that there is some other individual who also engaged in the relevant self-action.¹¹

- (41) Only John_{*i*} shaved himself.
 a. No, Bill_{*j*} shaved him_{*i*} too.
 b. No, Bill_{*j*} shaved himself_{*j*} too.

That both denials can be used felicitously in (41) suggests that the basic example is ambiguous, supporting both free and bound readings. This is not so for the English intransitive reflexive, however; (42) is judged to only support one denial, (42a), with (42b) being judged as strongly infelicitous. The infelicity of (42a) suggests the absence of a free reading, paralleling exactly the results from comparative ellipsis in the previous section.

- (42) Only John_{*i*} shaved.
 a. #No, Bill_{*j*} shaved him_{*i*} too.
 b. No, Bill_{*j*} shaved too.

In Greek, we find the same basic divergence between pronominal and natural reflexives. The pronominal reflexive in (43) licenses both denials; in (44), however, the natural reflexive is only compatible with the denial in (43b), suggesting that it can only be interpreted under the bound variable reading.

- (43) 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.’

¹¹A 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, 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.

- 592 (44) Mono o Janis ksiris- θ- ik- e.
 only the.NOM John.NOM $\sqrt{\text{SHAVE}}$ PFV.NACT PST.NACT 3SG
 593 ‘Only John shaved.’
 594 a. #Oçi, ke o Vasilis ton ksirise.
 no and the.NOM Bill.NOM 3SG.M.ACC shave.PST.3SG
 595 ‘No, Bill shaved him too.’
 596 b. Oçi, ke o Vasilis ksiris- θ- ik- e.
 no and the.NOM Bill.NOM $\sqrt{\text{SHAVE}}$ PFV.NACT PST.NACT 3SG
 597 ‘No, Bill shaved too.’

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

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

605 3.1.5 RECIPROCAL SCOPE

606 An additional diagnostic is provided by the scope-taking possibilities of the reciprocal prefix. The
 607 foundation of the test is provided by a well-known ambiguity in the interpretation of reciprocals,
 608 illustrated here with English (46) (see Heim, Lasnik, and May 1991: p. 65 and references therein).

- 609 (46) John and Mary told Sue that they love each other.

610 The example can describe two distinct sorts of saying events. Under one reading (call it *collective*
 611 *action*), John and Mary both told Sue the same thing, namely, that John loves Mary and Mary loves
 612 John. Under a different reading (call it *distributed action*), John and Mary told Sue distinct things:
 613 John said that he loves Mary, and Mary said that she loves John, but neither of them necessarily
 614 said that the other person loves them. As Heim et al. 1991 assume following previous literature,
 615 this ambiguity can be understood with reference to the different scope-taking possibilities of the
 616 distributor *each*. When *each* scopes narrowly, we obtain the collective action reading; but *each* can
 617 also scope widely, distributing over the antecedent and yielding the reading paraphrasable as *Each*
 618 *of John and Mary told Sue that they like the other person*.

619 The Greek reciprocal pronoun (47) exhibits the same ambiguity. The aim here, then, is to com-
 620 pare the full reciprocal pronoun with its prefixal counterpart: recall that the reciprocal counterpart
 621 of *afto-* is *alilo-*, and that the two display an identical distribution (see section 2.2).

622 (47) 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
 623 o enas ton alo.
 the.NOM one.NOM the.ACC other.ACC
 624 ‘John and Mary told Anna that they love each other.’

625 Consider first a context favoring the collective action reading such as the one in (48) (note that the
 626 root $\sqrt{\text{OIL}}$ can mean ‘bribe’). As expected, the full reciprocal can felicitously in (48a) describe the
 627 relevant situation, where both Mary and John testify that reciprocal bribing took place; unsurpris-
 628 ingly, so can the affixal reciprocal in (48b). This is nothing out of the ordinary: both the reciprocal
 629 pronoun and the prefixal reciprocal take scope in their surface position.

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

- 634 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
 635 o enas ton alo.
 the.NOM one.NOM the.ACC other.ACC
 636 ‘John and Mary separately said that they bribed each other.’
 637 b. O Janis ke i Maria ipan ksexorista oti alilo-
 the.NOM John.NOM and the.NOM Mary.NOM say.PST.3SG separately COMP each.other
 638 laðoθikan.
 oil.NACT.PST.3PL
 639 ‘John and Mary separately said that they bribed each other.’

640 Importantly, the reciprocal pronoun and *alilo-* diverge when we embed them in a context favoring the
 641 wide scope reading of the distributor. In (49), the context points to a distributed action reading; here,
 642 the reciprocal pronoun continues to be felicitous (49a), but the prefixal reciprocal leads to infelicity
 643 (49b).¹²

644 (49) *[John and Mary are under investigation for a bribery scandal. The truth is that John bribed*
 645 *Mary, and later Mary bribed John. When testifying in court, each of them mentions only their*
 646 *own wrongdoing to protect the other person: John says only that he bribed Mary, and Mary*
 647 *says only that she bribed John.]*

- 648 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

¹²The examples here use *ksexorista* ‘separately’ to avoid a homogeneity-related confound: without the inclusion of this adverb, (ib) 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.

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

654 The same facts emerge when we embed the different reciprocals below an attitude description
655 verb. In (50), where the context favors a collective belief interpretation whereby both John and Mary
656 believe that reciprocal bribing took place, both the reciprocal pronoun and *alilo-* are felicitous. But
657 the same is not true in (51), where only the reciprocal pronoun can describe the John and Mary’s
658 different recollections of the situation:

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

662 a. O Janis ke i Maria nomizun oti laðosan o
the.NOM John.NOM and the.NOM Mary.NOM think.3PL COMP oil.PST.3PL the.NOM
663 enas ton alo.
one.NOM the.ACC other.ACC
664 ‘John and Mary think that they bribed each other.’
665 b. O Janis ke i Maria nomizun oti alilo-
the.NOM John.NOM and the.NOM Mary.NOM think.3PL COMP each.other
666 laðoθikan.
oil.NACT.PST.3PL
667 ‘John and Mary think that they bribed each other.’

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

672 a. O Janis ke i Maria nomizun oti laðosan o
the.NOM John.NOM and the.NOM Mary.NOM think.3PL COMP oil.PST.3PL the.NOM
673 enas ton alo.
one.NOM the.ACC other.ACC
674 ‘John and Mary said that they bribed each other.’
675 b. #O Janis ke i Maria nomizun oti alilo-
the.NOM John.NOM and the.NOM Mary.NOM think.3PL COMP each.other
676 laðoθikan.
oil.NACT.PST.3PL

677 ‘John and Mary think that they bribed each other.’

678 The contrast in (50)–(51) suggests that, unlike the reciprocal pronoun, the prefixal reciprocal
679 *alilo*- cannot scope widely (cf. e.g. Dalrymple, McHombo, and Peters 1994 on Chicheŵa verbal
680 reciprocals); this constitutes yet another observation inconsistent with an analysis whereby *alilo*-
681 is an argument much like the reciprocal pronoun is, all things being equal. More specifically, the
682 contrast in (50)–(51) suggests that the two items must have different phrase-structural properties:
683 whereas (one part of) the reciprocal pronoun is a full phrasal nominal capable of taking wide scope,
684 *alilo*- is not, consistent with the position that *alilo*- is not an argument at all. The facts will then
685 follow on any treatment that takes DP-hood to be an essential precondition for non-surface-true
686 scope-taking, including Quantifier Raising.¹³

687 3.1.6 DE RE

688 The final diagnostic disfavoring an analysis of *afto*- reflexives as ‘hidden transitives’ is inspired by
689 Sportiche’s (2022) discussion of the following type of example, originally from Heim (1994):

- 690 (52) [*Oedipus, raised as King Polybus’s only son, kills someone he does not know, namely Laius,*
691 *who, unbeknownst to Oedipus, is his real father. The gods send a plague on Thebes, and an*
692 *oracle reveals that Laius’s killer must be punished to end the plague. Oedipus searches for*
693 *Laius’s killer, aiming to punish him, placate the gods and end the plague.*]
694 ‘Oedipus_i wants to PRO_i punish himself_i.’ (Sportiche 2022: p. 7)

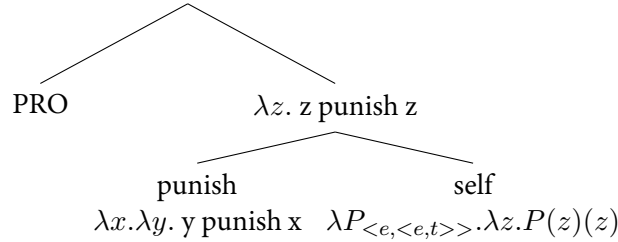
695 As Heim points out, sentences of this type seem problematic from the point of view of the classical
696 binding theory. In (52), *himself* is naturally read as *de re*, but its local binder *PRO* is *de dicto*, even
697 though both are apparently in the scope of the intensional operator contributed by *want*. In other
698 words, Oedipus wants Oedipus to punish someone who is distinct from Oedipus in Oedipus’ own
699 desire-worlds, but not in the real world. This is a puzzle for the theory of domains supplied by the
700 binding theory: how can it be that, from Oedipus’ point of view, *PRO* is identical to Oedipus, but
701 the reflexive pronoun is not? Sportiche (2020) argues that the tension resolves if (semantic) binding
702 is relativized to attitude holders.

