

# On the relation between Voice and Case: An Agree-based approach\*

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## Abstract

In this article, we focus on the morphosyntactic and semantic properties of constructions involving the well-known syncretic non-active and/or reflexive morphology (depending on the language). We show that if we treat this special morphology as a property of Voice, non-active / reflexive constructions fit into a consistent, independently attested pattern of cross-linguistic variation in properties of functional heads, allowing us to derive the syntactically different constructions (reflexive, anticausative, middle, passive) exhibiting non-active/reflexive morphology in a unified manner. We argue for the general cross-linguistic schema [<sub>VoiceP</sub> Voice ... [<sub>VP</sub> V IA ]], with Voice licensing (via Agree) the Internal Argument (IA) or the PP in all cases but in differing ways.

## 1. Introduction

This article focuses on the morphosyntactic and semantic properties of constructions involving the well-known syncretic non-active and/or reflexive morphology (depending on the language, as we discuss below). We show that if we treat this special morphology as a property of the syntactic category Voice, these constructions fit into a consistent, independently attested pattern of cross-linguistic variation in properties of functional heads, allowing us to derive the syntactically different constructions (e.g. reflexive, anticausative, middle, passive) exhibiting non-active or reflexive morphology in a unified manner. We argue for the general cross-

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linguistic schema in (1), with Voice licensing (via Agree, as we explicate below) the Internal Argument (IA) or the PP in all cases but in differing ways.

(1) [VoiceP Voice ... (PP) ... [VP V IA ]]

While the general idea here goes back to insights in Marantz (1984), following insights in Labelle (2008), Ahn (2015, 2016) and others but implementing these insights differently, our first novel claim is that in the case of reflexives, there is a Voice-feature (REFL) which marks the predicate as reflexive in the sense that reflexivity needs to be licensed by Voice, with the dimensions of variation involving (a) the exponence of Voice (i.e., the Probe) as e.g. clitic, affix, auxiliary choice, zero; and (b) the nature of the IA (i.e., the Goal) as e.g. *pro*, weak pronoun, special/body-part pronoun (e.g. X-self), which in turn are part of a more general pattern of variation (analogous to Sportiche 1996 on clitic constructions).

Turning to anticausatives, passives and middles, which likewise exhibit syncretic non-active and/or reflexive morphology, we argue that the relevant non-active features are systematically associated with Voice across all these systems in the configuration in (1), with differing morphological exponence in different languages. Of crucial importance here is also the difference with respect to licensing of different PPs:

- (2) a. [VoiceP [Voice REFL ] ... [VP V IA- IA-self/body(part) ]]  
 b. [VoiceP [Voice A-CAUS ] ... *fromP* ... [VP V (IA) ]]  
 c. [VoiceP [Voice MIDDLE ] ... [AdvP ADV *forP* ] ... [VP V (IA) ]]  
 d. [VoiceP [Voice PASSIVE ] ... *byP* ... [VP V (IA) ]]

The optional PPs here correspond to/realise the external argument obliquely:

- (3) a. The window broke from the pressure.  
 b. This book reads easily for children.  
 c. John was arrested by the police.

To (2) we can add Active Voice:

(4) [VoiceP [Voice ACTIVE ] [VP [VP V IA ]]

The real question of course is what underlies these alternations. We propose that (2b,c,d) are distinguished by instantiating distinct abstract oblique Cases: ablative (*from*), dative/benefactive (*for*), instrumental/ergative (*by*) -- the Cases are realised on the Goal of the Agree relation as is standard, see Chomsky (2000). Relating Case and Voice in this way takes us some way to understanding why distinct oblique Cases exist. In some languages (e.g. Albanian, Greek, Latin), there is syncretic realisation of ablative and dative. To this we can add that Active Voice licenses an Accusative IA. If Voice can license exactly one Case, then we understand why the IA cannot be accusative in (2b,c,d) and must therefore move. If REFL licenses *-self*, then reflexive marking can also be seen as Case (Pesetsky 2011).

A more formal account of the Agree relation between Voice and the IA in the respective constructions would run as follows: the intrinsic interpretable features of Voice license the characteristic interpretation of the logical subject in each construction, but we assume that Voice has uninterpretable  $\phi$ -features which probe for the interpretable  $\phi$ -features of the internal argument that is the closest possible c-commanded Goal. We thus conjecture that the oblique Cases are instantiations of these (interpretable)  $\phi$ -features. In these terms, oblique Cases represent interpretable features, whereas structural Cases represent uninterpretable features. Formulating Agree in this way in these constructions leads us to see a tight relation between Voice, Case and ( $\phi$ -)Agree. The fact that, as we will see below, many languages have a single non-active marker for (2b,c,d) clearly supports this approach, although participial passives are a systematic exception for reasons that remain unclear.

In what follows, we will unpack the statements above. To start with, it is well-known that what counts as a ‘passive’ form does not exclusively correspond to passive syntax the way this phenomenon is described for languages like English or German. That is, ‘passive’ form does not entail ‘passive’ syntax. For instance, while the Latin example in (5b) containing a verb which appears in what is traditionally known as the “passive conjugation” (glossed “non-active”) as opposed to the “active conjugation” in (5a), is rendered in English as a passive, while in (6) it corresponds to an anticausative, and in (7) to a reflexive:

(5) a. *Auctor opus laudat.* (Ov. Pont. 3, 9, 9)

author<sub>I<sub>NOM</sub></sub> work<sub>ACC</sub> praise<sub>3<sub>S</sub>,PR,ACT</sub>

‘The author praises (his) work.’

b. *Laudatur Apronius a Trimarchide.* (Cic. Verr. 2, 3, 155)

praise<sub>3<sub>S</sub>,PR,ACT</sub> Apronius<sub>NOM</sub> from Trimarchides<sub>ABL</sub>

‘Apronius is praised by Trimachides.’

(6) *Africano illi superiori coronam sibi in convivio ad caput adcommo-danti,*  
*Cum ea saepius rumperetur,* (Cic. de orat. 2, 250)

while it<sub>NOM,F,SG</sub> many.times break<sub>3S,SUBJ,IPFV,NACT</sub>

*P. Licinius Varus: “noli mirari” inquit “si non convenit; caput enim magnum est!”.*

‘While Africanus, during the dinner, was putting back again on his own head the crown, since it (the crown) kept on breaking, P. Licinius Varus said: “You shouldn’t wonder that it doesn’t fit. In fact, you have a big head!”’

(7) *Abditur Orion.* (Cic, *Arat.* 462, 26)

hide<sub>3S,PR,NACT</sub> Orion

‘Orion hides himself.’

The same phenomenon (i.e. syncretic non-active morphology) is also found in Albanian and Greek reflexives and anticausatives, as in (8) and (9):

(8) a. *Fëmija po lahet.* (Albanian)

child.the<sub>NOM</sub> PROG wash.NACT,PR,3S

(i) ‘The child is washing itself.’ → reflexive

(ii) ‘The child is being washed.’ → passive

b. *To agori plithike (mono tu ) / (apo ti mitera tu).* (Greek)

the boy washed.NACT,3S (alone his) / (by the mother his)

(i) ‘The boy washed himself.’ → reflexive

(ii) ‘The boy was washed (by someone).’ → passive

(9) a. *Vazoja \*(u) thye.<sup>1</sup>* (Albanian)

vase.the<sub>NOM</sub> NACT broke<sub>AOR,3S</sub>

(i) ‘The vase broke.’ → anticausative

(ii) ‘The vase was broken.’ → passive

<sup>1</sup> Albanian employs three distinct means with a fixed distribution to build the non-active paradigm, namely: affix, as in (8a), clitic, as in (9a), and auxiliary choice (‘to be’). The distribution of non-active realization follows the pattern in (i):

