Antipassive in a Minimalist universal grammar

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Abstract. Legate (2021) deconstructs passive into three characteristic properties – agent demotion, theme promotion, and morphological marking – and shows that these properties vary independently across languages. She concludes that this range of variation supports an approach, such as Minimalism, in which universal grammar includes no information specific to voice. This brief note takes a similar approach to antipassive, a clause type whose typology has been investigated by Polinsky (2017). I first deconstruct antipassive into two characteristic properties – demotion of the internal argument, which comes in several subvarieties, and voice marking – and then suggest that these properties vary independently across languages. The data are drawn primarily from Austronesian languages.

Keywords. antipassive; syntactic typology; universal grammar

1. Introduction. The idea that the human language capacity in some way specifies the range of possible languages – so-called universal grammar (UG) – is deeply embedded in generative linguistic theory. At the same time, it has been hard to say more precisely what UG consists of. In Principles and Parameters Theory (P&P), the hope was that UG could be reduced to a small number of principles, each accompanied by interconnected parametric settings (e.g., Chomsky 1981, 1982, and much other work). The idea was that the principles and parameters together would specify the compete menu of options for grammars of specific languages (see Chomsky 1983 for a particularly clear statement). That hope has not been realized (e.g., Newmeyer 2005). Minimalism has replaced P&P's principles with a radically underspecified language capacity that consists of just two operations, Merge – in its internal and external versions – and Agree (e.g., Chomsky 1995, 2000, 2001, and much other work). Such a stripped-down language capacity has clear implications for UG, as well as for syntactic typology. Already in P&P, syntactic constructions were treated as "wholly epiphenomenal" (Newmeyer 2000: 12). Chomsky (1981: 121–127), for instance, deconstructed passive into "suppression of the subject" (122), "change of object to subject" (124), and passive morphology. He further observed that "the range of phenomena that fall within [the category of passive] in some sense appear to be rather heterogeneous in character" (Chomsky 1981: 121). Taking this line of thought further, Legate (2021) demonstrates that the three properties into which she deconstructs passive – agent demotion, theme promotion, and morphological marking – vary independently across languages. She concludes that this range of variation supports an approach, such as Minimalism, in which "there is little or no information specific to voice in the language faculty" (Legate 2021: 173).

The aim of this note is to begin to replicate Legate's demonstration for antipassive. I try to show that when antipassive is deconstructed along lines similar to what Chomsky and Legate have proposed for passive, its characteristic properties vary independently across languages. The results, while preliminary, are compatible with the impoverished UG that Minimalism envisions.

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Section 2 deconstructs antipassive into demotion of the internal argument, which comes in several subvarieties, plus voice marking distinct from active transitive voice. Section 3 suggests that these properties vary independently across languages. Section 4 takes up the question of transitivity. Section 5 concludes.

Since the discussion is intended to be preliminary, for the most part I illustrate each point with data from just one or two languages, leaning heavily on Austronesian languages that are more or less familiar to me. It will be important to validate the claim that the properties of antipassive vary independently through serious investigation of a far broader range of languages, including those examined in Cooreman's (1994) and Polinsky's (2017) important overviews of antipassive and Heaton's (2017, 2020) extensive typological survey.

2. Deconstructing antipassive. As they are typically described in the literature, passive and antipassive are both formed from *transitive verbs* – verbs that select two semantic arguments.[1] One fundamental difference between them is that passive affects the realization of both arguments of the verb, whereas antipassive affects the realization of just the argument that Legate (2021) calls the *theme*, Polinsky (2017) calls the *logical object*, and I call the *internal argument* (INT).[2] As Polinsky (2017: 309) says, this argument is "demoted" in antipassive: "either suppressed or represented by an expression lower on the grammatical hierarchy" than the direct object. Antipassive does not (directly) affect the realization of the argument that Legate calls the *agent*, Polinsky calls the *logical subject*, and I call the *external argument* (EXT). This argument is realized as the subject.

By way of illustration, consider these examples from Chamorro, an Austronesian language of the Mariana Islands. Chamorro has verb-first word order and a voice system that includes active transitive, passive, and antipassive clauses (e.g., Cooreman 1987; Chung 1998, 2020). The clauses below are formed from the transitive verb *bisita* 'visit', which selects two semantic arguments, namely, an EXT and an INT. In the active transitive clause (1), the EXT *Dolores* is realized as the subject, and the INT *Antonio* is realized as the direct object.[3]

(1) Chamorro active transitive clause (Chung 2013: 6, (8a))

Ha	bisita	si	Dolores	si	Antonio.
AGR	visit	UNM	Dolores	UNM	Antonio

'Dolores visited Antonio.'

In the passive clause (2), the EXT is demoted – realized as an oblique DP – the INT is promoted to subject, and the verb is inflected with the passive infix *-in-*.

(2) Chamorro passive clause (Chung 2013: 6, (8b))

B*in*isita	si	Antonio	(gi)as	Dolores.
AGR.PASS.visit	UNM	Antonio	OBL	Dolores

'Antonio was visited by Dolores'

[1] This is an oversimplification, obviously. Somewhat less simplified: transitive verbs are verbs that select two semantic arguments, one of which is syntactically realized as the direct object under default circumstances.

[2] See Postal (1977: 353–355) for a view in which antipassive affects both arguments of the verb.

[3] Dångkulu na si Yu'us ma'åsi' to Manuel F. Borja for providing judgments on the Chamorro examples that are not attributed to other sources. The morpheme-by-morpheme glosses in the Chamorro examples generally employ the abbreviations used in the Leipzig Glossing Rules, except that UNM=unmarked case. Chamorro examples labeled CD are taken from the 2013 unedited database for the revised Chamorro-English dictionary. The morpheme-by-morpheme glosses in examples from other languages are unchanged from the original sources.