703 Of more direct interest here is the observation in Sportiche (2022) that the sentence in (52) is
704 incorrectly predicted to be infelicitous under treatments of *himself* as a arity-affecting reflexivizer, as
705 opposed to a variable. As Sportiche notes, if *himself* effects reduction and argument identification,
706 such that the embedded clause is essentially of the form $[\lambda x.punish(x)(x)](PRO)$, *PRO* is (ulti-
707 mately) the only semantic argument of *punish*. In turn, since *PRO* is interpreted *de se*, (52) should

¹³In 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.

only be able to describe situations where Oedipus thinks ‘I will punish myself’, and should thus be infelicitous in the context given.

(53)



We may extend Sportiche’s observation as follows. In sentences like (52), the reflexive is an autonomous syntactic argument, which, as Sportiche notes, must also be interpreted as an autonomous semantic argument, as opposed to an arity reducer. If there exist reflexive elements that are involved in monadic predicates (whether they themselves are arity reducers or not), they should pattern distinctly from full reflexive arguments; in particular, they should be infelicitous in the context in (52).

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:

(54) [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.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 self punish.NACT.3SG
‘Oedipus wants to self-punish.’
Consultant comment: ‘But he doesn’t want to self-punish; we wants to punish someone who happens to be himself.’

The judgments of my consultants here mirror those reported for proxy readings in section 3.1.1. (54a) is somewhat marked, as we might expect the relevant readings to be more generally; (54b) is judged as considerably more difficult even relative to this marked baseline, as suggested by the consultant comment provided underneath (54b).

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).

(55) [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!’]

- 737 a. John intends to shave himself.
 738 b. #John intends to shave.
 739 c. O Janis skopevi na ksirisi ton eafto tu.
 the.NOM John.NOM intend.3SG COMP shave.3SG the.ACC self.ACC 3SG.POSS
 740 ‘Oedipus wants to shave himself.’
 741 d. #O Janis skopevi na ksirisθi.
 the.NOM John.NOM skopevi.3SG COMP shave.NACT.3SG
 742 ‘John wants to shave.’

743 Thus, as both Heim (1994) and Sportiche (2022) observe, argumental reflexives dissociate from
 744 reflexivized verbs in *de re*-favoring contexts. The full significance of this observation for our purposes
 745 becomes clear in light of Sportiche’s original argument regarding how (52) bears on the semantics of
 746 reflexivization: unlike verbs that take a pronominal reflexive argument, reflexivized verbs must be
 747 treated as semantically monadic.

748 3.1.7 INTERIM SUMMARY

749 This section has aimed to argue that *afto*- reflexives (and their *alilo*-prefixed reciprocal counterparts)
 750 are syntactically intransitive, thus patterning on a par with natural reflexives in Greek (and English),
 751 and distinctly from anaphoric-argument-taking transitive verbs. Table 1 summarizes the diagnostics
 752 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 1: Summary of transitivity diagnostics.

753 At this juncture, it is important to become precise on the point of what exactly these diagnostics
 754 are testing. For many of the tests employed thus far, the crucial dimension differentiating pronom-
 755 inal from verbal reflexives seems to be the number of interpretively represented participants in the
 756 reflexive events. To see what is at stake, consider the two different reflexive denotations in (56).

- 757 (56) a. *Dyadic reflexive*
 758 $\lambda y \lambda x. Verb(e) \wedge Agent(e) = x \wedge Theme(y) \wedge x = y$
 759 b. *Monadic reflexive*
 760 $\lambda x. Verb(e) \wedge Participant(e) = x \wedge Reflexive(e)$

761 (56a) 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 (56a) is meant to instantiate.

(56b), 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 (56b).

The denotations in (56) are not provided as actual possible analyses of the data at hand in this paper, 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, (56a) furnishes one individual variable more relative to (56b); 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 (56a), but not (56b), 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 3.1.6. (56b), 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).

A denotation of the type seen in (56a) 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); (56b) 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 (57). On the question of whether this single-argument interpretation could arise, in the case of *afto*-, from a two-argument syntax, see section 4.3.

$$(57) \quad \lambda x. Verb(e) \wedge Theme(e) = x \wedge Agent(e) = Theme(e)$$

3.2 LOW ORIGIN

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 (see e.g. Alexiadou & Schäfer 2014). 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.¹⁴ With respect to these tests, *afto*- verbs never pattern with unergative verbs, but rather with structures that involve an un-

derlying 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.

3.2.1 PREDICATIVE COMPLEMENTS

A robust test for the presence of an internal argument in many languages comes from resultative secondary predication. A classic paradigm from English is given in (58); here, the predicate can successfully combine with an active transitive (58a), an unaccusative (58b), and a passive (58c); but the unergative (58d) lacks a resultative reading (compare (58e)).

- (58) 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.

The paradigm in (58) suggests that the surface subject of unaccusatives and passives has something in common with the object of transitives; the subject of unergatives behaves differently, however. 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 (58d) involving a deep object, crucially including the unaccusative (58b). This is the so-called *Direct Object Restriction* (Levin & Rappaport Hovav 1995; Simpson 1983), according to which resultative secondary predicates attach to deep objects.

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:

¹⁴Other 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 e.g. Alexiadou, Anagnostopoulou, & Schäfer 2006: 195 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 E. V. Spyropoulos and Philippaki-Warbuton 2001: p. 164, Kotzoglou 2007 and V. 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 Paparounas (forthcoming-b: ch. 5).

- 827 (59) a. I Maria xarakterise to Jani **vlaka**.
the.NOM Mary.NOM characterize.PST.3SG the.ACC John.ACC idiot.ACC
828 'Mary branded John an idiot.'
- 829 b. O papas anakirikse ton Karlomagno **vasilia**.
the.NOM pope.NOM declare.PST.3SG the.ACC Charlemagne.ACC king.ACC
830 'The pope declared Charlemagne king.'
- 831 c. I prothipuryos apokalese ton aktivisti **faro elpidas**.
the.NOM prime.minister.NOM call.PST.3SG the.ACC activist.ACC beacon.ACC hope.GEN
832 'The prime minister called the activist a beacon of hope.'
- 833 d. I prothipuryos dīorise ti Maria **ipuryo**
the.NOM prime.minister.NOM appoint.PST.3SG the.ACC Mary.ACC minister.ACC
834 **peðias**.
education.GEN
835 'The prime minister appointed Mary minister of education.'

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

- 838 (60) a. O Janis xakiristike **vlakas** (apo polus
the.NOM John.NOM characterize.NACT.PST.3SG idiot.NOM from many
839 ðimosioyrafus).
journalist.PL
840 'John was branded an idiot (by many journalists).'
- 841 b. O Karlomagno anakirixthike **vasilias** (apo ton papa).
the.NOM Charlemagne.NOM declare.NACT.PST.3SG king.NOM from the pope
842 'Charlemagne was declared king (by the pope).'
- 843 c. Pjos aktivistis apokalestike **faros elpidas** apo tin
which.NOM activist.NOM call.NACT.PST.3SG beacon.NOM hope.GEN from the
844 prothipuryo?
prime.minister
845 'Which activist was called a beacon of hope by the prime minister?'
- 846 d. I Maria dīoristike **ipuryos peðias** (apo tin
the.NOM Mary.NOM appoint.NACT.PST.3SG minister.NOM education.GEN from the
847 prothipuryo).
prime.minister
848 'Mary was appointed minister of education (by the prime minister).'

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

- 850 (61) a. I Maria xarakterise to Jani **vlaka** / ***vlakas**.
the.NOM Mary.NOM characterize.PST.3SG the John.ACC idiot.ACC idiot.NOM
851 'Mary branded John an idiot.'

852 b. O Janis xarakteristike vlakas / *vlaka.
the.NOM John.NOM characterize.NACT.PST.3SG idiot.NOM idiot.ACC
853 ‘John was branded an idiot.’

854 There are reasons to believe that the predicative complement and the object form a constituent un-
855 derlyingly. Firstly, no material can intervene between the two.¹⁵

856 (62) a. (epiyondos) i proθipuryos (epiyondos) sinandise (epiyondos)
urgently the.NOM prime.minister.NOM meet.PST.3SG
857 ton Vretano omoloyo tis (epiyondos).
the.ACC British.ACC counterpart.ACC her
858 ‘The prime minister urgently met her British counterpart.’
859 b. (epiyondos) i proθipuryos (epiyondos) ðiorise (epiyondos) ti
urgently the prime.minister.NOM appoint.PST.3SG the
860 Maria (?*epiyondos) stratiyo (epiyondos)
Mary.ACC general.ACC
861 ‘The prime minister urgently appointed Mary as general.’

862 Additionally, it can be shown that the predicate is low in the structure, as required by the analysis
863 whereby it attaches to the internal argument. In (63a), a reflexive embedded within the predicative
864 complement is successfully bound by the object, suggesting that the former is c-commanded by the
865 latter. As expected, this is not symmetric c-command: in (63b), the object anaphor cannot be bound
866 by the nominal embedded within the predicative complement.

867 (63) a. O vasilias anakirikse ton lao_i kiriarxo tu eafu
the.NOM king.NOM declare.PST.3SG the.ACC public.ACC master.ACC the.GEN self.GEN
868 tu_i.
his
869 ‘The king declared the people masters of themselves.’
870 b. *O vasilias anakirikse ton eafu tu_i kiriarxo tu lau_i.
the king.NOM declare.PST.3SG the.ACC self.ACC his master.ACC the.GEN public.GEN
871 ‘The king declared the people masters of themselves.’