(i) **If** the clause contains Perfect: (Kallulli and Trommer 2011: 284)  
 express non-active by choice of the auxiliary

**Else: If** the clause contains Tense but not Aspect or Admirative:  
 express non-active by an inflectional affix

**Else:** express non-active by a clitic.

- b. *To grama kaike / \*ekapse.* (Greek)  
 the sheet burned.NACT,3S / burned.ACT  
 (i) ‘The sheet burned.’ → anticausative  
 (ii) ‘The sheet was burned.’ → passive

Moreover, as Kallulli (2007, 2013) notes, in Albanian, Latin and Greek the *by*-phrase diagnostic cannot be applied to distinguish between passives and anticausatives because the relevant Preposition also means *from* (i.e. it may also introduce the external cause of an event), as illustrated in (5b) above and (10):

- (10) a. *Anna u dogj nga dielli mbi urë.* (Albanian)  
 Anna NACT burnt<sub>AOR,3S</sub> by/from sun.the on bridge  
 (i) ‘Anna burned from the sun on the bridge.’  
 (ii) ‘Anna was burned by the sun on the bridge.’
- b. *To grama kaike apo ti fotia.* (Greek)  
 the sheet burned.NACT by/from the fire  
 (i) ‘The sheet burned from the fire.’  
 (ii) ‘The sheet was burned by the fire.’

Similar syncretisms also exist in languages with no fully-fledged voice paradigms, such as Italian and German, which use a reflexive clitic or pronoun instead of inflection:

- (11) a. *Martina \*(si) guarda allo specchio.* (Italian)  
 Martina REFL,3 watches in-the mirror  
 ‘Martina watches herself in the mirror.’ → reflexive
- b. *La mela \*(si) mangerà domani.*  
 the apple REFL,3 eat.3S,FUT tomorrow  
 ‘The apple will be eaten tomorrow.’ → passive
- c. *Lo specchio \*(si) è rotto.*  
 the mirror REFL,3 is.3S broken  
 ‘The mirror has broken.’ → anticausative

- (12) a. *Ralf rasiert \*(sich).* (German)  
 Ralf shaves REFL,3  
 ‘Ralf is shaving/shaves (himself).’ → reflexive
- b. *Dieser Roman liest \*(sich) gut.*  
 this novel reads REFL,3 well  
 ‘This novel reads well.’ → middle
- c. *Die Tür öffnete \*(sich).*  
 the door opened REFL,3  
 ‘The door opened.’ → anticausative

Moreover, both languages contain a class of verbs where, unlike in (13) and (14), the special (i.e. reflexive) morphology doesn’t seem to bear on argument-structure alternations. Hence, the ungrammaticality of (15b) and (16b) as opposed to the grammaticality of (13b) and (14b) must be due to a theta-criterion violation:

- (13) a. *Martina si lava.* (Italian)  
 Martina REFL,3 washes  
 ‘Martina washes herself.’
- b. *Martina lava la camicia.*  
 Martina washes the shirt  
 ‘Martina washes the shirt.’
- (14) a. *Martina wäscht sich.* (German)  
 Martina washes REFL,3  
 ‘Martina washes herself.’
- b. *Martina wäscht das Hemd.*  
 Martina washes the shirt  
 ‘Martina washes the shirt.’
- (15) a. *Martina si arrabbia spesso.* (Italian)  
 Martina REFL,3 angers often  
 ‘Martina often gets angry.’
- b. *\*Martina arrabia spesso Piero.*  
 Martina angers often Piero

- (16) a. *Ich schäme mich.* (German)  
 I shame myself  
 ‘I am ashamed of myself.’  
 b. \**Ich schäme dich / (die) Eva.*  
 I shame you / (the) Eva

In fact, as Reuland (2009) remarks even for English: “[s]omething special must be said about [the paradigm in (18a,b) as opposed to (17a,b)]: Is it about binding or is it about argument structure?”

- (17) a. John washed (himself).  
 b. John washed the child / us.
- (18) a. John behaved (himself) / \*us.  
 b. \*John behaved the child.

The question then is what the role of the reflexive element in the (a) examples in (15a), (16a) and (17a) is. Kallulli (2013, 2021) argues that the reflexive element in these examples is the counterpart of non-active or passive morphology in the class of verbs known from traditional grammars of Latin as ‘deponent’ verbs, which are definable as verbs that lack an active conjugation and therefore only appear in the non-active (or so-called “passive” conjugation) but which do not have a passive meaning, as illustrated for Latin in (19b) as opposed to (19a), and for Albanian in (20a-e) as opposed to (20a’-e’).

(19)	<u>Pres.act.</u>	<u>Pres.pass</u>	(Latin)
a. alternating	<i>am-ō</i>	<i>am-or</i>	
	‘I love’	‘I am loved’	
b. deponent	—	<i>hort-or</i>	
		‘I encourage	
(20)	<u>Non-active</u>	<u>Active</u>	(Albanian)
a. <i>dergjem</i>		a’. * <i>dergj</i>	
	‘I linger’		

b. <i>përgjigjem</i>	<i>b'</i> * <i>përgjigj</i>
‘I answer’	
c. <i>krenohem</i>	<i>c'</i> * <i>krenoj</i>
‘I take pride in’	
d. <i>ligem</i>	<i>d'</i> * <i>lig</i>
‘I weaken’	
e. <i>pendohem</i>	<i>e'</i> * <i>pendoj</i>
‘I regret’	
...	

It is important to note that the morphological expression of non-active varies (dedicated non-active morphology, reflexive clitic/pronoun, auxiliary choice, etc), but we treat it as a syntactic category. In Albanian for instance the exponence of the Voice head REFL, ANTICAUS, PASSIVE and MIDDLE can be any of the three means used to build the non-active (NACT) paradigm, namely: affix, clitic, auxiliary selection (‘to be’), as we illustrate throughout (see also footnote 1). Therefore, cross-linguistically we may among other things expect null exponents, as is the case in English, for instance. Specifically, English has: (i) no (verbal) clitic or affix in reflexives, as in *John likes himself*; (ii) null deponent marking on the verb, as in *John absented himself*; (iii) no morphological marking of anticausatives, as in *The vase broke*; and (iv) no morphological marking of middles, as in *Bureaucrats bribe easily*. So, with the apparent exception of the participial passive (see below), English has null exponence of NACT (cf. Keyser and Roeper 1984, 1992 on abstract clitics in English).

In the remainder of this paper, we will look at each construction type in turn -- i.e., reflexives (including deponents) in section 2, anticausatives in section 3, middles in section 4, and passives in section 5 -- arguing that non-active features are systematically associated with Voice in all cases, with differing morphological exponence, as we summarise in section 6. In section 7 then, we suggest a tentative extension of our analysis to the superficially very different voice systems in Austronesian and Mandarin, concluding in section 8, which also formulates questions for future research.

## 2. Reflexives

An influential analysis which aims to capture the voice(-related) syncretism between



reflexives, passives and anticausatives is the so-called “unaccusative” analysis of reflexives. Under this analysis, the source of the syncretism is a particular syntactic property, namely the absence of an external argument (Marantz 1984). Thus, modelling this insight in terms of Distributed Morphology, Embick (1997, 2004) argues that the syntax generates passives, reflexives and unaccusatives, each fully specified for distinct features, with the “u-syncretism” as he calls it, resulting from the realization of *v* in a particular structural environment, as in (21), where *-X* refers to the feature associated with non-active morphology:

(21)  $v \leftrightarrow v\text{-}X / \text{ \_\_\_ } \text{No external argument}$

By underspecifying *-X*, an answer is thus provided to the common morphological form of all these constructions that otherwise have different syntactic and semantic properties. In other words, unaccusatives, passives and reflexives are not identical, but they share a common structure, namely the lack of an external argument; this is what the morphology is sensitive to, or reflects.