Finally, in the antipassive clause (3), the EXT is realized as the subject, the INT is demoted – realized as an oblique DP – and the verb shows the antipassive prefix *man-*.

(3) Chamorro antipassive clause (Chung 2013: 6, (8c))

Man-bisita	si	Dolores	as	Antonio.
AGR.ANTIP-visit	UNM	Dolores	OBL	Antonio

'Dolores visited Antonio.'

Oblique DPs that are proper names in Chamorro are case-marked with *(gi)as*. Various sorts of evidence reveal that the EXT is the subject in (1) and (3) and the INT is the subject in (2) (Chung 2013: 6–7, 2020: 213–219, 227–234).

The demoted EXT of a passive clause in Chamorro can be an implicit argument, that is, syntactically unrealized but semantically present, as in (4a). In such cases, the verb shows the passive prefix *ma-*.[4] The demoted INT of an antipassive clause can be an implicit argument, as well; see (4b). Implicit arguments have an interpretation that is context-dependent (Bhatt & Pancheva 2017; Condoravdi & Gawron 1996). Generally speaking, the types of implicit arguments considered here are interpreted either as narrow-scope indefinites or anaphorically; I will work with this simplified generalization from now on.[5] See the Appendix for a little more discussion of the syntactic-semantic profile of the Chamorro implicit arguments in (4).

(4) a. Chamorro passive clause with implicit EXT

Ma-bisita	si	Antonio.
AGR.PASS-visit	UNM	Antonio

'Antonio was visited.'

b. Chamorro antipassive clause with implicit INT

Man-bisita	si	Dolores.
AGR.ANTIP-visit	UNM	Dolores

'Dolores visited.'

As Polinsky (2017: 312–313) observes, another way for antipassive to be realized is for the INT to undergo pseudo noun incorporation (PNI), in the sense of Massam (2001) and much subsequent work – or, perhaps, even (ordinary) noun incorporation. (The last possibility brings to mind Baker's 1988 proposal to derive both noun incorporation and antipassive via head movement of N to V; in his proposal, the N that raises to V in antipassive is the antipassive prefix.) Following Chung and Ladusaw (2020), I take this to mean that the INT of antipassive is demoted if its constituent structure must be "smaller" than the constituent structure of ordinary direct objects; in other words, if it must be N or NP, as opposed to DP.

A particularly clear example of an antipassive of this type is found in Mandar, a Western Malayo-Polynesian (Austronesian) language of South Sulawesi that has been investigated by Brodkin (e.g., 2021, 2022, to appear). Mandar has verb-first word order, no case marking, and ergative-absolutive agreement. In the active transitive clause (5), the verb (glossed 'PV') shows

[4] Chamorro has two passive affixes, *-in-* and *ma-*. A simplified view of their distribution: *-in-* occurs when the demoted EXT is singular, *ma-* occurs when the demoted EXT is dual, plural, or an implicit argument. See Chung (2020: 220–223) for details.

[5] Here are two English pairs of examples illustrating the indefinite vs. anaphoric interpretation of implicit arguments of verbs. In *Her latest book was published in 2015*, the implicit EXT is indefinite, whereas in *Her latest book was written in 2015*, the implicit EXT is anaphoric. In *They wrote on the dotted line*, the implicit INT is indefinite, whereas in *They signed on the dotted line*, the implicit INT is anaphoric.

ergative agreement, which agrees with the EXT (a third person singular null pronoun). Absolutive agreement is realized by a second-position clitic that agrees with the INT *di'o bau o* 'that fish'.

(5) Mandar transitive clause (Brodkin 2022: 8, (9b))
Na-ande=i di'o bau o.
PV.3ERG-eat=3ABS that fish there
'He ate those fish.'

In the antipassive clause in (6), the verb shows the antipassive affix *ma*'- (glossed 'AV') and the absolutive clitic agrees with the EXT (a first-person singular null pronoun). The INT *bau* 'fish' is demoted: it must be NP but not DP. It cannot include a demonstrative, for instance (Brodkin 2022: 8, and p.c.).[6]

(6) Mandar antipassive clause (Brodkin 2022: 18, (31b))
Ma'-ande=a' bau.
AV-eat=1ABS fish
'I'm eating fish.'

Brodkin (2022) demonstrates that Mandar has high absolutive syntax: the DP cross-referenced by the absolutive clitic is the structurally most prominent DP in the clause. (This amounts to saying that the absolutive DP is the subject.) This DP is the INT in (5), but the EXT in (6). In his account (2022: 7), the demoted INT of antipassive is an NP that remains within VP, where it receives abstract accusative Case.

Mandar also allows the demoted INT of antipassive to be an implicit argument, as in (7).[7]

(7) Mandar antipassive clause with implicit INT (Brodkin 2022: 18, (31c))
Umm-ande-a'.
AV-eat-1ABS
'I'm eating.'

Finally, alongside demotion of the INT, I take (verbal) voice morphology – such as Chamorro *man*-, Mandar *ma'*-, and Mandar *umm*- – to be characteristic of antipassive (cf. Legate 2021 on passive and Polinsky 2017: 314 on verbal affixation in antipassives). I thus decompose antipassive into two characteristic properties: (a) INT demotion, which comes in the three subvarieties shown in (8), and (b) (verbal) voice morphology.[8]

(8) Characteristic properties of antipassive
a. Demotion of the INT:
The INT is
i. syntactically realized as an oblique DP, or
ii. not syntactically realized (it is an implicit argument), or
iii. syntactically realized as N(P) as opposed to DP
b. (Verbal) voice morphology

[6] When the demoted INT is overt, it follows the EXT: see Brodkin (2021: 33, (30)) for an example, and Brodkin (to appear) for discussion of Mandar prosody, word order, and clause-internal movement.
[7] Mandar has numerous antipassive (AV) affixes; see Brodkin (2022: 18–20) on their distribution.
[8] Jessica Coon asks whether option (8aiii), that the INT is syntactically realized as N(P) as opposed to DP, might be better stated in terms of semantic type, i.e., the INT is of type <e,t> as opposed to type *e*. This is an interesting question that I cannot address here.