872 All considerations adduced thus far suggest that predicative complements of *declare*-class verbs at-
873 tach to the internal argument of such verbs. Importantly, to my knowledge, no unergative verb in the
874 language forms predicative complements; that is, we do not find any examples of the kind in (64),
875 taking ‘run’ as a placeholder for any *bona fide* unergative verb.

876 (64) *O Yanis etrekse olimbionicis.
the.NOM John.NOM run.PST.3SG olympic.champion.NOM

¹⁵The final attachment site of *urgently* in (62b) 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*.

877 The crucial observation, then, is that *afto*- reflexives freely take predicative complements. Examples
 878 like those in (59) to (60) are perfectly grammatical once reflexivized, with the predicate's case tracking
 879 the case of the single argument of the reflexive:

- 880 (65) a. O Yanis afto- xaraktiristike vlakas.
 the.NOM John.NOM self characterize.NACT.PST.3SG idiot.NOM
 ‘John branded himself an idiot.’
 881
 882 b. O Karlomaynos afto- anakirixθike vasilias.
 the.NOM Charlemagne.NOM self declare.NACT.PST.3SG king.NOM
 ‘Charlemagne declared himself king.’
 883
 884 c. 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.’
 885
 886 d. 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.’
 887

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

- 890 (66) O Karlomaynos anakrikse ton eafto tu vasilia.
 the.NOM Charlemagne.NOM declare.PST.3SG the.ACC self.ACC his king.ACC
 ‘Charlemagne declared himself king.’
 891

892 The argument is clear: since predicative complements require an underlying object to attach to,
 893 and *afto*- reflexives freely take predicative complements, then the single argument of *afto*- reflexives
 894 must be internal. From this perspective, the derivation of examples like (65) must closely parallel
 895 that of the passive examples in (60), with the internal argument vacating the constituent it shares
 896 with the predicate to become the surface subject.

897 The unergative analysis of reflexives, whereby the only argument of the reflexive is an external
 898 one, cannot account for this data, unlike the unaccusative analysis. But it seems at first glance that
 899 the ‘transitive’ analyses in (26) and (28) also fare well here, insofar as these structures do supply
 900 an internal argument for the predicate to attach to. But the case matching aspect of (65) supplies a
 901 straightforward argument against at least (26): if *afto*- were the internal argument participating in
 902 predicate formation, it seems unexpected that the predicate should track the case of a wholly different
 903 element, namely, the nominal that, under (26), would occupy the external argument position.¹⁶

¹⁶For a parallel case, see the argument against the unergative analysis of reflexives from reflexivization of ECM verbs in Icelandic (Andrews 1982; Marantz 1984: pp. 164–165).

3.2.2 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).

- (67) a. { trayudis , xoref , kolimv , kaθaris , apeleθero , 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 (68a), grammatical *-tis* nominals often have a prototypical occupational reading (69a); this reading is not a necessity, however, and a simple agent nominal interpretation emerges once we supply an overt complement (68b), (69b).

- (68) a. John is a builder. *interpreted occupationally by default*
 b. John is a careful builder of Jenga towers.
 (69) 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.3SG the.NOM
 ‘The builder of the bridge was Kostas Bekas.’ (attested, <https://tinyurl.com/2cvs3u3t>)

Importantly, *afto-* reflexives do not form good *-tis* nominals (see also e.g. Dalrymple et al. 1994: p. 154 on Chicheŵa, and cf. Reinhart 2016: p. 22 on English). Prefixing an existing *-tis* nominal with the reflexivizer systematically yields unacceptable forms (70). 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. (69a) to (69b)), and (71) clarifies that a reflexive pronoun complement indeed felicitously yields a non-occupational agent noun.

- (70) a. (*afto-) ðiafimis- tis
 self $\sqrt{\text{ADVERTISE}}$ NMLZ
 b. (*afto-) ekðo- tis
 self $\sqrt{\text{PUBLISH}}$ NMLZ
 c. (*afto-) anali- tis
 self $\sqrt{\text{ANALYZE}}$ NMLZ
 d. (*afto-) epikri- tis
 self $\sqrt{\text{CRITICIZE}}$ NMLZ

- 932 (71) O Janis ine o pio skliros epikri- tis tu
the.NOM John.NOM be.3SG the.NOM most harsh.NOM $\sqrt{\text{CRITICIZE}}$ NMLZ.NOM the.GEN
933 eaftu tu.
self.GEN his
934 'John is his own harshest critic.' (adapted from <https://tinyurl.com/3n7pjnt9>)

935 This dissociation between transitives and unergatives on the one hand, and reflexives on the other,
936 lends some insight into the inner workings of this diagnostic. (70) is *prima facie* surprising: since
937 reflexives are, in one sense, agentive verbs, it may be unexpected that they do not form agent nomi-
938 nals. It must be the case, then, that the formation of agent nominals requires 'deep' agentivity, of the
939 kind borne by unergatives and transitives but not by reflexives derived via an unaccusative syntax.¹⁷

¹⁷Alexiadou 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*).

- (i) 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 $\sqrt{\text{SHAVE}}$ 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.

- (ii) 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 $\sqrt{\text{EXERCISE}}$ NMLZ.NOM
✓ 'John is a fitness coach.'
✗ 'John trains himself.'

Paradigms like (ii) 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 (iib) are indeed NRVs, not simple unaccusatives, and any confounds regarding possible differences between agent nouns more generally, and occupational nouns like that in (iic) specifically, would need to be taken into account.

940 3.2.3 EVENT NOMINALS

941 A further diagnostic for unaccusativity is provided by the formation of event nominals.¹⁸ Alexiadou
942 (2001: pp. 41–42) states the relevant generalization in the most general way possible: Greek unac-
943 cusatives readily form event nouns, whereas unergatives do not.

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

948 With roots commonly forming transitives (72) and unaccusatives (73), affixation of *-si* freely
949 yields event nominals, using standard tests from Grimshaw (1990): the eventiveness of the nominals
950 is diagnosed by the availability of aspectual modifiers, the obligatoriness of internal arguments are
951 obligatory, and modification by *frequent* without plural marking on the noun.

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

965 Note in the examples above that the internal argument surfaces in the genitive, with the transitive
966 (72a) permitting the external argument to be expressed as a *by*-phrase.

¹⁸Here I use the term ‘event nominal’ to correspond to the presence of argument structure; in the terminology intro-
duced in Grimshaw (1990), the relevant class are *complex* event nominals (cf. (Alexiadou 2010; Borer 2003), who use the
term *argument structure nominals*).

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 (74a), the *-si* nominal has a generic reading, which is incompatible with an overtly expressed argument and with aspectual modification (74b)/modification by *frequent* (74c):

- (74) 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)
the.NOM $\sqrt{\text{SWIM}}$ NMLZ.NOM the.GEN Mary.GEN for two hour.PL
metaðoðike zondana se pende kanalja.
broadcast.NACT.PST.3SG live in five channel.PL
‘Mary’s swimming for two hours was broadcast live on five channels.’
c. *I (sihni / 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*,¹⁹ suggesting that the relevant nominals are of the result type:

- (75) a. I epemva- si ton Amerikanon (*epi tria xronia)
the.NOM $\sqrt{\text{INTERVENE}}$ NMLZ.NOM the.GEN 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.’
b. I (*sineçis / *sihni) epemva- si ton Amerikanon
the.NOM constant frequent $\sqrt{\text{INTERVENE}}$ NMLZ.NOM the.GEN 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

¹⁹As expected for result nominals, this type of modification becomes possible if the noun is pluralized:

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

990 ‘The frequent/constant intervention by the Americans forever changed the geopolitical
991 balances of the region.’

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

- 994 (76) a. I **afto**- anakri- si tis Marias epi mia ora sto one
the.NOM self $\sqrt{\text{INTERROGATE}}$ NMLZ.NOM theGEN Mary.GEN for one hour in.the one
995 man show apespase to sxoliko vravio ipokritikis.
man show glean.PST.3SG the.ACC school prize.ACC acting.GEN
996 ‘Mary’s interrogating herself for one hour in the one man show won the school acting
997 prize.’
998 b. I sihni **afto**- ðiafimi- si tu Jani tu
the.NOM frequent self $\sqrt{\text{ADVERTISE}}$ NMLZ.NOM theGEN John.GEN 3SG.M.GEN
999 apoferi polus neus followers sto Instagram.
yield.3SG many new followers on.the instagram
1000 ‘John’s frequent advertizing himself yields him many new followers on Instagram.’
1001 c. I **afto**- anakirik- si tu stratiyu os ðiktatora epi tesaris
the.NOM self $\sqrt{\text{PROCLAIM}}$ NMLZ.NOM theGEN general.GEN as dictator for four
1002 ores eðose to xrono stis kivernitikes ðinamis na ton
hour.PL give.PST.3SG the time.ACC to.the governmental force.PL COMP 3SG.ACC
1003 anatrebsun proora.
overturn.3PL prematurely
1004 ‘The general’s proclamation of himself as dictator for four hours gave government forces
1005 the time to overturn him prematurely.’

1006 Note that the single argument of the reflexives in (76) is expressed as a genitive; it thereby patterns
1007 with the internal argument of nominalized transitives, and not with their external argument, which,
1008 in event nominals with a genitive theme, can be expressed only as a *by*-phrase (72a); see (Horrocks
1009 and Stavrou 1987; Alexiadou 2001: 79ff).