Given this background, the main question we want to focus on here is the following: Is (REFL/NACT) Voice always implicated in reflexivity? Our contention is that this is indeed the case. That is, (REFL/NACT) Voice is always implicated in reflexivity though its exponence can be null. Reasons to think that Voice is implicated in reflexive constructions bear on: (i) the frequent cross-linguistic deployment of the same morphological markers for reflexives and (other) voice alternations, as we saw above, which in turn has motivated (ii); (ii) the “unaccusative analysis” of reflexives (Marantz 1984, Kayne 1993, Pesetsky 1995, Embick 2004 i.a.); (iii) very similar locality conditions (which can be explicitly captured by subjecting both reflexives and NP traces to Principle A of Binding Theory), see (22) and (23); (iv) the cross-linguistically common subject-orientation of reflexives, while voice-alternations always implicate subjects/external arguments.

- (22) a. Mary was declared (Mary) bankrupt.  
 b. \*John was believed that (John) was bankrupt.  
 c. John was believed (John) to be bankrupt.  
 d. \*John was believed Mary to like (John).

- (23) a. Mary has declared herself bankrupt.  
 b. \*John believed that himself was bankrupt.

- c. John believed himself to be bankrupt.
- d. \*John believed Mary to like himself.

Thus, we maintain that the Latin non-active *-r* paradigms as in (19) are naturally associated with Voice (however exactly the Latin verb is built, on which see Calabrese (2021)); this naturally extends to (the exponents of) the Albanian and Greek non-active voice, as well as to so-called “SE” (versus SELF-anaphors, cf. Reinhart and Reuland 1993). In other words, simplex reflexive elements such as the Italian reflexive *si* merge in Voice and raise with the verb, just like non-active markers:

- (24) a. *Abditur Orion.* (Latin)  
 hide<sub>3S,PR,NACT</sub> Orion  
 ‘Orion hides himself.’
- b. *Gianni si ama / lava.* (Italian)  
 Gianni REFL love.3S / wash.3S  
 ‘Gianni loves/washes himself.’

SELF-anaphors on the other hand are merged as true arguments, i.e. XPs; note the complementarity of SI/NACT with SELF-anaphors however:

- (25) a. *Beni po lan veten / Anën.* (Albanian)  
 Ben PROG wash<sub>ACT,PR,3S</sub> self<sub>ACC</sub> / Anna<sub>ACC</sub>  
 ‘Ben is washing himself / Anna.’
- b. \**Beni po lahet veten / Anën.* (Albanian)  
 Ben PROG wash<sub>NACT,PR,3S</sub> self<sub>ACC</sub> / Anna<sub>ACC</sub>  
 ‘Ben is washing himself / Anna.’
- (26) a. *Gianni lava se stesso / Anna.* (Italian)  
 Gianni washes REFL,3 self<sub>MASC,S</sub>/ Anna  
 ‘Gianni washes himself / Anna.’
- b. *Gianni si lava (\*se stesso / Anna).* (Italian)  
 Gianni REFL,3 washes REFL,3 self<sub>MASC,S</sub>/ Anna  
 ‘Gianni washes himself.’

(27) John is washing himself / Anna.

(English)

We analyse these facts on the basis of the general cross-linguistic schema in (28), complemented by the dimensions of variation discussed below.

(28) *General cross-linguistic schema:*

[VoiceP [Voice REFL] ... [vP V IA-pronoun ]]

REFL in (28) is the Voice-feature which marks the predicate as reflexive, in the sense that reflexivity needs to be licensed (cf. Reinhart and Reuland 1993).<sup>2</sup> Its cross-linguistic exponence may involve an affix, a clitic, auxiliary choice (namely, ‘to be’), a zero morpheme, or, depending on the language, potentially some other linguistic means. In Albanian for instance the exponence of REFL can be any of the three morphosyntactic means used to build the non-active voice paradigm, namely an affix, as we already saw in (8a), a clitic, as in (29a), or BE, as in (29b):<sup>3</sup>

(29) a. *Beni \*(u) la.*

Ben REFL wash

(i) ‘Ben washed himself.’

(ii) ‘Ben was washed (by someone).’

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<sup>2</sup> Ahn (2015: 95f., 2016) also postulates a REFL Voice. However, his version of this idea is quite different from ours. In his system, REFL Voice has an EPP feature which attracts anaphors to its Specifier, although the lower copy is spelt out. Since, like us, Ahn assumes that Voice is outside the thematic domain, the only element which can function as an antecedent for the reflexive is the subject. Furthermore, this cannot be a derived subject, as such subjects depend on a different specification of Voice (e.g. passive, raising or non-active). This analysis derives the basic properties of anaphors in contexts local subject-oriented reflexivity (i.e. canonical subject-oriented reflexives in active clauses). The representation of *Werner loved himself* is as in (i):

(i) [TP Werner -ed ... [PredP (Werner) Pred<sup>o</sup> ... [VoiceP himself REFL ... [vP Werner loved  
[vP himself (love) ]]]]]

Here the external argument *Werner* raises from Spec,vP to SpecTP in the standard way (through SpecPredP as PredP may be a phase); the verb raises from V to v. Most importantly for our purposes *himself* raises to SpecVoiceP attracted by the EPP feature of Reflexive Voice. This movement guarantees the extrametricality of the reflexive, i.e. the fact it does not receive Nuclear Stress; instead the Verb does (hence the accent on *loved*). In general, Nuclear Stress is assigned to the most deeply embedded category, and so normally the object of the transitive Verb is stressed (cf. *Werner loves Máry*), but movement of the reflexive has the consequence that the Nuclear Stress Rule does not apply to it (see Ahn 2015: 87-95 for details). Ahn’s account, unlike ours, is not grounded in a wider theory of Voice alternations, and assumes a rather different derived structure for reflexives from ours.

<sup>3</sup> As discussed, all these examples also have a passive interpretation given the syncretic morphology, so in the context of reflexives only the (i)-readings are relevant.

- b. *Beni ishte larë.*  
 Ben was washed  
 (i) ‘Ben had washed himself.’  
 (ii) ‘Ben had been washed (by someone).’

English on the other hand has zero exponence for the Voice feature REFL (cf. Keyser and Roeper 1984, 1992), as in (30a), though given (30b), it stands to reason to state that REFL in this language can also be realised by a non-null exponent, namely the element *self-*, which at first sight seems to act as an incorporated noun.

- (30) a. John Ø loves/washes himself.  
 b. I heard that John self-harms.

Despite this variance of exponence within and across languages, of course REFL licenses the internal argument pronoun (IA-pronoun in (28)) in all cases, as depicted in (31) for Italian, Latin and English:

- (31) a. *Gianni si ama pro.*  
 Gianni REFL love.3S  
 ‘Gianni loves himself.’  
 b. *Abditur Orion pro.*  
 hide<sub>3S,PR,NACT</sub> Orion  
 ‘Orion hides himself.’  
 c. John Ø hates himself.  
 d. John self-harms *pro.*

Another dimension of variation in reflexives involves the realisation of licenser and licensee. Thus, in the examples above we see the realisation of either the licenser or the licensee, but in Greek and Albanian, both can -- indeed must -- be realised for the reflexive reading to obtain, as Embick (2004) discusses for Greek and as illustrated in (32) for Albanian and (33) for Greek.<sup>4</sup> In fact this is to some degree possible even in English, as shown in (34). Relatedly, we

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<sup>4</sup> The Albanian and Greek examples in (32) and (33) would be ungrammatical in the absence of non-active morphology, and passive in the absence of the ‘self’-reflexive element.

can have neither the licenser nor the licensee realised, as in (35).

(32) *Jani u vetëshkatërrua.* (Albanian)

Jani NACT selfdestroyed.3S

‘Yani destroyed himself.’