3. Variations on a theme. Polinsky (2017) and Heaton (2017, 2020) have pointed out that the empirical landscape of antipassives is surprisingly varied. Among other things, antipassives are not uniform with respect to morphological realization or discourse function; they are not attested only in ergative languages (despite early conjectures to the contrary by, e.g., Silverstein 1972); and it is difficult to draw clear boundaries separating them from (pseudo) noun incorporation, on the one hand, and differential object marking (DOM), on the other. What is responsible for this variability? I contend that the two characteristic properties of antipassive simply vary independently. Section 3.1 shows that INT demotion can occur without overt voice morphology; section 3.2 shows that the overt voice morphology associated with antipassive can occur without INT demotion.

3.1. INT DEMOTION BUT NO VOICE MORPHOLOGY. In the antipassives presented in section 2, INT demotion co-occurs with verbal voice morphology. It is also possible for INT demotion to occur without any voice morphology (Heaton 2020: 133–134; see also Postal 1977: 351–352). The following discussion shows this for the three subvarieties of INT demotion.

3.1.1. CHAMORRO. To begin with, there are languages in which the demoted INT is an oblique DP or an implicit argument, but the verb need not show overt voice morphology. Take Chamorro, for instance. The vast majority of verbs in Chamorro antipassive clauses must be inflected with the antipassive prefix *man-*, as seen earlier in (3) and (4b). But a handful of verbs, including *ayåo* 'borrow', *dandan* 'play (music)', and *gimin* 'drink', cannot show *man-* or any voice morphology at all in antipassive clauses (Chung 2020: 226).[9] The verbs *ayåo* and *gimin* are shown below in pairs of an active transitive clause and an antipassive clause. Note that the verb of each pair (in bold) differs only in its subject-verb agreement, which is sensitive to transitivity (Chung 2020: 20–31).[10]

(9) a. Chamorro active transitive clause
Ha **ayåo** si Juan i lapes-su.
AGR borrow UNM Juan the pencil-AGR
'John borrowed my pencil.'

b. Chamorro antipassive clause with oblique DP
Um-ayåo si Maria sanhilo'-hu.
AGR-borrow UNM Maria shirt-AGR
'Maria borrowed a shirt of mine.'

(10) a. Chamorro active transitive clause (CD, *kuåntu åntis*)
Un **gigimin** i hanum sinaga.
AGR drink.PROG the rainwater
'You have been drinking the rainwater.'

b. Chamorro antipassive clause with implicit INT (CD, *påtiu*)
G*um*igimin gi patiu.
AGR.drink.PROG LOC patio
'He is drinking on the patio.'

[9] These verbs show passive voice morphology in the expected way in passive clauses.
[10] Subject-verb agreement in the realis mood is realized as a proclitic when the verb is transitive, but as an infix or prefix when the verb is intransitive. Oblique DPs whose D is the null indefinite article are not overtly case-marked; this is why the demoted INT in (9b) is not preceded by a case marker (Chung 2020: 90–91).

3.1.2. NIUEAN. INT demotion combines with the absence of voice morphology in a more general way in Niuean, a Polynesian (Austronesian) language of Niue that has been investigated by Seiter (e.g., 1979, 1980), Massam (e.g., 2001, 2020), Clemens (e.g., 2014, 2019), and Tollan (e.g., 2019). Niuean has strict VSOX word order and ergative-absolutive case marking. The case markers are proclitics that are sensitive to whether or not the DP is a common noun. In the transitive clause (11), the EXT *ekekafo* 'doctor' appears in the ergative case (marked with *e*), and the INT *ia* 'him' appears in the absolutive case (marked with *a*).

(11) Niuean transitive clause (Seiter 1980: 29, (73b))
To lagomatai he ekekafo a ia.
FUT help ERG doctor ABS him
'The doctor will help him.'

A different case pattern occurs in certain clauses whose verb has an INT that, as Seiter (1980: 33) puts it, is "only indirectly affected by the process described, if at all". More specifically, for most psychological verbs, perception verbs, and a few other verbs, such as *mui* 'follow' and *fakatali* 'wait for', the EXT appears in the absolutive case and the INT appears in the oblique case used for goals (Seiter 1980: 32–34; Massam 2020: 168–174). In the literature on Polynesian syntax, verbs that occur in this case pattern are called "middle" verbs – an unfortunate term due to Chung (1978a). In the "middle" clause (12), the EXT *au* 'I' appears in the absolutive case and the INT *koe* 'you (sg.)' is marked with *ki*, which Seiter glosses 'to'.

(12) Niuean "middle" clause (Seiter 1980: 32, (83b))
To fanogonogo a au ki a koe.
FUT listen ABS I to PERS you
'I'll listen to you.'

I claim that Niuean "middle" clauses are (noncanonical) antipassives. The idea that they involve a voice alternation is consistent with two further patterns: (a) some transitive verbs, such as *kai* 'eat', can also occur in "middle" clauses, especially when the clause is progressive or incompletive (Seiter 1980: 33–34; Massam 2020: 172–173), and (b) some "middle" verbs, such as *fakalilifu* 'respect' (see (13a)), can also occur in transitive clauses, as in (13b) (Seiter 1980: 33 and footnote 11; Massam 2020: 173–174).[11]

(13) a. Niuean "middle" clause (Seiter 1980: 33, (87a))
Fakalilifu a ia ke he tau momotua.
respect ABS he to PL old.PL
'He respects the old people.'
b. Niuean transitive clause (Seiter 1980: 33, (87b))
Fakalilifu e ia e tau momotua.
respect ERG he ABS PL old.PL
'He respects the old people.'