1010 3.2.4 ETHICAL GENITIVES

1011 The final diagnostic for unaccusativity comes from ethical genitives.²⁰ These elements take the gen-
1012 eral form in (77), where the genitive clitic indexes an entity somehow affected by the event.

- 1013 (77) **Mu** efije to peði.
1SG.GEN leave.PST.3SG the child.NOM
1014 ‘The child left on me. (i.e. to my detriment)’

²⁰Note that dative and genitive systematically syncretize in (standard) Modern Greek; see Anagnostopoulou and Sevdali (2020) for recent discussion.

1015 That these elements may provide an unaccusativity diagnostic is conjectured by Alexiadou et al.
 1016 (2004), where they are labeled possessor clitics following Borer and Grodzinsky (1986). In Greek at
 1017 least, there is a clear adversity reading dissociable from possession, as demonstrated by the following
 1018 example, where the possessor of the object is explicitly distinguished from the maleficiary (see also
 1019 Michelioudakis 2012; Michelioudakis and Kapogianni 2013; cf. Cuervo 2003 on Spanish):²¹

1020 (78) [I have been tasked with watching Mary's child at the park. I discover that, while I had my
 1022 back turned, the child ran away.]
 1021 Mu efije to peði tis Marias.
 1023 1SG.GEN leave.PST.3SG the child the.GEN Mary.GEN
 1024 'Mary's child left on me.'

1025 Ethical datives can generally be built from transitives and unaccusatives, but not from unergatives
 1026 (Alexiadou & Anagnostopoulou 2004):²²

1027 (79) a. Mu evrise to peði tis Marias.
 1SG.GEN curse.PST.3SG the.ACC child.ACC the.GEN Mary.GEN
 1028 'S/he cursed Mary's child on me.'
 1029 b. Mu efije to peði tis Marias.
 1SG.GEN leave.PST.3SG the.NOM child.NOM the.GEN Mary.GEN

²¹In the absence of explicit disambiguation of the kind in (78), (77) 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 Pyllkkänen (2008: p. 68) for similar effects in Japanese adversity passives.

²²See 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 malefactives, would take us far afield, I put these questions to the side for now.

1030 ‘Mary’s child left on me.’
 1031 c. *Mu etrekse to peði tis Marias.
 1SG.GEN run.PST.3SG the.NOM child.NOM the.GEN Mary.GEN
 1032 ‘Mary’s child ran on me.’

1033 Some unergative examples improve with the provision of a path/result, as in (80); as Elena Anagnos-
 1034 topoulou (p.c.) points out, this addition plausibly facilitates coercion into an unaccusative structure:

1035 (80) ?Mu etrekse to peði tis Marias os to gremo.
 1SG.GEN run.PST.3SG the.NOM child.NOM the.GEN Mary.GEN until the cliff
 1036 ‘Mary’s child ran to the cliff on me.’

1037 The impossibility of ethical datives with unergatives finds an explanation in a system such as Pylkkä-
 1038 nen (2008): if these are introduced by Low Appl, with this head combining with the internal argu-
 1039 ment before it meets the event, then (80c) will be ungrammatical for the same reason that **I ran them*
 1040 is in English: Appl has nowhere to attach.²³

1041 Crucially, ethical datives can be build from *afto*- reflexives perfectly easily:

1042 (81) a. Mu afto- katastrafike to ðiastimoplio.
 1SG.GEN self destroy.NACT.PST.3SG the.NOM spaceship.NOM
 1043 ‘The spaceship self-destructed on me.’
 1044 b. [A lawyer prepares his client for testimony in court.]
 1045 Mi mu afto- katiyoriðis avrio sto ðikastirio!
 1046 NEG 1SG.GEN self accuse.NACT.2SG tomorrow in.the court
 1047 ‘Don’t accuse yourself on me tomorrow in court!’

1048 Once again, *afto*- reflexives pattern with structures involving an internal argument, and distinctly
 1049 from unergatives.

1050 3.2.5 SUMMARY OF LOWER ORIGIN DIAGNOSTICS

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 thematic subject
Ethical datives	✓	✗	✓	✓	Presence of thematic object

Table 2: Summary of unaccusativity diagnostics.

²³An issue that deserves more attention here concerns the semantic composition, insofar as, in Pylkkänen (2008), malefactive are typically introduced by *High* Appl. That things may work differently in Greek is perhaps suggested by the fact that malefactive genitives can be compatible with a possessive reading (see footnote 21), but much more must be said here. 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.

As shown in Table 2, *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 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 datives (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 detailed below.

Finally, although this section has focussed on *afto*- verbs, the generalizations supporting the low origin of the surface subject can be extended to *alilo*- reciprocals, as well as to natural reflexives and reciprocals. For reasons of space, I provide only a few selective examples here.

alilo-prefixed reciprocals fully parallel *afto*- reflexives in hosting predicative complements (82a); failing to yield agent nominals (82b), but freely forming event nominals (82c); and combining with ethical datives (82d).

- (82) a. O Janis ke o Joryos alilo- xaraktiristikan
the.NOM John.NOM and the.NOM George.NOM each.other characterize.NACT.PST.3PL
vakes.
idiot.PL.NOM
‘John and George branded each other an idiot.’
- b. O Janis ke i Maria ine (*alilo-) anakrites.
the.NOM John.NOM and the.NOM Mary.NOM be.3PL each.other interrogator.PL
‘John and Mary are interrogators (of each other).’
- c. I sineçis alilo- anakri- si ton ðio
the.NOM constant.NOM each.other $\sqrt{\text{INTERROGATE}}$ NMLZ.NOM the.GEN two
detectives krata staθeri tin endasi sto kalitero astinomiko
detectives.GEN keep.3SG steady.ACC the.ACC tension.ACC in.the best police
θriler tis xronjas.
thriller the.GEN year.GEN
‘The two detectives’ constant interrogation of each other keeps the tension steady in the year’s best crime thriller.’
- d. [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 each.other accuse.NACT.PST.2PL tomorrow
‘Don’t accuse each other to my detriment tomorrow!’

1085 Natural reflexives and reciprocals can also be shown to be unaccusative: they freely form event nom-
 1086 inals (83) and combine with ethical datives (84):²⁴

- 1087 (83) a. [John and his friend are running late, but the friend has decided to shower first; John
 1088 tries to dissuade his friend.]
 1090 Mi mu plenese tora!
 NEG 1SG.GEN wash.IMP.2SG now
 1091 ‘Don’t wash to my detriment now!’
- 1092 b. [While the gang is being chased by a skeleton, Fred and Daphne decide to stop and
 1094 kiss. Dismayed, Scooby Doo says:]
 1095 Tora vrikate efceria na mu filiθite?
 now find.PST.2PL opportunity.ACC COMP 1SG.GEN kiss.2PL
 1096 ‘Now you find the opportunity to kiss to my detriment?’
- 1097 (84) a. To pli -simo tu Jani epi tris ores eknevrise
 the.NOM √WASH NMLZ.NOM the.GEN John.GEN for three hour.PL annoy.PST.3SG
 1098 tus singatikus tu.
 the.PL.ACC roommate.PL.ACC his
 1099 ‘John’s washing for three hours annoyed his roommates.’
- 1100 b. To sineçes fili- ma tu Jani ke tis Marias
 the.NOM constant.NOM √KISS NMLZ the.GEN John.GEN and the.GEN Mary.GEN
 1101 ejine θema kutsombolju.
 become.PST.3SG subject.NOM gossip.GEN
 1102 ‘John and Mary’s constant kissing became the subject of gossip.’

1103 4 ANALYSIS: REFLEXIVITY ON VOICE

1104 *afto*- reflexives have been shown to have three core properties.

1105 Firstly, they are truly syntactically intransitive; that is, the syntactic argument structure involves
 1106 just one nominal, and *afto*- itself realizes a reflexivizing morpheme.²⁵ Secondly, *afto*- reflexives only
 1107 appear with **NACT** morphology; and thirdly, they trigger a passive-like syntax, with only a single
 1108 argument present, in the internal argument position.

1109 Any adequate account of this instance of reflexivization must do justice to the correlation of these
 1110 three properties; in other words, it must specify why reflexivization in Greek-type languages goes
 1111 hand-in-hand with an intransitive syntax, and moreover, why this intransitive syntax is of the unac-
 1112 cusative/passive type.

1113 I propose that this correlation can be insightfully accounted for by tying reflexivization directly to
 1114 the domain responsible for (external) argument introduction. I thus build on the intuition that Voice,

²⁴Some of the other diagnostics of Table 2 unfortunately do not straightforwardly extend to these verbs. Since inher-
 ent reflexives/reciprocals are not part of the *declare* class, predicative complements cannot be tested; for agent nominal
 formation with natural reflexives, see footnote 17.