(33) *O Yanis afto-katastrafike.* (Greek)

the Yani self-destroy.NACT,3S

‘Yani destroyed himself.’

(34) John \*self-hated / ??self-promoted / ?self-nourished / self-selected / self-harmed himself.

(35) John washes (himself).

We thus have an analogy with clitic doubling, as analysed in Sportiche (1996):<sup>5</sup>

(36) [<sub>CIP</sub> O(bject) Cl ] [<sub>VP</sub> V IA ]]

Further developing and expanding on this analogy, we have the dimensions of variation in (37), which exactly parallel Sportiche’s (1996) Clitic Parameters:

(37) *Dimensions of variation:*

- a. Exponence of OCl (clitic, affix, zero, ...)
- b. Nature of IA (pronoun, specific DP, zero, ...)
- c. Cross-linguistic preference for exponence of just OCL or IA, but it’s well-known that both can be realised (as in classical cases of clitic doubling); the neither option may be null objects (Huang 1984, Rizzi 1986).

We uniformly account for the fact that though Greek and Albanian (unlike Spanish) don’t allow doubling of the *X-self* with overt REFL, there is nonetheless clitic doubling, as shown in (38),

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<sup>5</sup> Sportiche (1996) refers to clitic projections (CIP in (36)) as Clitic Voices.

which we crucially interpret as the exponence of REFL.<sup>6</sup> This is then a second novelty of our approach.

- (38) a. *Fernando<sub>i</sub> se<sub>i</sub> / \*lo lava [a si mismo]<sub>i</sub>.* (Spanish)  
 Fernando REFL/CL washes a himself
- b. *Beni<sub>j</sub> e<sub>i</sub>/\*<sub>j</sub> do [veten<sub>i</sub> e vet<sub>j</sub>]<sub>i</sub>.* (Albanian)  
 Ben CL,ACC loves self.the<sub>ACC</sub> own  
 ‘Ben loves himself.’
- c. *[O Petros]<sub>j</sub> ton<sub>i</sub>/\*<sub>j</sub> agapa<sub>i</sub> [ton eafto<sub>i</sub> tu<sub>j</sub>]<sub>i</sub>.* (Greek)  
 the Petros CL,ACC loves the<sub>ACC</sub> self<sub>ACC</sub> his  
 ‘Petros loves himself.’

In turn, this is compatible with Woolford’s (1999) argument that object agreement is incompatible with anaphors, unless the agreement is a special anaphoric form. The structure for English, which has no overt clitics (but see Keyser and Roeper 1984, 1992), could then be as in (39), where *himself* is decomposed into the possessive pronoun *his* and the reflexive *self*; note that in English in all non-third-person X-self forms (i.e., *myself*, *yourself*, *ourselves*, *yourselves*) X is clearly a possessive pronoun, which is also the case for the third person singular feminine *herself*. The third person forms *himself*, *themselves* and *themselves* in Standard English deviate from this pattern, but many non-standard varieties have the forms *hissself* and *theirselves* (see also Ahn and Kalin 2018).

- (39) John<sub>j</sub> likes Ø<sub>i</sub> [ his<sub>j</sub> self<sub>i</sub> ]<sub>i</sub>.

Hence, another dimension of variation in reflexive constructions bears on the nature of the IA-pronoun, which as we have seen can among other things be *pro*, a weak pronoun (e.g. German *sich*), or a special/body-part pronoun (e.g. *X-self*). Taking stock, we can then revise (28) as in (40):

- (40) [VoiceP [Voice REFL ] ... [VP V IA-SELF/BODY(PART) ]]

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<sup>6</sup> On the indexation in (37a,c) see the discussion in Anagnostopoulou and Everaert (1999); (37b) exactly parallels (37c) in this respect.

A further upshot of the analysis we have provided is that it accounts for selectional restrictions with pseudo-reflexives:

- (41) a. The ascetic<sub>i</sub> inured himself<sub>i</sub> / his<sub>i</sub> body to hardship.  
b. Mary<sub>i</sub> exerted herself<sub>i</sub>.  
c. Mary<sub>i</sub> exerted every ounce of her<sub>i</sub> { energy / strength }.
- (42) a. \*The ascetic inured my body to hardship.  
b. \*Mary exerted every ounce of John's { energy / strength }.

Mandarin Chinese is another language which fits into the type with both licenser or licensee realised. As Li Zhen (personal communication) points out to us, research on reflexive verbs in Chinese is relatively limited, with scholarly work having primarily focused on the reflexive *ziji* ‘self’, paying less attention to *zi*-verb (i.e., the element *zi* combined with a verb, commonly referred to as a reflexive verb), but see Fu (1996), and Wong (2017), both works suggesting that reflexive verbs in Chinese are unaccusative and can no longer select an internal argument. However, Li Zhen further points out to us that some reflexive verbs can take an overt object coreferential with the subject/clitic *zi*. In other words, both the licenser and the licensee appear. For example, for him reflexive verbs such as *zi-xing* ‘self-reflect’ and *zi-hui* ‘self-destroy’ can take an object in Mandarin Chinese, as shown in (43) and (44), “although the versions without the reflexive *ziji* could be more natural”.

(43) *Lisi zhende shi zai zi-hui (ziji).*

Lisi really be PROG self-destroy self  
‘Lisi is really destroying herself/himself.’

(44) *Lisi jingchang zi-xing (ziji).*

Lisi often self-reflect self  
‘Lisi often reflects herself/himself.’

To conclude, if we treat reflexives as involving Voice, they fit into a consistent, independently attested pattern of cross-linguistic variation in properties of functional heads.

### 3. Anticausatives

Let us now turn to anticausatives, illustrated in (45):

- (45) a. *Lo specchio si è rotto.* (Italian)  
 the mirror REFL,3 is broken  
 ‘The mirror has broken.’
- b. *ea saepius rumperetur.* (Latin)  
 it<sub>NOM,F,SG</sub> many.times break<sub>3S,SUBJ,IPFV,NACT</sub>  
 ‘it breaks many times’
- c. *The window broke.* (English)
- d. *Vazoja u thyë.* (Albanian)  
 vase.the<sub>NOM</sub> NACT broke  
 ‘The vase broke.’
- e. *Die Tür öffnete sich.* (German)  
 the door opened REFL,3  
 ‘The door opened.’

In anticausatives, we observe the same morphosyntactic variants as for the reflexives. The general cross-linguistic schema for anticausatives is given in (46):

- (46) General cross-linguistic schema for anticausatives:  
 [VoiceP [Voice A-CAUS ] ... [VP V (IA) ]]

Here A-CAUS is the Voice-feature which marks the predicate as anticausative. The exponence of A-CAUS as for reflexives, i.e. it may be a clitic/weak pronoun, an affix, an auxiliary or zero. In Albanian, again as in the case of reflexives, we find three patterns of exponence: a clitic (9a), affix (47a), or the auxiliary BE (47b):

- (47) a. *Çelësi thyhej sa kthente bravën.*  
 key.the<sub>NOM</sub> break.NACT,P,3S when turned lock  
 ‘The key would break as soon as it turned the lock.’



- b. *Vazoja ishte / \*kishte thyer.*  
 vase.the<sub>NOM</sub> was / had broken  
 ‘The vase had (been) broken.’

These exponents are determined as described in note 1 (see also Kallulli and Roberts, forthcoming). Null exponence of A-CAUS is also possible, as in English (45c) above.