Seiter provides various sorts of evidence (summarized in 1980: 148) that the INT of a "middle" clause is an oblique DP. For instance: relativization of either the EXT or the INT of a transitive

[11] Although Seiter (1980) found just four transitive verbs that can occur in "middle" clauses, Massam (2020) noticed a larger number of such verbs. Diane Massam points out (personal communication) that these transitive verbs often occur in "middle" clauses when the clause is progressive, but that this may not be an absolute requirement. No information is available about other potential semantic differences, if any, between pairs of examples such as (13).

clause leaves a gap, whereas relativization of oblique DPs leaves behind a resumptive pronoun; either the EXT or the INT can undergo raising, whereas oblique DPs cannot. The INT of a "middle" clause patterns like an oblique DP for these purposes. Accepting all this (but see section 4), Niuean is another language in which the demoted INT is an oblique DP, but there is no overt voice morphology.

3.1.3. ENGLISH. English has a clause type, known as object deletion, in which the INT of certain transitive verbs is an implicit argument. Compare the transitive clause (14a) with the object deletion clause (14b).

(14) a. She was reading a book.
b. She was reading.

Blight (2004) (cited by Polinsky 2017: 329 and Heaton 2020: 135) analyzes English object deletion clauses as antipassive. Likewise, Postal (1977: 341–346) analyzes French object deletion clauses as antipassive. Heaton (2017: 189), who uses the term "ambitransitive" for verbs, such as *read*, that can be transitive or intransitive, notes that these verbs "have antipassive-like features" (see also Heaton 2020: 134). What matters here is that the INT in (14b) is an implicit argument, and this demoted INT occurs in the absence of voice morphology.

3.1.4. NEZ PERCE. Finally, there are languages in which the demoted INT must be "smaller" – NP as opposed to DP – but the verb shows no voice morphology. One such language is Nez Perce (Niimiipuutímt), a Sahaptian language of the Pacific Northwest that has been investigated by Deal (e.g., 2010, 2011). Nez Perce has what Deal (2010: 74) calls a "three-way ergative" case system, in which the EXT and the INT of a transitive clause are overtly case-marked, but the single argument of an intransitive clause is caseless. In the transitive clause (15), the EXT is in the ergative case (marked with *-ním*), and the INT is in the object case (marked with *-ne*).

(15) Nez Perce transitive clause (Deal 2010: 83, (13a))
'ip-ním pée-qn'i-se qeqíi-ne.
3SG-ERG 3/3-dig-IMPERF edible.root-OBJ
'He digs qeqíit roots.'

Nez Perce also allows transitive verbs to occur in another clause type in which both the EXT and the INT are caseless, as in (16). Following previous work on Nez Perce, Deal identifies this clause type as antipassive.

(16) Nez Perce antipassive clause (Deal 2010: 83, (13b))
'ipí hi-qn'íi-se qeqíit.
3SG 3SUBJ-dig-IMPERF edible.root
'He digs qeqíit roots.'

Deal (2010: 85–86, 92–94) shows that the INT of a transitive clause can be interpreted as definite or indefinite, whereas the INT of an antipassive clause must be interpreted as a property-type indefinite. She derives this semantic difference from the syntactic proposal that the INT of a transitive clause is DP, whereas the INT of an antipassive clause must be NP but not DP. Note that no voice morphology distinguishes the verbs in (15)–(16), although they show different forms of agreement – subject-object agreement in (15) vs. subject agreement in (16). Nez Perce, in other words, is a language in which the demoted INT must be NP as opposed to DP, but voice morphology is absent.

3.1.5. SUMMARY. In short, it is possible for INT demotion to occur even when the verb shows no overt voice morphology. This is so whether the demoted INT is realized as an oblique DP, an implicit argument, or NP as opposed to DP.

3.2. VOICE MORPHOLOGY BUT NO INT DEMOTION. It is more difficult to point to languages in which the voice morphology associated with antipassive occurs without INT demotion. One such language may be Chamorro.

Chamorro has a rich system of complex word formation (i.e., derivational morphology) that includes a number of ways of deriving complex verbs from nouns. The following types of denominal verb formation are of interest here: one process that creates derived transitive verbs, and several processes that create derived intransitive verbs.

First of all, transitive verbs can be derived from concrete nouns by *conversion* – by a change in lexical category not signaled by any overt morphology. Conversion in Chamorro is highly similar to the English process of conversion that derives transitive verbs such as *butter*, *bottle*, and *nail* from the corresponding nouns (Clark & Clark 1979). Both the Chamorro process and the English process are lexically restricted, on the one hand, but productive, innovative, and informed by essentially the same semantic-pragmatic generalizations, on the other (Chung 2012). Some examples of complex transitive verbs derived from nouns by conversion in Chamorro are cited in (17).

(17) Chamorro denominal transitive verbs formed by conversion (Chung 2012: 34)

Noun		*Complex verb*	
apåga	'shoulder'	apåga	'carry on shoulder'
botsa	'pocket'	botsa	'put in pocket'
åtuf	'roof'	åtuf	'put a roof on'
chå'lak	'small cut'	chå'lak	'make a small cut in'
bålas	'whip'	bålas	'hit with whip'

Second, intransitive verbs can be derived from nouns by attaching one of Chamorro's overt voice affixes to the noun. These formations are lexically restricted and unproductive to one extent or another. Nonetheless, the complex verb's morphological relation to the noun from which it is derived, and the affix's identity as a voice affix, are – with the possible exception of the verbs in (20) – quite transparent.