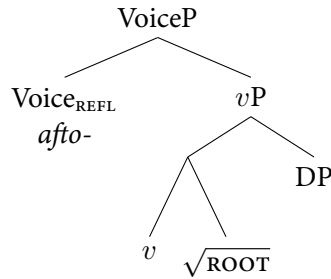
²⁵That *afto*- is effectively a member of the functional vocabulary can be seen as a parallel to reflexivizing morphemes
 in, for example, Dravidian languages such as Kannada (Lidz 1995, 1996, 2001b).

the projection responsible for the introduction of the external argument (Kratzer 1996: et seq.), can be the locus of reflexivization (with Bruening 2006; Labelle 2008; McGinnis 2022; Raghotham 2022; cf. Alexiadou 2014b; Spathas et al. 2015; and for related ideas in anaphor binding, see e.g. B. T. Ahn 2015; Kratzer 2009; Paparounas and Akkuş forthcoming, 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 propose that *afto-* realizes a particular type of Voice head, Voice_{REFLEXIVE}, from whose presence follows the passive-like syntax of intransitive reflexives; their obligatory co-occurrence with nonactive morphology; and their reflexive semantics.²⁶

Syntactically, I take Voice_{REFL} to be a specifier-less head, giving rise to the unaccusative-like syntax of Greek reflexives. Since Voice_{REFL} does not introduce a syntactic argument, structures built by combining this head with a transitive *v*P will have a single core argument introduced in the *v*P 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 Šereikaitė 2021 and Akkuş 2021: ch.3).

(85)



Being specifier-less, the Voice_{REFL} head will receive the feature [NACT] at PF (see (6) and (7)), guaranteeing that structures built with this head will be systematically realized with nonactive morphology.

²⁷

²⁶The 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 for Greek 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).

²⁷The analysis proposed here has some features in common with early ‘lexical’ analyses of reflexivization (Bouchard 1982; Grimshaw 1982; Wehrli 1986); however, Greek poses issues for purely ‘lexical’ analyses of reflexivization. Firstly, the main point of this paper, namely, that Greek verbal reflexives are derived from an unaccusative structure, is wholly unexpected on analyses that attempt to derive both unaccusatives and reflexives using lexical rules (Chierchia 2004; Reinhart 2016), and thus can only derive unergative reflexives (see esp. Reinhart and Siloni 2004, 2005, where the authors are at pains to claim that unaccusative reflexives do not exist, a conclusion untenable in light of the Greek facts and in any case questionable in its fully general form). Secondly, as stressed in Embick (2004), 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 rele-

1135 This type of analysis straightforwardly accounts for the crucial facts on the distribution of *afto*-
 1136 verbs. These reflexives are voice-selective, appearing only with nonactive morphology; and they
 1137 introduce an agent and identify it with the theme (see [section 4.1](#) for evidence that *afto*- reflexives
 1138 really are thematically restricted in this specific way). The claim here is that these properties – agent
 1139 introduction and Voice selectivity – follow straightforwardly if the locus of reflexivity is Voice, the
 1140 head responsible for agent introduction and for the determination of voice morphology.

1141 4.1 UPSHOT: THEMATIC RESTRICTIONS

1142 Crucial support for the linking of reflexivity to Voice in Greek comes from two observations on the
 1143 thematic restrictions on reflexivization.²⁸

1144 The first observation, made already in Alexiadou (2014b), is that *afto*- reflexivization is necessar-
 1145 ily agent-oriented. There are various corners of the Greek grammar where this restriction comes to
 1146 light.

1147 Firstly, *afto*- never combines with unaccusatives, either unmarked (86) or marked (87):

- 1148 (86) O Janis (*afto-) peθane.
 the.NOM John.NOM self die.PST.3SG
 1149 ‘John died.’
- 1150 (87) a. I supa kaike (apo moni tis).
 the.NOM soup.NOM burn.NACT.3SG from alone her
 1151 ‘The soup burned (by itself).’
 1152 b. I supa (*afto-) kaike.
 the.NOM soup.NOM self burn.NACT.3SG
 1153 ‘The soup burned (*itself).’
 1154 c. O Janis (*afto-) kaike.
 the.NOM John.NOM self burn.NACT.3SG
 1155 ‘John burned himself.’

1156 On an *afto*-as-Voice analysis, these distributional restrictions follow straightforwardly from the com-
 1157 plementarity of Voice heads. For example, if, as assumed in Alexiadou et al. (2015), unaccusatives are
 1158 built either without a Voice head to begin with (yielding unmarked unaccusatives) or with a specifier-
 1159 less and semantically vacuous expletive Voice head (yielding marked unaccusatives), then there will
 1160 simply be no way to generate a reflexivized unaccusative if the reflexivizer is itself a different Voice
 1161 head.²⁹

vant type, where passives/unaccusatives and reflexives effectively undergo distinct reduction operations. Finally, lexicalist operations are forced to stipulate the thematic restrictions on verbal reflexivization (see [section 4.1](#)) as a constraint on (the input of) the reflexivization rule (see e.g. Reuland 2018); these restrictions, particularly agent orientation, arguably follow more naturally by tying reflexivity to the head that normally introduces agents, Voice.

²⁸ *alilo*- reciprocals are subject to the same restrictions; for reasons of space, I do not provide the relevant examples here.

²⁹ At a superficial level, the explanation here is a mechanical one: choosing one Voice head when building a given

The second corner of the Greek grammar demonstrating the close link between agentivity and *afto*- reflexivization comes from subject experiencer and deponent verbs. Consider firstly the core properties of subject experiencer verbs like *be afraid of* or *despise* in Greek: these are systematically realized with nonactive morphology (88a)/(89a), being systematically ungrammatical with active morphology (88b)/(89b); they also cannot passivize (88c)/(89c).

- (88) a. O Janis fova- te { to skotaði / 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 skotaði / ti Maria }.
the.NOM John.NOM $\sqrt{\text{FEAR}}$ 3SG.ACT the.ACC dark.ACC the.ACC Mary.ACC
c. *{ To skotaði / 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.’
- (89) a. O Janis apexθan- ete { to skotaði / ti Maria }.
the.NOM John.NOM $\sqrt{\text{DESPISES}}$ 3SG.NACT the.ACC dark.ACC the.ACC Mary.ACC
‘John despises the dark/Mary.’
b. *O Janis apexθan- i { to skotaði / ti Maria }.
the.NOM John.NOM $\sqrt{\text{DESPISE}}$ 3SG.ACT the.ACC dark.ACC the.ACC Mary.ACC
c. *{ To skotaði / i Maria } apexθan- ete apo ton Jani.
the.NOM dark.NOM the.NOM Mary.NOM $\sqrt{\text{DESPISED}}$ 3SG.NACT from the John
‘*The dark/Mary is despised by John.’

The cluster of properties exemplified in (88)-(89) is expected if the relevant Roots typically enter a structure that lacks a canonical agent. If the experiencer subject in (88a)/(89a) does not originate in the specifier of VoiceP, instead merging lower than canonical agents (Alexiadou & Iordachioaia 2014; Anagnostopoulou 1999; Arad 1998; Belletti & Rizzi 1988; Pesetsky 1995), then Voice will receive [NACT] at PF, explaining the systematic appearance of experiencer verbs with nonactive morphology; since the relevant structures are thus effectively not canonical transitives, we may expect them to resist passivization (Perlmutter 1978; Perlmutter & Postal 1984).

This intuition – that in a language where Voice morphology is sensitive to the presence of a canonical external arguments, verbs with non-canonical external arguments will always bear nonactive – is also at the heart of Grestenberger’s (2018) analysis of deponency. Under this analysis, deponents

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 (86), which are never agentive, this much will suffice. But an additional ingredient is required to guarantee that (87b)-(87c) 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 ability to be reflexivized by *afto*- holds more generally.

1187 in Greek-type languages have low agents, guaranteeing that they appear with nonactive morphol-
 1188 ogy. For Greek, this guarantees that deponents pattern identically to experiencer verbs,³⁰ as shown
 1189 immediately below for ‘handle’ and ‘curse’:

- 1190 (90) a. Panda metaçir- iz- **ome** me prosoçi politima andikimena.
 always $\sqrt{\text{HANDLE}}$ VBZ 1SG.**NACT** with care precious.ACC= objects.ACC
 1191 ‘I always handle precious artifacts with care.’
 1192 b. *Panda metaçir- iz- **o** me prosoçi politima andikimena.
 always $\sqrt{\text{HANDLE}}$ VBZ 1SG.**ACT** with care precious.ACC= objects.ACC
 1193 ‘I always handle precious artifacts with care.’
 1194 c. *Ta politima andikimena prepi na metaçiriz- onde me
 the.NOM precious.NOM object.PL.NOM must.3SG COMP $\sqrt{\text{TREAT}}$ 3PL.**NACT** with
 1195 prosoçi.
 care
 1196 ‘Precious artifacts should be treated with care.’
- 1197 (91) 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
 1198 ‘Her competitors cursed Mary.’
 1199 b. *I andayonistes tis kataras- an ti Maria.
 the.NOM competitor.PL.NOM her $\sqrt{\text{CURSE}}$ 3PL.**ACT** the.ACC Mary.ACC
 1200 ‘Her competitors cursed Mary.’
 1201 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
 1202 ‘Mary was cursed (by many of her competitors).’

1203 Crucially, neither experiencer nor deponent verbs can be reflexivized by means of *afto-* in Greek
 1204 (Alexiadou 2014b). In (92a)/(93a), an experiencer verb is shown to be freely reflexivized by means
 1205 of the pronominal anaphor; but prefixing the same verb with *afto-* leads to ungrammaticality (92b)-
 1206 (93b).