In the case of anticausatives, unlike reflexives, the question of the representation of the external argument arises. The argument in the “*from*-phrases” in (48) clearly corresponds to the Causer (only the (i)-readings are relevant in (48c,d)):

- (48) a. *Lo specchio si è rotto dalla pressione.* (Italian)  
 the mirror REFL,3 is broken from-thepressure  
 ‘The mirror broke from the pressure.’
- b. *The window broke from the heat.* (English)
- c. *Anna u dogj nga dielli mbi urë.* (Albanian)  
 Anna NACT burnt.AOR,3S by/from sun.the on bridge  
 (i) ‘Anna burned from the sun on the bridge.’  
 (ii) ‘Anna was burned by the sun on the bridge.’
- d. *To grama kaike apo ti fotia.* (Greek)  
 the sheet burned<sub>NACT</sub> by/from the fire  
 (i) ‘The sheet burned from the fire.’  
 (ii) ‘The sheet was burned by the fire.’
- e. *Die Tür öffnete sich durch den Luftzug.* (German)  
 the door opened REFL,3 from the draft  
 ‘The door opened from the draft.’

Since it bears the Causer role, we could treat the *from*-phrase as the external argument? We do not take a position on that question here, but we attribute the representation in (49) to anticausatives where the *from*-phrase is present:

- (49) [VoiceP [Voice A-CAUS ] ... *from*P ... [VP V (IA) ]]

Here Voice’s a-caus feature licenses the *from*P, which arguably intervenes between Voice and the IA. Where a-caus has an overt realisation (i.e. in all the languages under consideration

except English), realisation of the *from*-phrase implies double exponence of the a-caus feature, again in line with Sportiche’s approach to clitic-doubling in (36).

#### 4. Middles

Middle constructions are illustrated in (50):

- (50) a. *Questi libri si leggono facilmente.* (Italian)  
 these books REFL,3 read.3PL easily  
 ‘These books read easily.’
- b. *Bureaucrats bribe easily.* (English)
- c. *Dieser Roman liest sich gut.* (German)  
 this novel reads REFL,3 well  
 ‘This novel reads well.’
- d. *Ky libër lexohet kollaj.* (Albanian)  
 this<sub>NOM</sub> book read<sub>NACT,PR,3S</sub> easily  
 ‘This book reads easily.’

Middles show the same morphosyntactic variants as reflexives and anticausatives discussed in the previous sections. This is summarised in (51):

(51) General cross-linguistic schema and dimensions of variation:

[VoiceP [Voice MIDDLE] ... [VP V (IA) ]]

Here middle is the Voice-feature which marks the predicate as a middle. The exponence of middle is as for reflexives and anticausatives (affix, clitic, auxiliary or zero). Again, Albanian has an affix (50d), a clitic (52a) or the auxiliary BE (52b) (only the (i) readings are relevant here):

- (52) a. *Ky libër u lexoka kollaj.*  
 this<sub>NOM</sub> book NACT read<sub>ADM,PR,3S</sub> easily  
 (i) ‘Hmm, so this book reads easily.’  
 (ii) ‘Hmm, so this book is easy to read.’

- b. *Ky libër qenka / \*paska lexuar kollaj.*  
 this<sub>NOM</sub> book be<sub>ADM,3S</sub> / \*have<sub>ADM,3S</sub> read easily  
 (i) ‘Hmm, so this book has read easily.’  
 (ii) ‘Hmm, so this book has been easy to read.’

Finally, null exponence also possible, as in English (50b) above.

As with anticausatives, a question arises concerning the representation of the external argument in middles. A characteristic feature of middles is that they have a dispositional reading (Condoravdi 1989, Lekakou 2005), implying that the clause is stative, the subject often is a generic bare plural, and an evaluative adverb characterising the property (canonically *easily*) appears (see Cinque 1999: 101-3, on Voice and the middle adverb). This adverb has an Experiencer argument, which may be realised as a *for*-phrase or its equivalent, illustrated in (53):<sup>7</sup>

- (53) a. *This book reads easily for me.* (English)  
 b. *?Dieser Roman liest sich leicht für mich.* (German)  
     this novel reads REFL,3 easily for me  
     ‘This novel reads easily for me.’  
 c. *Physik-Bücher lesen sich leicht für Mathematiker...* (German)  
     physics books read.3PL REFL,3 easily for mathematicians  
     ‘Physics books read easily for mathematicians (but not for linguists).’  
 d. *Ky libër u lexoka kollaj (edhe) për mua.* (Albanian)  
     this<sub>NOM</sub> book NACT read<sub>ADM,PR,3S</sub> easily also for me  
     ‘Hmm, this book reads easily (also/even) for me.’

Hoekstra and Roberts (1993) and Stroik (1999) propose that the *for*-phrase introduces the Experiencer external argument. If this is correct, then we should replace (51) with (51’):

<sup>7</sup> Italian appears to be an exception to the cross-linguistic pattern observed in (53):

- (i) *\*Questi libri si leggono facilmente per noi / gli alunni.*  
 these books REFL,3 read.3PL easily for us / the pupils

Here the *per*-phrase only has the “according to” interpretation; the external argument is interpreted as arbitrary (Leonardo Russo-Cardona, p.c.). It is not clear why Italian does not fit the cross-linguistic pattern. The *tough*-movement example corresponding to (i) is grammatical with a *per*-phrase corresponding to the external argument:

- (ii) *Questi libri sono facili da leggere per noi / gli alunni.*  
 these books are easy to read for us / the pupils

We have no explanation for these facts at present.

(51') [VoiceP [Voice MIDDLE ] ... [AdvP ADV *for* P ] ... [VP V (IA) ]]

In (51'), the MIDDLE feature of Voice licenses the *for*-phrase. As with the anti-causatives discussed in the previous section, we can treat the languages in which MIDDLE Voice has an overt morphosyntactic realisation as double exponence, a form of clitic-doubling once more. English once again has null exponence of MIDDLE Voice, seen in (50b).

We mentioned above that middles are characterised by a property (or dispositional) reading. We suggest that this arises because the external argument of a middle is an Experiencer. Given that, like much recent work on voice alternations (for overview and references see Alexiadou, Anagnostopoulou and Schäfer 2015), we are not assuming that external (or other) arguments of predicates are not lexically determined, it is quite possible to suppose that otherwise canonical agentive predicates can be interpreted as having Experiencer external arguments. This means that the middle predicates share important properties with the *fear* class of psych verbs (Belletti and Rizzi's 1988 Class I psych verbs), which are statives with Experiencer external arguments. These verbs also express dispositions. The effect of MIDDLE Voice, then, is to cause the external argument to become an Experiencer argument, realised overtly as the *for* phrase associated with the adverb. In Albanian and elsewhere (e.g. Slavic) dispositional and affective dative subjects are found, which in Albanian employ non-active morphology and in Slavic are marked by reflexives; see Kallulli (2006):

(54) *Benit i hahej një mollë.*  
 Ben<sub>DAT</sub> CL,DAT,3S eat<sub>NACT,P,3S</sub> an apple  
 'Ben felt like eating an apple.'

There is a clear parallel between examples like (54) and the English middle construction (cf. *These apples cook easily for Benny*). We therefore suggest that middles arise when an agentive, eventive transitive verb takes an Experiencer external argument instead of an Agent. Since no verb can have two external arguments, only one of the two options can appear with a given occurrence of a verb of this type.

## 5. Passives

In this section we bring passive constructions into our general proposals, although we will leave certain questions concerning the cross-linguistic morphological properties of passives open.

Passives are illustrated for Italian, Latin, English and German in (55). In (55a), we give both the participial passive and “mediopassive” *si* of Italian. It is of course the latter that shows syncretism with the other types of non-active constructions, including reflexives, that we have been concerned with here. In (55b), we see the morphological passive of Latin. In perfective tenses, Latin has a periphrastic participial passive (see (59b) below). (55c, d) illustrate the English and German participial passive, which have different auxiliaries (German also has a ‘be’-passive, but this is usually considered to be an adjectival passive, see Alexiadou, Anganostopoulou and Schäfer 2015):

- (55) a. *Questi libri sono stati venduti / si sono venduti.* (Italian)  
these books are been sold / REFL,3 are sold  
‘These books have been sold.’
- b. *Laudatur Apronius a Trimarchide.* (Latin)  
praise<sub>3S,PR,NACT</sub> Apronius<sub>NOM</sub> from Trimarchides<sub>ABL</sub>  
‘Apronius is praised by Trimachides.’
- c. *The bureaucrats were bribed.* (English)
- d. *Dieser Roman wurde gelesen.* (German)  
this novel was read  
‘This novel was read.’