The most productive of these formations involves the passive infix *-in-*. This infix combines with nouns denoting types of clothing or jewelry to create complex intransitive verbs which mean 'wear [that type of clothing or jewelry]', and with nouns denoting means of transportation to create complex intransitive verbs which mean 'use [that means of transportation]' (Chung 2020: 630–631). One can perhaps think of the meanings of these denominal verbs as passive-like, in that they can be paraphrased as 'be clothed/bedecked/adorned [by that type of clothing or jewelry]' or 'be conveyed [by that means of transportation]'. See (18).

(18) Chamorro denominal intransitive verbs formed with passive *-in-*

Noun		*Complex verb*	
tuhung	'hat'	tinihung	'wear a hat'
magågu	'clothes'	minagågu	'wear clothes'
sapåtus	'shoes'	sinapåtus	'wear shoes'
bisikleta	'bicycle'	binisikleta	'ride a bicycle'

The antipassive prefix *man-* combines with a small number of nouns to create complex intransitive verbs of internal evolution or transformation, which mean 'develop [whatever the noun denotes]' (Chung 2020: 631, 690). Some examples are cited in (19). These verbs denote activities of internal change that can be viewed as iterative or habitual and whose onset is perhaps imperceptible – aspectual properties that Cooreman (1994: 57–58) associates with the antipassive (see also Polinsky 2017: 315–316).

(19) Chamorro denominal intransitive verbs formed with antipassive *man-*

Noun		*Complex verb*	
chåda'	'egg'	mañåda'	'lay eggs'
chetnut	'wound, sore'	mañetnut	'become infected'
floris	'flower'	mamfloris	'bloom, have blossoms'
håli'	'root'	manhåli'	'sprout roots'
pokkat	'footstep'	mamokkat	'walk'

Finally, the passive prefix *ma-* combines unproductively with a very few nouns to create complex intransitive verbs with unpredictable meanings, as illustrated in (20).

(20) Chamorro denominal intransitive verbs formed with passive *ma-*

Noun		*Complex verb*	
cho'chu'	'work'	macho'chu'	'work, i.e., do work'
håga'	'blood'	mahåga'	'menstruate'
fondu	'bottom'	mafondu	'sink'

A few examples of clauses in which these verbs occur are cited below. In (21a), the predicate is a denominal transitive verb formed by conversion; in (21b), a denominal intransitive verb formed with the passive infix *-in-*; and in (21c), a denominal intransitive verb formed with the antipassive prefix *man-*.

(21) a. Chamorro clause with denominal transitive verb (conversion) (CD, *åtuf*)

Si	Pedro	ha	åtuf	i	gimå'-ña	nigap.
UNM	Pedro	AGR	put.roof.on	the	house-AGR	yesterday

'Pedro put a roof on his house yesterday.'

b. Chamorro clause with denominal intransitive verb (passive *-in-*) (CD, *ma'akgak*)

Ti	siña	yu'	s*in*apåtus.
not	can	I	AGR.wear.shoes

'I cannot wear shoes.'

c. Chamorro clause with denominal intransitive verb (antipassive *man-*) (CD, *mañetnut*)

Mañetnut	i	addeng-hu.
AGR.become.infected	the	foot-AGR

'My foot became infected.'

Stepping back from the details, one can generalize from (17)–(20) that Chamorro has systematically appropriated the morphology of voice for use in denominal verb formation, whether this morphology is overt (as it is in passive and antipassive clauses) or not (as it is in active transitive clauses).

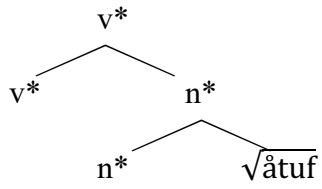
In a morphological theory like Distributed Morphology (e.g., Halle & Marantz 1993; Marantz 1997; Embick 2010; and much other work), this systematic appropriation would be represented in constituent structure below the word level, employing categories such as Root

(represented as $\sqrt{root}$) and the category-forming functional heads that create nouns and verbs (represented here as n* and v*). Nouns like *guma'* 'house' and *åtuf* 'roof' would have the internal structure shown in (22), for example.

(22)

A denominal transitive verb formed by conversion, such as *åtuf* 'put a roof on', would have the more elaborate internal structure shown in (23) (Chung 2012: 39–45).

(23)



Suppose that the Chamorro voice affixes are normally the realizations of the functional head Voice, which combines with the constituent consisting of the verb and its arguments (i.e., vP) in the verb's extended projection. Then a natural move to make would be to treat these affixes, when recruited for denominal verb formation, as realizations of the functional head that combines with n* to form denominal verbs – namely, the category-forming head v*. Thus, the null affix that signals active transitive voice would realize this v* in complex transitive verbs created by conversion, as in (23), and the passive *-in-* and the antipassive *man-* would realize this v* in complex intransitive verbs such as *sinapåtus* 'wear shoes' and *mañetnut* 'become infected', as in (24).

(24)

We are now in a position to see the point. The voice affixes recruited for denominal verb formation signal the transitivity of the complex verb they create, in a way consistent with their original function. The null active transitive voice affix creates transitive verbs – verbs, such as *åtuf* 'put a roof on', that select an EXT and an INT. The passive *-in-* and the antipassive *man-* create intransitive verbs – verbs, such as *sinapåtus* 'wear shoes' and *mañetnut* 'become infected', that select a single argument that serves as their subject. (The single argument of *sinapåtus* denotes the wearer; the single argument of *mañetnut* denotes a body part.) Note that *sinapåtus* selects no second argument that could be realized outside the denominal verb as an EXT (e.g., as a constituent denoting the clothing worn), whether demoted or not. Likewise, *mañetnut* selects no second argument that could be realized outside the denominal verb as an INT (e.g., as a constituent denoting the infection developed), whether demoted or not. This last observation makes it clear that clauses formed from denominal verbs like those in (19) contain the voice morphology associated with antipassive – namely, *man-* – but no INT demotion.[12]