- 1207 (92) a. Ke pços ðe fova- te ton eafto tu?
 and who.NOM NEG $\sqrt{\text{FEAR}}$ 3SG.**NACT** the.ACC self.ACC his
 1208 ‘Who ISN’T afraid of themselves?’
 1209 b. *Ke pços ðen afto- fova- te?
 and who.NOM NEG REFL $\sqrt{\text{FEAR}}$ 3SG.**NACT**
- 1210 (93) a. O Janis apexθan- ete ton eafto tu.
 the.NOM John.NOM $\sqrt{\text{DESPISE}}$ 3SG.**NACT** the.ACC self.ACC his

³⁰The parallel distribution of deponents and experiencer verbs makes distinguishing the former from the latter a non-trivial task. The examples in the main text intentionally use the most agentive of deponent verbs (‘handle’ and ‘curse’) to avoid this issue, but it is likely that many descriptively deponent verbs in the language are actually experiencer verbs; see Zombolou and Alexiadou 2014 and cf. Grestenberger (2018) and Embick (1997: 216ff).

- 1211 'John despises himself.'
 1212 b. *O Janis afto- apexθan- ete.
 the.NOM John.NOM REFL $\sqrt{\text{DESPISE}}$ 3SG.NACT

1213 Similar observations can be made for the deponents, which are perfectly grammatical with the pronom-
 1214 inal anaphor, but generally not so with the prefixal reflexive:

- 1215 (94) 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 her with
 1216 prosoçi.
 care
 1217 'After the accident, Mary is treating herself carefully.'
 1218 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
- 1219 (95) a. Metanionondas ja ta laθi tis, i Maria kataras- θ- ik-
 regretting for the errors her the.NOM Mary.NOM $\sqrt{\text{CURSE}}$ PFV.NACT PST.NACT
 1220 e ton eafto tis.
 3SG the.ACC self.ACC her
 1221 'Regretting her mistakes, Mary cursed herself.'
 1222 b. *Metanionondas ja ta laθi tis, i Maria afto- kataras- θ-
 regretting for the errors her the.NOM Mary.NOM REFL $\sqrt{\text{CURSE}}$ PFV.NACT
 1223 ik- e.
 PST.NACT 3SG

1224 The generalization in Greek is then straightforward: like passivization,³¹ reflexivization is only
 1225 possible with verbs with canonical external arguments, specifically agents, lending strong support to
 1226 the tying together of reflexivization to the agent-introducing head.³²

1227 Moreover, reflexivization of verbs with non-canonical external arguments is another instance
 1228 where *afto-* reflexives dissociate from pronominal anaphors. The facts just discussed are of immediate
 1229 interest because they provide yet another argument against fully assimilating *afto-* to overt anaphors.

1230 But the same facts also raise points of wider interest. The difference in reflexivization of verbs

³¹Angelopoulos 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), where the exact interpretation of this role in the passive depends, in a contextual fashion, on the *vP* complement. 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 Paparounas (forthcoming-b) for further arguments against the view in Angelopoulos et al. (2020).

³²Note 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 2004). 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.

1231 with non-canonical external arguments has in fact been noted widely in previous literatures; summa-
1232 rizing these observations, Reuland (2018: 101ff) takes the unavailability of experiencer reflexiviza-
1233 tion to be a hallmark of verbal reflexives relative to their pronominal counterparts cross-linguistically.

1234 In theories where verbal reflexivization takes place in the lexicon (Reinhart & Siloni 2004, 2005),
1235 the restriction against experiencer reflexivization can only be stated as a restriction on the lexical
1236 reflexivization operation tasked with presyntactically bundling certain thematic roles. Thus, Reuland
1237 (2018) formulates the relevant restriction thus:

- 1238 (96) *Restriction on (lexical) bundling*
1239 Bundling is restricted to agent-theme verbs. (Reuland 2018: p. 102)

1240 On its own, (96) amounts to little more than a stipulation: there is no principled reason why an oper-
1241 ation capable of ‘bundling’ thematic roles in the lexicon should be relativized to particular thematic
1242 roles. More worryingly, (96) misses the clear connection discussed above between reflexivization
1243 and passivization: while (96) guarantees that the relevant verbs will not undergo reflexivization,
1244 nothing in a system with (96) guarantees that the same verbs normally cannot be passivized.

1245 By contrast, a system that locates ‘affixal’ reflexivization on the functional head Voice seems bet-
1246 ter suited to give the restriction on non-canonical argument reflexivization a principled treatment.
1247 Under this approach, ‘morphological’ reflexivization involves a particular flavor of Voice, the head
1248 normally tasked with introducing canonical external arguments; if the relevant verbs simply do not
1249 tolerate canonical external arguments, we correctly predict that they will not be able to undergo
1250 the kind of reflexivization that Voice effects. In other words, the restriction against experiencer re-
1251 flexivization follows from tying reflexivity to Voice; no stand-alone restriction of the type in (96) is
1252 needed. Note further that this perspective makes the reflexivizing Voice head minimally different to,
1253 say, a passive Voice head: where one existentially closes the agent argument, the other identifies it
1254 with another role. The important point is the reference to agents specifically, as opposed to other
1255 roles that external arguments could in principle bear.

1256 From this perspective, the two types of reflexivity contrasted in section 3.1 are crucially different:
1257 the ‘affixal’ strategy is Voice-sensitive in that it *a*) effects a particular type of intransitive syntax; *b*)
1258 leads to a particular type of Voice morphology, in languages like Greek; and *c*) only occurs with Roots
1259 that can be construed with a canonical agent. Because reflexivization by means of a pronominal
1260 anaphor does not crucially involve Voice, it places no such demands on Voice syntax/morphology.³³

1261 Note finally that the semantics proposed for *afto*- involves explicit reference not only to the agent,
1262 but also to the theme role. This latter component is justified by two observations.

1263 Firstly, consider ditransitive verbs. (97a) shows that a Greek ditransitive can be reflexivized with
1264 the pronominal anaphor as an indirect object, either as a genitive/dative goal³⁴ or as a prepositional
1265 goal. Importantly, this type of reflexivization can never be achieved by means of *afto*- (97b) (see also

³³This view thus presupposes that, at least for Greek-type languages, pronominal reflexivization does not involve Voice_{REFLEXIVE}, *pace* B. T. Ahn (2015) for English.

³⁴Indirect 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.

1266 Papangeli 2004: p. 79).³⁵

- 1267 (97) a. O Janis estile tu eafu tu / ston eafu
 the.NOM John.NOM 3SG.M.GEN send.PST.3SG the.GEN self.GEN 3SG.M.GEN to.the self
 1268 tu ena yrama.
 3SG.M.GEN one.ACC letter.ACC
 1269 ‘John sent himself a letter.’
 1270 b. *O Janis afto- stalθike ena yrama.
 the.NOM John.NOM REFL send.NACT.PST.3SG one.ACC letter.ACC
 1271 Intended: ‘John was self-sent a letter.’

1272 The impossibility of (97b), for any ditransitive verb in the language, follows straightforwardly if *afto-*
 1273 is only capable of linking agents to themes, and not beneficiaries or other types of goals.

1274 Secondly, ECM predicates can be reflexivized by means of the pronominal reflexive, but not by
 1275 means of *afto-*, as in (98). Once again, the impossibility of (98b) is expected if *afto-* must link the agent
 1276 to the theme; note that *afto-* is not generally impossible with secondary predicates, see section 3.2.1.

- 1277 (98) a. O Janis theori ton eafu tu iðiko sti
 the.NOM John.NOM consider.3SG the.ACC self.ACC 3SG.M.GEN expert.ACC to.the
 1278 ylosolopia.
 linguistics
 1279 ‘John considers himself an expert in linguistics.’
 1280 b. ?*O Janis afto- teorite iðikos sti ylosolopia.
 the.NOM John.NOM REFL consider.NACT.3SG expert.NOM to.the linguistics

1281 4.2 EXCURSUS: NOT AN ANTI-ASSISTIVE MODIFIER

1282 The above discussion has presented a reflexivizing semantics for *afto-*, and it is important to en-
 1283 sure that a reflexivizing semantics is what is needed. Clearly, reflexive interpretations could be de-
 1284 rived without a dedicated reflexivizer; let us subsume analyses of this type, where reflexive semantics
 1285 emerge from the composition of individually non-reflexive pieces, under the name *emergent reflex-*
 1286 *ivity* (see e.g. Kastner 2017; Spathas et al. 2015; Wood 2014).

1287 In the spirit of emergent reflexivity, Alexiadou (2014b) and Spathas et al. (2015) propose that

³⁵The impossibility of indirect object reflexivization speaks out against extending to Greek *afto-* an analysis of the type proposed by Wood (2014, 2015) for Icelandic *-st* reflexives; see also McGinnis 2022 for the same point made from the perspective of Romance. Wood takes the morpheme *-st* to be a syntactic argument clitic which is semantically expletive; when it is merged in an argument position, its expletive semantics leads to a semantic derivation where the thematic role ‘assigned’ to *-st* is effectively passed up the tree (*delayed saturation*; Myler 2016). As a result, this function composes with a separate, higher role, the composite role being assigned to the ‘real’ argument. If extended to *afto-*, this type of analysis would allow us to merge *afto-* in the indirect object position and interpretively link the associated role with that of agent, deriving (ib). More generally, this type of expletive analysis would fail to predict the strict agent-theme orientation of Greek reflexives. Note also that the syntax required for this sort of derivation, and assumed for Icelandic by Wood – one where the full DP originating as an agent – is simply not the correct one for Greek (see section 3.2).