In (56) and (57), we see the Albanian and Greek passives. In all these examples, we have syncretic non-active voice morphology, which, alongside the passive interpretations (boldfaced here), also allows a reflexive interpretation in (56) and an anticausative interpretation in (57):

- (56) a. *Fëmija po lahet.* (Albanian)  
 child.the<sub>NOM</sub>prog wash.nact,p,3s  
 (i) ‘The child is washing itself.’ → reflexive  
 (ii) ‘The child is being washed (by X).’ → passive
- b. *To agoriplithike (mono tu ) / (apo ti mitera tu).* (Greek)  
 the boy washed.nact,3s (alone his) / (by the mother his)  
 (i) ‘The boy washed himself.’ → reflexive  
 (ii) ‘The boy was washed (by X).’ → passive
- (57) a. *Vazoja \*(u) thye.* (Albanian)  
 vase.the<sub>NOM</sub> NACT broke.AOR,3S  
 (i) ‘The vase broke.’ → anticausative  
 (ii) ‘The vase was broken.’ → passive
- b. *To grama kaike .* (Greek)  
 the sheet burned.nact  
 (i) ‘The sheet burned.’ → anticausative  
 (ii) ‘The sheet was burned.’ → passive

Here the cross-linguistic pattern is as shown in (58):

(58) Cross-linguistic pattern:

[VoiceP [Voice PASSIVE ] ... byP ... [VP V (IA) ]]

Here the *by*-phrase is licensed by PASSIVE Voice, analogously to the *from*-phrase in anticausatives and the *for*-phrase in middles. However, the cross-linguistic pattern of exponence is different from what we saw above with anticausatives and middles in that English, German, Italian, Albanian (subject to tense/aspect distinctions; see Kallulli and Trommer 2011, Kallulli and Roberts, to appear) and Latin (in perfect tenses) all have participial passives:

- (59) a. *Beni ishte larë.* (Albanian)  
 Ben<sub>NOM</sub> was washed  
 (i) ‘Ben had washed himself.’  
 (ii) ‘Ben had been washed (by someone).’

- b. *A me Lesbia amata mea est.* (Latin, Catull. 87, 2)  
 from me Lesbia<sub>NOM</sub> love<sub>PST,PTCP,NOM,SG</sub> mine<sub>NOM,SG</sub> is  
 ‘My Lesbia has been loved by me.’

Where the exponence of passive involves an auxiliary and a participle, we have either the structure in (60a) or that in (60b):

- (60) a. [VoiceP [Voice BE] ... [PrtP V+Prt [VP (V) (IA) ]]  
 b. [AuxP BE [VoiceP [Voice V+Prt] ... [VP (V) (IA) ]]

The analysis of Albanian in Kallulli and Trommer (2011) and Kallulli and Roberts (to appear) favours (60b) if AuxP is interpreted as PerfectP, since the activation of this projection entails the presence of an auxiliary (see note 1, (i)). The structure (60b) is also consistent with Harwood’s (2013) analysis of the English auxiliary system. Hence, we tentatively favour this structure for participial passives, but we do not exclude the possibility of cross-linguistic variation, such that (60a) would be the correct structure in some languages.

In non-perfective tenses in Latin, generally in Greek and, subject to tense/aspect conditioning, in Albanian, passive is realised by a dedicated morpheme, shown in (61) (only the (ii) readings are relevant in (63b,c)):<sup>8</sup>

- (61) a. *Laudat-ur Apronius a Trimarchide.* (Latin)  
 praise<sub>3S,PR,NACT</sub> Apronius<sub>NOM</sub> from Trimarchides<sub>ABL</sub>  
 ‘Apronius is praised by Trimachides.’
- b. *Fëmija po la-h-et.* (Albanian)  
 child.the<sub>NOM</sub> PROG wash.NACT,PR,3S  
 (i) ‘The child is washing itself.’ → reflexive  
 (ii) ‘The child is being washed.’ → passive
- c. *To agoripli-thike (mono tu) / (apoti mitera tu).* (Greek)  
 the boy washed.NACT,3S (alone his) / (by the mother his)  
 (i) ‘The boy washed himself.’ → reflexive  
 (ii) ‘The boy was washed.’ → passive

<sup>8</sup> Calabrese (2021:8), note 16, says that *-u-* in Latin is an epenthetic vowel; this also holds for *-h-* in Albanian, (61b).

The Verb is attracted to Voice here too (and possibly moves further up in the clausal spine, although this requires further demonstration, especially for Albanian); the difference with periphrastic passives lies in the presence of an auxiliary in a higher functional head, which bears Tense and subject-agreement features.

Of course, one can ask why we see the alternation, within and across languages, between periphrastic passive and the other syncretic non-active heads. To put it another way, why do we not see periphrastic reflexives, middles or anti-causatives? One possibility is suggested by both Albanian and Latin, which have a periphrasis in the perfect (Albanian) or the perfective forms (Latin): it may be that the participle originates diachronically as denoting a resultant state, which develops into a perfect(ive) and thence into a generalized passive, at least in English, German and Italian of the languages we have considered here. Reflexives, with their lack of sensitivity to aspect, anticausatives, which tend to have an inchoative reading, and middles, which are purely stative, are all incompatible with the participial resultant-state interpretation; this may go some way to accounting for why these constructions do not originate as a periphrasis and why the participial periphrasis does not generalize to them. Formally, this could be captured in terms of a requirement that in each of these constructions, the lexical Verb must access the aspectual field, either through movement or Agree, and this is not possible if an auxiliary is present since an auxiliary will intervene between the position of the participial lexical Verb and the aspectual field. But we leave this as a tentative speculation for now.

## 6. Summary: What is Voice?

In the preceding sections, we have seen the following scenarios involving non-active Voice:

- (62) a. [VoiceP [Voice REFL ] ... [VP V IA-self/body(part) ]]  
 b. [VoiceP [Voice A-CAUS ] ... *from* P ... [VP V (IA) ]]  
 c. [VoiceP [Voice MIDDLE ] ... [AdvP ADV *for* P ] ... [VP V (IA) ]]  
 d. [VoiceP [Voice PASSIVE ] ... *by* P ... [VP V (IA) ]]

To complete the picture, we now add Active Voice:

- (63) [VoiceP [Voice ACTIVE ] ... [VP [VP V IA ]]



So, we observe five different kinds of Voice. The obvious question at this point is what underlies these alternations. For the anticausatives, middles and passives, i.e. (62b, c, d), we propose abstract oblique Cases: ablative ('from'), dative/ benefactive ('for'), instrumental/ergative ('by'). In Greek, Albanian and Latin, there is syncretic realisation of ablative and dative, meaning that the same preposition appears in passives and anticausatives. Of course, case syncretism is a natural and expected process.

In these terms, ACTIVE Voice fits neatly into the picture, in that it licenses an Accusative IA. In general, Case-licensing categories license a single Case (e.g. finite Tense licenses Nominative and no other Case, etc). So, if Voice can license exactly one Case, then we understand why the IA cannot be accusative in (64b,c,d) and must therefore move. Extending this to the reflexives, since reflexive Voice *self*, then we conclude that reflexive marking is a kind of Case (as independently proposed by Pesetsky 2011).