[12] Alongside the antipassive *man-*, Chamorro has an agreement prefix *man-* that appears on intransitive verbs to signal agreement with a plural subject. The two prefixes exhibit the same morphophonemic alternations, but differ in how nasal substitution – which changes /man-sugun/ to /mañugun/ 'endure (ANTIP)' and /man-såga/ to /mañåga/

Significantly, the ability of antipassive voice morphology to occur without INT demotion in denominal verb formation is not unique to Chamorro. Jessica Coon and Marcel den Dikken have each pointed out that a similar pattern is attested elsewhere. Coon observes that in Chuj (Mayan), the suffix *-w*, which attaches to transitive roots to form antipassive verbs in the construction known as the incorporation antipassive,[13] also attaches to nominal roots to form unergative verbs; see Coon (2019) for a detailed investigation. Den Dikken observes that in Hungarian, the suffix *-ik*, which attaches to the verb in various types of detransitivized clauses, including certain antipassive clauses, also productively attaches to nouns to form intransitive verbs; see den Dikken (2022) for discussion. These patterns offer further evidence that antipassive voice morphology can occur in the absence of INT demotion. Whether this particular dissociation also occurs outside of complex word formation remains to be seen.

4. Variations on transitivity. Though preliminary, the discussion above makes a good initial case that the characteristic properties of antipassive vary independently. This, in turn, raises the question of whether antipassives might also exhibit crosslinguistic variation in other, related domains (see Heaton 2017 for detailed investigation). One such domain is the morphosyntax of transitivity.

The fact that the INT of an antipassive clause is not realized as a direct object, but rather demoted, might lead one to expect the clause to show the morphosyntax of an intransitive clause as opposed to a transitive clause. (By *transitive clause*, I mean a clause that has a direct object.) This is uncontroversially true for antipassive clauses in many languages, including Chamorro and Mandar (see section 2). In Chamorro, antipassive clauses have the case marking and agreement of intransitive clauses, and the EXT (= subject) undergoes *wh*-movement like the subject of an intransitive clause, whereas the demoted INT is simply inaccessible (Chung 1998, 2020). In Mandar, antipassive clauses exhibit the agreement of intransitive clauses. Recall that Mandar has high absolutive syntax; it also has a restriction that makes the absolutive the only DP eligible for *wh*-movement. Once again, antipassive clauses pattern like intransitive clauses: the EXT (= the absolutive DP) can undergo *wh*-movement, but the demoted INT cannot (Brodkin 2022: 472).

The situation with regard to morphosyntactic intransitivity is less straightforward for antipassives in some other languages. Some challenges and opportunities are briefly examined here.

Consider object deletion to begin with. Indonesian, a Western Malayo-Polynesian (Austronesian) language, has a clause type in which the INT of certain transitive verbs is an implicit argument (Sneddon 1996: 242–243). Compare the active transitive clause (25a) with the object deletion clause (25b).

(25) a. Indonesian transitive clause (Sneddon 1996: 243)
Anakanak sedang me-nyanyi lagu.
children PROG TRANS-sing song
'The children are singing a song.'

'stay (PL)' – interacts with CV reduplication for the progressive aspect. For the antipassive prefix, nasal substitution precedes reduplication, e.g., /mañuñugun/ 'endure (ANTIP PROG)'; for the agreement prefix, nasal substitution follows reduplication, e.g., /mañåsaga/ 'stay (PL PROG)'. As expected, the *man-* that is recruited for denominal verb formation patterns like the antipassive prefix, not the plural prefix: nasal substitution precedes reduplication, e.g., /mañeñetnut/ 'become infected (PROG)' (Chung 2020: 690–691).

[13] Chuj has two antipassive constructions (see Coon 2019: 50). In the incorporation antipassive, the INT is NP as opposed to DP; in the other antipassive, the INT is either realized as an oblique or else implicit.

b. Indonesian object deletion (Sneddon 1996: 243)
Anakanak sedang me-nyanyi.
children PROG TRANS-sing
'The children are singing.'

Indonesian object deletion has much in common, in form and interpretation, with English object deletion, but there is an interesting difference. English verb morphology does not reveal whether the object deletion clause (14b) is transitive or intransitive. However, the verb of an Indonesian object deletion clause must be inflected with the transitive prefix *meng-* (Sneddon 1996: 243). Even in colloquial varieties of Indonesian in which *meng-* need not appear in transitive clauses, there evidently are verbs that must be inflected with *meng-* in object deletion clauses (see Chung 1978b: 338, where this observation is attributed to Soenjono Dardjowidjojo). This morphosyntactic fact seems to signal that object deletion clauses in Indonesian are transitive, despite their demoted INT.

Next, consider DOM, the phenomenon in which direct objects that are more prominent along some dimension are overtly case-marked, but less prominent direct objects are not (see, e.g., Aissen 2003, the references cited there, and much subsequent work). In Spanish, animate direct objects are case-marked with the dative preposition *a*, as in (26a), whereas inanimate direct objects have no case marking, as in (26b) (see Aissen 2003: 462–465 and Fábregas 2013 on the fine details).

(26) a. Spanish clause with DOM (Fábregas 2013: 1, (1b))
Encontré a un superviviente.
I.found A a survivor
'I found a survivor.'
b. Spanish transitive clause without DOM (Fábregas 2013: 1, (1a))
Encontré un problema.
I.found a problem
'I found a problem.'

If one were to take the DOM object in (26a) to be realized as an oblique DP, then it could be identified as a demoted INT. However, other well-known Spanish evidence paints a more ambivalent picture. On the one hand, the fact that both clauses in (26) have passive alternants can be taken to suggest that both (26a) and (26b) are transitive, i.e., that their INT is a direct object (Fábregas 2013: 2). Judith Aissen (p.c.) observes that patterns of clitic doubling and relativization offer further support for this view. On the other hand, the fact that pronominal DOM objects are realized as accusative clitics in some varieties of Spanish but as dative clitics in others (Fábregas 2013: 44–47) could be taken to suggest that their status as direct objects versus demoted INTs differs from one variety to another. The more general point is that, here, the morphosyntactic indicators of transitivity do not completely line up.