1288 Voice-level *afto-* is an anti-assistive modifier, equivalent to *herself* in *Mary built the house herself*;
 1289 on this analysis, the combination of anti-assistivity with the semantics of a passive yields a reflexive
 1290 denotation, without the need for a dedicated reflexivizer. Ingenious as this analysis is, it emerges as
 1291 untenable for Greek upon further scrutiny.

1292 Firstly, if *afto-* asserted the lack of delegation of assistance, it should produce a contradiction
 1293 when combined with elements that overtly denote delegation or assistance. This is true of the *bona*
 1294 *fide* Greek anti-assistive modifier.³⁶

- 1295 (99) #Me ti voiθia tis Marias, o Janis dieynos- e ton eafto tu monos
 1296 with the help the.GEN Mary.GEN the John.NOM $\sqrt{\text{DIAGNOSE}}$ 3SG the self.ACC his alone
 1297 tu.
 his
 ‘#With Mary’s help, John diagnosed himself himself.’

1298 The same prediction, however, is not borne out for *afto-*, which is fully compatible with assistive PPs.

- 1299 (100) [*John and Mary are doctors. John has been suffering from an unknown disease. Together,*
 1300 *they come up with the diagnosis.*]

1301 Me ti voiθia tis Marias, o Janis afto- diaynos- θ- ik- e.
 with the help the.GEN Mary.GEN the John self- $\sqrt{\text{DIAGNOSE}}$ NACT PST 3SG

1302 ‘With Mary’s help, John diagnosed himself.’

1303 Secondly, no aspect of the anti-assistive analysis of *afto-* predicts its complementarity with NRVs.
 1304 On this type of analysis, examples like (101), repeated from section 2, should be fully acceptable
 1305 on the meaning ‘Mary washed without help’. That such examples are decidedly infelicitous without
 1306 contrastive focus suggests that *afto-* and ‘inherent’ reflexivity are, in some sense, carrying out the
 1307 same function, a fact that does not follow if *afto-* is unrelated to reflexivity. Once again, the true anti-
 1308 assistive behaves differently (102), further casting doubt on the link between *afto-* and anti-assistive
 1309 modification.

- 1310 (101) #I Maria afto- pli- θ- ik- e.
 the Mary.NOM self $\sqrt{\text{WASH}}$ PFV.NACT PST.NACT 3SG
 1311 ‘Mary self-washed.’

- 1312 (102) I Maria pli- θ- ik- e (moni tis).
 the Mary $\sqrt{\text{WASH}}$ NACT PST 3SG alone her
 1313 ‘Mary washed (without help).’

1314 Furthermore, recall from the end of section 2 that Greek has a reciprocal prefix *alilo-*, whose distribu-
 1315 tion fully parallels *afto-*: it is compatible only with nonactive verbs, and appears in complementary

³⁶This observation, and the observation on the lack of reflexivization of active predicates below, are also made in Sportiche (2022) in considering a Spathas et al. (2015)-style approach to French *auto-* and English *self-*.

1316 distribution with naturally reciprocal verbs. The parallel distribution of *afto-* and *alilo-* clarifies that
 1317 the phenomenon at hand picks out *anaphoric* elements in a uniform fashion; crucially, it is difficult
 1318 to conceive of a plausible anti-assistive semantics for *alilo-* that would emergently yield reciprocity,
 1319 in the same way that *afto-* purportedly yields emergent reflexivity.

- 1320 (103) *afto-* { *amina*, *katastrofi*, *kritiki*, *vioyrafia* }
 self defense destruction criticism biography
 1321 ‘self-defense, self-destruction, self-evaluation, autobiography’

1322 Finally, under the analysis in Spathas et al. (2015), the obligatory co-occurrence of *afto-* with non-
 1323 active morphology must be stipulated. If *afto-* is an independent modifier, it should in principle
 1324 be able to combine with different Voice heads. But recall that *afto-* is systematically ungrammati-
 1325 cal with active morphology (104). All things being equal, an anti-assistive *afto-* should make this
 1326 example grammatical on the reading ‘Mary advertised herself/John without help’.

- 1327 (104) *I Maria *afto-* *katiyori-* *s-* e (ton *eafto* *tis* / ton Jani).
 the Mary.NOM self- $\sqrt{\text{ACCUSE PFV.}\mathbf{ACT}}$ 3SG the.ACC self.ACC her the.ACC John.ACC
 1328 ‘Mary self-accused_{ACTIVE} herself/John.’

1329 Spathas et al. (2015: p. 1334) ‘attribute the ungrammaticality of [(104)] to brute-force c-selection;
 1330 *afto-* c-selects for an unsaturated projection of Middle Voice’. But this approach clearly amounts to
 1331 treating as accidental the robustly systematic connection between *afto-*, nonactive morphology, and
 1332 unaccusative syntax. Under this account, *afto-* is an anti-assistive modifier that is Voice-selective only
 1333 by stipulation: although properly independent of Voice itself, it happens to be able to occur only with
 1334 the type of Voice that does not project an external argument and triggers the insertion of nonactive
 1335 morphology at PF. Note in this connection that the language’s *bona fide* anti-assistive modifier shows
 1336 no Voice-related restrictions whatsoever, freely occurring with active Voice:³⁷

³⁷Parallels 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 four native speaker consultants. *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 may diagnose not anti-assistivity but rather (the semantic consequences of) certain detransitivized structures. Note also that the incompatibility of *afto-* with states follows from a Voice-level treatment, see section 4.1. 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 an internally consistent picture (Spathas et al. 2015: p. 1336).

These complications make a full assimilation of reflexives to anti-assistives of the kind pursued by Spathas et al. (2015) difficult; however, these authors are correct to point out connections between the two phenomena. It is worth considering a meaning-oriented explanation here; for instance, 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; cf. Charnavel and Sportiche 2021.

1337 (105) I Maria katiyori- s- e to Yiani moni tis.
 the.NOM Mary.NOM $\sqrt{\text{ACCUSE}}$ **ACT** 3SG the.ACC John.ACC alone.NOM her
 1338 ‘Mary accused John herself’

1339 Though it is perfectly possible to stipulate the connection between *afto*-, unaccusative syntax,
 1340 and nonactive morphology, what seems preferable is an account that does justice to both the system-
 1341 aticity of this connection (all *afto*- reflexives show these properties) and its obvious link to the rest
 1342 of the Greek voice system (*afto*- reflexives are just one of a few classes of verbs participating in Voice
 1343 syncretism, all sharing the same structural property).

1344 For these reasons, I forgo an analysis fully assimilating *afto*- to anti-assistive modifications, noting
 1345 that Spathas et al. 2015 are correct to point to connections between the two, even if these ultimately
 1346 do not warrant a full assimilation of this type (cf. footnote 37. This divergence aside, the results of
 1347 this paper are very much in line with the core of the proposal in Spathas et al. (2015), where *afto*- is
 1348 taken to be a Voice-level element involved in an intransitive unaccusative syntax.

1349 4.3 INCORPORATION/A HIDDEN TRANSITIVE SYNTAX?

1350 Recall from section 3.1 the numerous striking divergences between *afto*- reflexives and the Greek
 1351 reflexive pronoun. The premise of that section has been simple: if *afto*- is a (semantic or syntactic)
 1352 argument of the verb (or predicate) to which it attaches, it should share properties with elements in-
 1353 dependently thought to be arguments, particularly argument anaphors. Since *afto*- and *bona fide* ar-
 1354 gumental reflexives have been shown to dissociate across a wide range of environments, there seems
 1355 to be every reason to treat *afto*- reflexives as intransitive.

1356 But it is worth entertaining an alternative interpretation of the facts. It is in principle possible
 1357 that the interpretive facts concerning *afto*- in fact follow from a transitive syntax, one where one of
 1358 the arguments is somehow defective. This type of approach is compatible with the ‘hidden transitive’
 1359 analyses (26) and (28), with the additional assumption that *afto*- is a ‘defective’ argument, perhaps
 1360 by virtue of a process of incorporation as proposed in Rivero (1992).

1361 Before evaluating the plausibility of this type of analysis for Greek, it is worth specifying exactly
 1362 what it amounts to. There is a way of construing this type of incorporation analysis that will make it
 1363 predictively equivalent to that proposed in this paper; if the incorporation analysis amounts to the
 1364 claim that *afto*- verbs display a transitive syntax, but one that cannot be diagnosed as transitive, it
 1365 seems that the burden of proof lies with this approach. Viewed in this light, the discussion above
 1366 does little more than draw the most conservative conclusion possible: if *afto*- systematically fails to
 1367 pattern as an anaphor, it is not an anaphor.³⁸

1368 But we can go further than a burden of proof argument, as the incorporation analysis turns out
 1369 to be heavily disfavored by three types of considerations in Greek.

³⁸The 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 Pancheva (2017), Landau (2010), Legate (2014), Williams (2015).

1370 Firstly, Greek lacks any process of (pseudo-)incorporation of arguments: there is simply no way
 1371 of leaving arguments low and caseless in the language, much less a mechanism of incorporating them
 1372 into the verbal form.

1373 To make matters worse, the one process that the language does avail itself of to yield struc-
 1374 tures that could, pretheoretically, be called ‘incorporation’ turns out to systematically target non-
 1375 argumental elements. Greek shows a process of so-called adverb incorporation (Embick 2004; Rivero
 1376 1992), whereby sentences like (106a) alternate with (106b), where the adverb appears to be incorpo-
 1377 rated into the verb.