Our account leads to a new conclusion regarding the nature of syncretic non-active morphology: it marks Voice as a licenser of oblique Case. This distinguishes our approach from all previous analyses (but see note 10), including that proposed by Alexiadou, Anagnostopoulou and Schäfer (2015).<sup>9</sup> The one systematic exception is participial passives, which, perhaps due to the nature of passive participles, can license instrumental/ergative *by* (in some languages, e.g. Italian, in addition to the syncretic non-active morphology).

One question that we have systematically left open in the foregoing is the first-merged position of the external argument. There are two options here: either SpecVoiceP or SpecvP. If we take the former option, then in all the non-active Voices except Reflexive Voice the external argument can be suppressed or be an implicit argument of some kind, with the PP adjuncts Case-licensed by Voice. If we take the latter option, then the PPs can be seen as actually instantiating the external arguments, but we have to explain then why the external argument is not marked as reflexive in (62a) and why it is not marked Accusative in the active

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<sup>9</sup> Alexiadou, Anagnostopoulou and Schäfer (2015) present an analysis of non-active constructions across several languages. Unlike in our approach, they treat the passive in English and German as involving a Passive head which selects Voice bearing a D-feature representing the external argument. Passive selects VoiceP and binds the external argument (cf. also Bruening 2013). For passives in Greek and similar languages, on the other hand, these authors propose a structure without a Passive head, and they label Voice "Voic<sub>MIDDLE</sub>", which subsumes several morphologically syncretic Voice heads. This kind of Voice is also found in "marked anticausatives" in Greek (i.e., anticausatives bearing non-active morphology), as well as in reflexives. On the other hand, they propose a different structure for "SE-reflexives" and SE-marked anticausatives in Romance and Germanic. We consider our approach to be superior for two reasons. First, because it provides a uniform structure for reflexives and all kinds of non-active voice, and second, because the account extends naturally to English, as we have shown (cf. also Legate, Akkuş, Šereikaitė and Ringe 2020, who also do away with an extra Passive projection on top of Voice).

(with the IA presumably raising to SpecTP for Case). Concerning the latter point, Roberts (2019) suggests inheritance of Case features from Voice to *v* in the active, thus ensuring that the IA is Accusative. For reflexives, adopting the unaccusative analysis as in Section 2 neatly unifies reflexives with the other non-active Voices and this problem does not arise.

In the next section, we will try to extend our approach to the superficially very different voice systems found in Austronesian and Mandarin.

## 7. A tentative extension to Austronesian and Mandarin voice systems

### 7.1. Austronesian

Looking first at Austronesian voice systems, these languages are very well-known for the complexity and richness of morphological marking of voice, and associated case and agreement alternations. This is particularly true of the Philippine languages. In (64), we illustrate a typical Philippine pattern from Puyuma. Example (64a) shows “Actor Voice” (AV); here the verb is marked by the infix *-em-*, the agent argument (‘the child’) is marked with *na*, traditionally known in the Austronesian literature as a “definite pivot” marker, and the direct object is marked accusative. The word order here as in all other examples is V>S>O>Oblique. In (64b-d), we see the third person nominative prefix *tu-*. In (64b) we have “Patient Voice” (PV) marking in the form of the suffix *-aw* on the verb, the agent is marked nominative, while the patient receives the definite pivot marking *na*. In (64c), the verb is marked with the “Locative Voice” marking *-ay*, and the locative argument ‘road’ bears the definite pivot marking *na*. This argument also precedes the patient argument. Finally, in (64d), we have the “Circumstantial Voice” suffix *-anay*, and the instrumental argument has the definite pivot marking and precedes the patient.

(64) A typical Philippine pattern (Puyuma, Chen 2023):

- a. S<**em**>elap    na            walak kana    ramaraman i dalran    dra    saselap.  
 sweep<**AV**>    DEF.PIVOT child DEF.ACC rubbish    LOC road    INDF.OBL broom  
 ‘The child swept up the rubbish on the road with a broom.’    (**Actor Voice**)
- b. Tu=selap-**aw**            kana    walak na            ramaraman i dalran    dra    saselap.  
 3.NOM=sweep-**PV**    DEF.NOM child DEF.PIVOT rubbish    LOC road    INDF.OBL broom  
 ‘The child swept up *the rubbish* on the road with a broom.’    (**Patient Voice**)

- c. Tu=selap-**ay**            kana    walak na            dalran kana ramaramandra    saselap  
 3.NOM=sweep-**LV**    DEF.NOM child DEF.PIVOT road DEF.ACC rubbish INDF.OBL broom  
 ‘The child swept up the rubbish on *the road* with a broom.’    (**Locative Voice**)
- d. Tu=selap-**anay**        kana    walak    na            saselap kana ramaraman i dalran.  
 3.NOM=sweep-**CV**    DEF.NOM child    DEF.PIVOT broom DEF.ACC rubbish    LOC road  
 ‘The child swept up the rubbish on the road with *the broom*.’ (**Circumstantial Voice**)

We propose the analysis of this system summarised in (65). Following Chen (2023), we take each voice to be associated with topic-marking of a different argument with the *na* definite pivot marker, which is in complementary distribution with the otherwise regular case-agreement marking of the relevant grammatical function. Thus, in Actor Voice, the external argument is topic-marked, while the internal argument is accusative, and the obliques marked by the appropriate prepositions; this is schematised in (65a). In Patient Voice, (65b), the internal argument is topic-marked, the external argument is nominative, and the obliques are the same as in Actor Voice. Locative and Circumstantial Voice mark the locative and instrumental arguments, respectively, as topics, with the external argument nominative and the internal argument accusative.

- (65) a. Actor voice:            EA-Topic IA-ACC  
 b. Patient voice:            IA-Topic EA-Nom  
 c. Locative voice:            LOC-Topic EA-Nom IA-Acc  
 d. Circumstantial voice:    INST-Topic EA-Nom IA-Acc

More specifically, we analyse the verb-initial order as verb-raising into the Clitic Voice field (in the sense of Sportiche 1996); the morphological markers of the different voices are precisely exponents of the Sportichean Clitic Voice heads. The *na*-marked pivot/topic-arguments occupy SpecVoiceP with the Voice head agreeing with the Clitic Voice position, and thereby attracting the relevant argument to its Specifier. The external argument (when not a topic) precedes Voice, the internal argument (when not a topic) follows Voice.

The structures we assume for each voice seen in (64) and (65) are given in (66):<sup>10</sup>

<sup>10</sup> Rackowski and Richards (2005) propose that voice alternations in Tagalog result from object shift and that voice morphology is Case agreement with the shifted object. Clearly this proposal is very similar in spirit to our proposals here, notably in that it makes Indo-European voice systems look more similar to the Austronesian voice system than has previously been thought.

- (66) a. [<sub>CI</sub>Voice [<sub>CI</sub>-Voice V+Voice<sub>ACTOR</sub>] [<sub>TP</sub> ... [<sub>VoiceP</sub> EA<sub>TOP</sub> Voice<sub>ACTOR</sub> [<sub>VP</sub> (EA) IA<sub>ACC</sub> LocP CircP ]]]]
- b. [<sub>CI</sub>Voice [<sub>CI</sub>-Voice V+Voice<sub>PATIENT</sub>] [<sub>TP</sub> EA<sub>NOM</sub> ... [<sub>VoiceP</sub> IA<sub>TOP</sub> Voice<sub>PATIENT</sub> [<sub>VP</sub> (EA) (IA) LocP CircP ]]]]
- c. [<sub>CI</sub>Voice [<sub>CI</sub>-Voice V+Voice<sub>LOC</sub>] [<sub>TP</sub> EA<sub>NOM</sub> ... [<sub>VoiceP</sub> LocP<sub>TOP</sub> Voice<sub>LOC</sub> [<sub>VP</sub> (EA) IA<sub>ACC</sub> (LocP) CircP ]]]]
- d. [<sub>CI</sub>Voice [<sub>CI</sub>-Voice V+Voice<sub>CIRC</sub>] [<sub>TP</sub> EA<sub>NOM</sub> ... [<sub>VoiceP</sub> CircP<sub>TOP</sub> Voice<sub>CIRC</sub> [<sub>VP</sub> (EA) IA<sub>ACC</sub> LocP (CircP) ]]]]

Here we see the Agree relation between the two Voice heads, namely, the high Clitic Voice head and the lower Voice head. The lower head is also endowed with an EPP feature which triggers movement to the Specifier of the (low) Voice head. Thus, strictly speaking, there are in fact two Agree relations, namely between the two Voice heads on the one hand, and the lower Voice head and the relevant argument on the other. Although we postulate that the EA raises to SpecTP when not the pivot/topic argument, we are not committed to the idea that SpecTP has the properties of an A-position in these languages.<sup>11</sup> Indeed, following Aldridge (2021), we consider that it is possible that the A- vs. A'-distinction is not operative in these languages (cf. also Van Urk 2015).