The indicators may align more favorably for "middle" clauses in Niuean (see section 3.1.2). The literature on Niuean syntax is divided on the issue of the transitivity of "middle" clauses. For Seiter (1980), Niuean "middle" clauses are intransitive, but for Tollan (2019: 72–74), they are transitive – their oblique DPs are direct objects. Tollan's evidence for transitivity comes from PNI (Massam 2001). In Niuean PNI, the INT of a transitive verb is realized as a caseless NP to the immediate right of the verb, inside VP; the EXT appears in the absolutive case, outside VP (i.e., following the INT), and is itself followed by other arguments and adjuncts. Compare the

case marking and word order of the EXT and INT in the transitive clause (27a) with those in the PNI clause (27b).

(27) a. Niuean transitive clause (Seiter 1980: 69, (183a))
Takafaga tūmau nī e ia e tau ika.
hunt always EMPH ERG he ABS PL fish
'He's always fishing (lit. He always hunts fish).'
b. Niuean PNI clause (Seiter 1980: 69, (184a))
Takafaga ika tūmau nī a ia.
hunt fish always EMPH ABS he
'He's always fishing (lit. He always hunts fish).'

The key point is that "middle" verbs also occur in PNI clauses (Seiter 1980: 71; Tollan 2013: 72–74; Massam 2020: 170). This happens not only for "middle" verbs that can independently occur in transitive clauses, such as *fakalilifu* 'respect' (see (13)), but also for "middle" verbs that cannot occur in transitive clauses, such as *manako* 'want' (Seiter 1980: 88, fn. 33).

(28) a. Niuean "middle" clause (Seiter 1980: 71, (189a))
Manako nakai a koe ke he tau manu?
like Q ABS you to PL animal
'Do you like (the) animals?'
b. Niuean PNI clause (Seiter 180: 71, (189b))
Na manako manu nakai a koe?
PST like animal Q ABS you
'Are you an animal-lover?'

The patterns illustrated in (27) and (28) *could* be an indication that "middle" clauses are transitive, meaning that their oblique DPs are direct objects. However, another approach – one fully consistent with the ideas pursued here – is to claim that in Niuean, both "middle" clauses and PNI clauses are antipassives. Suppose this is so. More specifically, suppose that "middle" clauses are antipassives in which the demoted INT is realized as an oblique DP, and PNI clauses are antipassives in which the demoted INT is realized as NP as opposed to DP. Then, a view of Niuean grammar emerges in which the language has three subtypes of transitive verbs: (i) verbs that must occur in the antipassive – e.g., "middle" verbs like *manako* 'like', which occur in "middle" and PNI clauses, but not transitive clauses; (ii) verbs that can occur in the antipassive only if the demoted INT is realized as NP, i.e., verbs that occur in transitive and PNI clauses, but not "middle" clauses; and (iii) verbs that have no restrictions, i.e., the transitive and "middle" verbs that can occur in all three clause types (see section 3.1.2).[14] On this view, "middle" verbs themselves are subtypes of transitive verbs – they have two arguments, an EXT and an INT (cf. Massam 2020: 170–171; Tollan 2019: 105) – but "middle" clauses and PNI clauses are intransitive clauses – they do not have a direct object (cf. Clemens & Tollan 2021: 100, on PNI). The broad outlines of this view have much in common with the treatment of "middle" verbs and "middle" clauses in Massam's (2020) account of Niuean clause structure, although the two

[14] *Takafaga* 'hunt' may be a verb of type (ii), and *fakalilifu* 'respect' may be a verb of type (iii), although Seiter (1980) does not say this explicitly. Note further that Niuean allows the INT of a transitive verb to be an implicit argument (Massam 2020: 118–119); in such cases, the EXT appears in the absolutive case. Clauses of this type would be antipassives as well in the approach pursued here.

implementations are significantly different. This convergence of approaches to the Niuean "middle" strikes me as a heartening result.

5. Coda. The conclusion that the characteristic properties of antipassive vary independently might make some readers feel uncomfortable. And indeed, it has already been suggested, in one way or another, that some of the types of noncanonical antipassives surveyed here are not antipassive, after all. Polinsky (2017:303), for instance, asserts that DOM is a construction that "resemble[s] the antipassive but should be differentiated from it" (326), and that it is "probably better" to differentiate English object deletion from antipassive by treating it as lexical as opposed to syntactic. Heaton (2020: 142) observes that "if the definition of antipassive were to include … ambitransitives, pseudo noun incorporation, some types of noncanonical patient marking … and were not limited to the marked constructions on which [Heaton (2017)] focused", then certain typological correlations she discusses would not hold.

From a Minimalist perspective, the question of what "counts" as antipassive is not the right question. What matters is that INT demotion and verbal voice morphology – the two characteristic properties of antipassive – vary independently. This stripped-down perspective provides a way out of the classificatory tangles that research on syntactic typology sometimes seems to wander into. And it has, I think, two further salutary results. First, it dovetails interestingly with the mantra, often heard in nongenerative approaches to syntax, that constructions are not defined by necessary and sufficient conditions (see, e.g., Croft & Cruse 2004; Goldberg 2013). Second, it is a reminder that the human language capacity is, in some fundamental sense, probably far more distant from the language-specific and crosslinguistic patterns we typically investigate than we have realized.

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Appendix: More on implicit arguments in Chamorro

Although the syntax and semantics of implicit arguments is not the focus of this chapter, it may be worth providing a bit more information about the syntax-semantic profile of the Chamorro implicit arguments illustrated in (4). The discussion is preliminary, as will become clear immediately.