- 1378 (106) a. Fayame kala ke simera.
 eat.PST.1PL well and today
 ‘We ate well again today.’
 1379
 1380 b. Kalo- fayame ke simera.
 well eat.PST.1PL and today

1381 The analysis of the alternation is not crucial here. Rivero (1992) assumes a syntactic process of
 1382 incorporation; as Embick (2004) notes, a compounding analysis seems more likely. What is crucial,
 1383 however, is the observation that whatever derives (106b) never applies to arguments:

- 1384 (107) a. Fayame psari / psarja.
 eat.PST.1PL fish.ACC fish.ACC.PL
 ‘We ate fish.’
 1385
 1386 b. *psaro- fayame.
 fish eat.PST.1PL

1387 Given the simple fact that Greek lacks argument incorporation, the ‘defective *afto-*’ approach
 1388 amounts to a suspicious conjecture: the process of incorporation this approach needs to make the
 1389 right cut between *afto-* and the reflexive pronoun is a process that only ever targets *afto-* (and perhaps
 1390 its reciprocal counterpart), but does not extend to any other argument in the language. While statable
 1391 in prose, such an approach clearly lacks any explanatory potential.

1392 The plausibility of an incorporation analysis diminishes further in light of a second consideration
 1393 regarding Greek verbal reflexives: as argued in section 3.2, the surface subject of this verbs is a deep
 1394 object. As such, on an incorporation analysis, incorporated *afto-* would have to originate from the *ex-*
 1395 *ternal* argument position. We would have to grant it, then, not only that Greek shows incorporation
 1396 only of anaphoric elements, but also that the relevant phenomena are instances of *agent* incorpo-
 1397 ration. Note now that *bona fide* incorporation of agents is typically ruled out (Baker 1988), with
 1398 languages that apparently allow it in fact showing pseudo-incorporation (Massam 2001) of agents
 1399 (see e.g. Öztürk 2009 on Turkish). In turn, agent pseudo-incorporation is not only another process
 1400 which Greek generally lacks, but also one that, when found, is typically restricted to noun-verb com-
 1401 binations that are judged to be sufficiently *name-worthy* (see Chung and Ladusaw 2020: fn. 10), such
 1402 as *bee-stinging* or *dog-biting*; needless to say that Greek *afto-* reflexivization exhibits no such effect,
 1403 with not obviously name-worthy events such as *self-accusing* being freely expressible.

1404 The incorporation view thus exhibits dim prospects for Greek. It would amount to positing a
 1405 process of agent incorporation for a language that otherwise lacks one; this process would crucially
 1406 have to be syntactic, to guarantee that the putatively incorporating element, *afto-*, not be interpreted
 1407 as an argument (see [section 3.1](#)). For these reasons, I put the possibility of such an analysis to the
 1408 side.

1409 Finally, it is worth noting that there is no compelling morphological grounds on which to favor
 1410 an incorporation analysis.

1411 At first sight, *afto-* as in (108) seems to (partially, but not totally) resemble the noun making up
 1412 the Greek reflexive pronoun (108).

- 1413 (108) O Janis afto- điafimiz -ete.
 the John.NOM REFL advertise 3SG.NACT
 1414 ‘John promotes himself.’
 1415 (109) O Janis điafimiz- i ton eafto tu.
 the.NOM John.NOM advertise 3SG the.ACC self.ACC 3SG.M.GEN
 1416 ‘John promotes himself.’

1417 This instance of formal overlap, however, is not probative, at least not synchronically. Firstly, the
 1418 same phonological sequence is found on synchronically unrelated elements, in particular the lan-
 1419 guage’s demonstrative (110).³⁹ Secondly, the overlap between verbal morpheme and anaphoric
 1420 pronominal is even more imperfect in the case of reciprocals (111), where the reciprocal counter-
 1421 part of *afto-*, *alilo-*, is simply no longer identical to the relevant component of the Greek reciprocal
 1422 construction, *alo*. In short, the (highly imperfect) overlap between anaphoric pronouns and the cor-
 1423 responding verbal prefixes in Greek is contentful only diachronically, with *afto-* and *alilo-* clearly
 1424 having once corresponded to incorporated pronouns.

- 1425 (110) afto to vivlio
 this.NOM the.NOM book.NOM
 1426 ‘This book.’
 1427 (111) a. O Janis ke i Maria alilo- điorθon- onde sineça.
 the.NOM John.NOM and the.NOM Mary.NOM RECIP correct 3PL.NACT constantly
 1428 ‘John and Mary correct each other all the time.’
 1429 b. O Janis ke i Maria điorθonun o enas ton
 the.NOM John.NOM and the.NOM Mary.NOM correct.3PL the.NOM one.NOM the.ACC
 1430 alo sineça.
 other.ACC constantly
 1431 ‘John and Mary correct each other all the time.’

³⁹Note 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.

5 CONCLUDING REMARKS: IMPLICATIONS

Though focussed chiefly on a case study from verbal reflexives, the discussion in this paper bears on important broader issues in the domains of reflexivity, voice, and the relationship between the two.

A first important connection involves the nature of argument introduction. The analysis offered above parallels analyses of the passive that involve the introduction of an agent role without the necessary concomitant introduction of a DP saturating that role (e.g. Akkuş 2021; Alexiadou et al. 2015; Bruening 2013; Legate 2014; Legate, Akkuş, Šereikaitė, & Ringe 2020; Schäfer 2008). In fact, it was shown that this type of analysis is the only one available for Greek verbal reflexives, which involve a DP that is ultimately associated with the agent role but does not originate in the syntactic position associated with this interpretation. The analysis and facts presented here thus reinforce previous conclusions on the separation of syntactic argument introduction from thematic role introduction, and enrich the typology of Voice from the perspective of a domain considerably less intensively investigated than passives and unaccusatives, namely verbal reflexives.

A second important question concerns the proper analysis of (Greek-type) Voice syncretism. According to a long-standing intuition, the syncretic nonactive morphology found in Greek-type systems is tied to the introduction of the external argument. This intuition has been implemented in different ways: by taking nonactive morphology to force the creation of a deep-subject-less structure in a framework where the lexical specification of affixes casually drives the syntax (Marantz 1984), or by taking nonactive morphology to be the reflection of such a structure having been created, in frameworks where morphological realization follows, and can be sensitive to, the building of abstract syntactic structure (see among others Alexiadou et al. 2015; Embick 1997, 1998, 2004; Oikonomou & Alexiadou 2022). This connection between has recently been called into question by researchers opting to emphasize the apparent counterexamples to the regularity of Voice syncretism in Greek (Angelopoulos et al. 2020, connecting with the more general program in Collins (2022)). The syntactic observations presented here suggest that these objections are unwarranted, as they would leave wholly unexplained the fact that reflexive verbs showing a truly passive-like syntax also systematically share their morphology with passives. As such, the analysis advanced here reinforces, and lends further support to, the analysis of Voice syncretism as related to the presence/absence of the external argument.

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 (e.g. *John advertised himself*) and their apparent counterparts formed by ‘verbal’ means, such as Greek *afto-*. If the preceding discussion is on the right track, argumental and verbal reflexives cannot be assimilated to each other. This dissociation of verbal reflexives from reflexive pronouns amounts to the claim that there exist at least two distinct types of reflexivity: Voice-based reflexivization and anaphoric binding have been argued above to have different properties in Greek, opening up the possibility that these may correspond to distinct phenomena more generally (with e.g. Safir 2004: ch. 4, at least to some extent, and *contra* e.g. Reinhart and Reuland 1993).

A final consequence concerns the proper analysis of reflexivizing morphology such as the ele-

ment *afto-* in Greek. 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 either 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’ (see [section 4.3](#)). 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 have argued 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. 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; for Greek reflexives, Spathas et al. (2015)), and not as an argument in itself (e.g. Baker et al. 1989; Collins 2005; for Greek reflexives, Rivero 1992; Tsimpili 1989, 2006, and, to some extent, Embick 1997, who takes *afto-*, but not nonactive morphology, to be an argument).

Alongside these theoretical contributions, the paper presents a number of empirical advances, in the form of mounting a battery of diagnostics aimed at diagnosing both the valency of verbal reflexives and the position of their argument(s). This contribution becomes significant in light of the long-standing controversy regarding the unergative and the unaccusative analysis of reflexive verbs, along both empirical and theoretical lines. Empirically, arguing for against these two analyses has been difficult, owing to the fact that diagnostics standardly distinguishing between unaccusatives and unergatives in a given language often turn out not to apply to reflexive verbs. The problem has been all the more acute for Greek, a language that arguably furnishes hardly any reliable diagnostics of this type in the first place, with the syntax of the otherwise intensively researched reflexive verbs having been left almost entirely undiagnosed (with the notable exception of Alexiadou and Schäfer 2014, where, however, only a tentative conclusion is drawn). Theoretically, the precise empirical discussion that follows enables two important points. Firstly, it permits a rather precise elaboration of what it means for Greek reflexives to be ‘unaccusative’, with ‘transitive unaccusative’ analyses of the kind advanced for Romance being inadmissible for Greek. Moreover, the existence of unaccusative reflexives cross-linguistically has been called into question (Reinhart 2016; Reinhart & Siloni 2004, 2005); this conclusion is simply not tenable. Finally, the paper brings together a range of diagnostics for the valency of verbal reflexives; this in itself is important as these had heretofore remained in disparate parts of the literature, and had not been applied to Greek.

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