Now let us look back at the schemata in (62) and (63) that we gave for the Indo-European languages that we analysed in the preceding sections, from, as it were, “an Austronesian perspective”:

- (67) a. [<sub>VoiceP</sub> [<sub>Voice</sub> REFL ] ... [<sub>VP</sub> V IA-self/body(part) ]]
- b. [<sub>VoiceP</sub> [<sub>Voice</sub> A-CAUS ] ... *from* P ... [<sub>VP</sub> V (IA) ]]
- c. [<sub>VoiceP</sub> [<sub>Voice</sub> MIDDLE ] ... [<sub>AdvP</sub> ADV *for* P ] ... [<sub>VP</sub> V (IA) ]]
- d. [<sub>VoiceP</sub> [<sub>Voice</sub> PASSIVE ] ... *by* P ... [<sub>VP</sub> V (IA) ]]
- e. [<sub>VoiceP</sub> [<sub>Voice</sub> ACTIVE ] ... [<sub>VP</sub> [<sub>VP</sub> V IA ]]

The Case relation that we postulated as holding between Voice and the reflexive anaphor, or PPs, in (67a-d), and between Active Voice and the IA in (67e) clearly corresponds to the Agree relation just postulated between the lower Voice and the appropriate argument in (66). In these

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<sup>11</sup> We thank Victoria Chen (personal communication) for drawing our attention to this point.

terms, we could consider the Anticausative in (67b) and the Passive in (67d) as two kinds of Patient voice.<sup>12</sup> The Middle in (67c) we could consider to be Experiencer Voice, somewhat analogous to the Austronesian Locative Voice (cf. Landau 2010 on the connection between Locatives and Experiencers). In the same vein, we could consider (67a) to be a special Reflexive Voice.<sup>13</sup>

Despite this important similarity, there are two clear salient differences between Austronesian and Indo-European type voice systems. First, unlike in Indo-European, in Austronesian the verb raises to the high Clitic Voice head. Second, in Austronesian, the low Voice head has an EPP feature which attracts the pivot/topic feature to its Specifier. Note that these differences represent very well-known forms of parametric variation, namely: verb-movement, and EPP features.

An intriguing question concerns the role of the (high) Clitic Voices in the Indo-European languages. Both Albanian and Greek, and indeed also the Romance languages, show that the Clitic Voices can in fact be exponents of non-active Voice (see our discussion in the previous sections, in particular section 2). As for English, we have seen that Voice is consistently null, except in the participial passive, and so there is no bar to considering the Clitic Voice heads in English to be syntactically present but phonologically null. Therefore the Agree relations between the two Voice heads are the same cross the Indo-European and the Austronesian languages.

## 7.2. Mandarin

Here we briefly consider how the Chinese *bei*-construction, often taken to be the analogue of the Indo-European passive, fits in the general picture that we have presented in this paper. Huang (1999) and Huang, Li and Li (2009) propose that there are in fact two *bei*-constructions, namely: (i) the long passive, which is analogous to the English *tough*-construction, in which *bei* takes a CP-complement, which features null-operator movement to SpecCP; and (ii) a short passive construction, which we take to have *bei* in Voice with a vP-complement. These two

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<sup>12</sup> Victoria Chen (personal communication) reminds us that some Philippine-type languages have an Indo-European style active-passive alternation, which can co-occur with the Philippine-type alternation (see also Chen 2023). This intriguing observation is consistent with our observation in section 5, that participial passives to some extent fall outside of the general Voice system we have described. Note also that at least in Romance se-impersonals can co-occur with the participial passive: *Si è stati arrestati* (lit. ‘SI is been arrested’, i.e. ‘People were arrested.’).

<sup>13</sup> For details on reflexives in Austronesian languages, see Franssen (2010), who, crucial to our contention, notes a connection between verb-affixal reflexives and verb-affixal passives in these languages among other things.

structures are shown in (68):

(68) a. Long passive:

*Zhangsan<sub>i</sub> bei* [<sub>CP</sub> *OP<sub>i</sub>* [*Lisi da-le t<sub>i</sub>*]]

Zhangsan BEI Lisi hit-PERF

‘Zhangsan was hit by Lisi.’

b. Short passive:

*Zhangsan<sub>i</sub> bei* [<sub>vP</sub> *PRO<sub>i</sub> da-le t<sub>i</sub>*]]

Zhangsan BEI hit-PERF

‘Zhangsan was hit.’

Here we leave aside the nature of the long passive (see Huang 1999 and Huang, Li and Li 2009 for detailed discussion). Concerning the short passive in (68b), we propose that *bei* corresponds to passive/Patient Voice. This raises the question of the status of PRO in (68b) in relation to the NP-movement relation that is standard in English and other languages in (short) passives. Following Chomsky et al. (2023), the distinction between “NP-trace” and “PRO” reduces to Form Copy in both cases, the difference being whether the higher copy (i.e., *Zhangsan* in (68b)) is internally or externally merged. Here we do not take a view on this question.

As a final point, it is worth noting that this account of the exponents of passive voice in Mandarin is consistent with the general “deep” analytic nature of Mandarin morphosyntax, as argued for in detail by Huang (2015).

## 8. Conclusions

We have argued that non-active Voices are licensors of abstract oblique Case, showing an exponence/doubling pattern reminiscent of clitic doubling as analysed by Sportiche (1996) (Baker, Johnson and Roberts’ 1989 analysis of passives anticipated this in the context of a rather different framework). The non-active Voices tend to show the same exponence/doubling pattern in a given language (with Albanian a particularly interesting and complex case; Kallulli and Trommer 2011, Kallulli and Roberts, to appear); we treat this as exponence of an oblique-licensing Voice. The nature of the Case-licensing affects the surface realisation of both the internal argument and, depending on precise assumptions about the position of the external argument, also the external argument. Furthermore, we have tentatively extended our approach

beyond Indo-European to both Austronesian and Mandarin Chinese. In the former case, we have seen a striking deep similarity between Austronesian and Indo-European voice systems subject to relatively simple parametric variation involving verb-movement and EPP features. We have also seen that the Mandarin short *bei*-passive fits into our system, and is consistent with the deep analyticity of this language.

Two important further questions remain. First, what is the nature of implicit arguments in the various non-active constructions? Second, what is the status of impersonals? On the former, Collins (2024) argues that passive implicit arguments are structurally represented (as does Roberts 2019), but this leaves open the question of implicit arguments in anticausatives and middles (on the latter, see Hoekstra and Roberts 1993). On the latter, Blevins (2003) argues that impersonals are transitive structures; Roberts (2019) develops this idea and treats impersonals as transitives with an arbitrary external argument. However, this approach does not account for the fact that in many languages the exponents of impersonals tend to be syncretic to those for non-active Voice, e.g. Italian *si* (on which see Cinque 1988, D’Alessandro 2007).

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