Implicit arguments are semantic arguments that are syntactically unrealized but syntactically "active", in the sense that they participate in grammatical dependencies (Bhatt & Pancheva

2017). The implicit agent in English short passives, for instance, can control into infinitival purpose clauses (as in *The boat was sunk to collect the insurance*) and can license agent-oriented adverbs (as in *The boat was sunk deliberately*).

Although Chamorro restricts infinitives to argument positions and has no agent-oriented adverbs, it does have patterns suggesting that the implicit demoted EXT in passive clauses like (4a), and the implicit demoted INT in antipassive clauses like (4b), participate in grammatical dependencies.

For instance, finite purpose clauses in Chamorro can modify a passive main clause whose EXT is implicit (as in (29a)), but are incompatible with an unaccusative main clause (29b).

(29) a. Chamorro purpose clause modifying passive clause with implicit EXT
Ma-distrosa i gima' [para uma håtsa i iskuela].
AGR.PASS-destroy the house FUT AGR build the school
'The house was destroyed so that they could build the school.'

b. Chamorro purpose clause modifying unaccusative clause
*Kimason i gima' [para uma håtsa i iskuela].
AGR.burn.down the house FUT AGR build the school
('The house burned down so that they could build the school.')

The contrast in (29) looks a lot like the English contrast between *The boat was sunk to collect the insurance* and **The boat sank to collect the insurance*. Assuming that the licensing of purpose clauses in Chamorro and English requires the presence of an agentive argument in the clause being modified, (29a) could be evidence that the unrealized EXT of passive is implicit, i.e., semantically present and "active". The investigation of this possibility must be left to another time.[15]

As for the implicit INT of antipassive, one indication that it participates in grammatical dependencies comes from sluicing (Chung 2013). In Chamorro, the INT of a transitive clause (i.e., the direct object) can undergo *wh*-movement, but the INT of an antipassive clause cannot. Nonetheless, an antipassive clause can serve as the antecedent clause for a sluice in which the stranded *wh*-phrase is interpreted as the INT – presumably, the INT of the corresponding transitive clause (Chung 2013: 34–40). See (30a) for an illustration.[16]

(30) a. Chamorro antipassive verb with implicit INT in sluicing
Man-aitai gui', låo ti hu tungu' håfa [__].
AGR.ANTIP-read he but not AGR know what?
'He's reading, but I don't know what.' (Chung 2013: 36, (77b))

b. Chamorro intransitive verb with implicit argument in sluicing
*Maleffa si Dolores, låo ti hu tungu' håfa [__].
AGR.forget UNM Dolores but not AGR know what?
('Dolores forgot (something), but I don't know what.') (Chung 2013: 23, (46a))

The grammaticality of sluicing in (30a) contrasts with its ungrammaticality in (30b), where the antecedent clause contains an intransitive verb (*maleffa* 'forget') that selects an oblique DP as

[15] Among the issues: (i) whether purpose clauses in Chamorro (and English) must be licensed, and, if so, whether this licensing counts as syntactic or semantic; (ii) whether (29a) might involve finite control, which exists independently in Chamorro; and (iii) whether the English analogue of (29a) does indeed involve control after all.

[16] The morpheme-by-morpheme glosses and the representation of the ellipses in these examples have been modified slightly to make them uniform with each other and consistent with the Chamorro examples presented earlier.

its second argument. Even though this second argument can be implicit, sluicing is not allowed (Chung 2013: 23–25). The exact account of this contrast depends on one's theory of syntactic identity in sluicing; see Chung (2013) for one approach, which is applied explicitly to Chamorro, and Rudin (2019) for another. The point here is that the implicit INT of antipassive participates in sluicing in a way that the implicit oblique of an intransitive verb does not.

As mentioned in section 2, implicit arguments are interpreted either as narrow-scope indefinites or anaphorically. Both interpretations differ from the interpretation of an ordinary definite pronoun. The implicit EXT in Chamorro passive clauses, and the implicit INT in antipassive clauses, conform to this generalization. For simplicity, I focus here on the narrow-scope indefinite interpretation.

Consider first the examples in (31), which begin with a passive clause whose demoted EXT is 'missing': this EXT is a (null) definite pronoun in (31a), but implicit in (31b). (Recall from footnote 4 that the verb shows the passive infix *-in-* when the demoted EXT is singular, but the passive prefix *ma-* when the demoted EXT is dual, plural, or implicit.). The "missing" EXT in (31a) must be interpreted as a definite (singular) pronoun, so (31a) is anomalous. But the implicit EXT in (31b) is interpreted as a narrow-scope indefinite (i.e., nonspecific), so the result is felicitous.

(31) a. Chamorro passive clause with null *pro* as demoted EXT
#Man-k*in*attåyi ham, låo ti in tingu' håyi kumattåyi ham.
AGR-PASS.write.to we.EXCL but not AGR know who? WH.write.to us.EXCL
('#We were written to by him, but we don't know who wrote to us'.)
Chamorro passive clause with implicit EXT
b. Man-ma-kattåyi ham, låo ti in tingu' håyi kumattåyi ham.
AGR-PASS-write.to we.EXCL but not AGR know who? WH.write.to us.EXCL
'We were written to (by someone or other), but we don't know who wrote to us'.

Next, consider (32), which ends with an antipassive clause whose implicit INT is interpreted as a narrow-scope indefinite. If this INT could have wide scope with respect to negation, (32) would make sense, but that interpretation is not possible, so the sentence is anomalous.

(32) Chamorro antipassive clause with implicit INT
#Kana' ha fåhan todu i kabåyu, låo ti mam-åhan.
almost AGR buy all the horse but not AGR.ANTIP-buy
('#He bought almost all the horses, but he didn't buy any.')
Not: 'He bought almost all the horses, but there's some (horse) he didn't buy.'