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## How universal is agent-first? Evidence from symmetrical voice languages

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# HOW UNIVERSAL IS AGENT-FIRST? EVIDENCE FROM SYMMETRICAL VOICE LANGUAGES

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Agents have been claimed to be universally more prominent than verbal arguments with other thematic roles. Perhaps the strongest claim in this regard is that agents have a privileged role in language processing, specifically that there is a universal bias for the first unmarked argument in an utterance to be interpreted as an agent. Symmetrical voice languages such as many western Austronesian languages challenge claims about agent prominence in various ways. Inter alia, most of these languages allow for both ‘agent-first’ and ‘undergoer-first’ orders in basic transitive constructions. We argue, however, that they still provide evidence for a universal ‘agent-first’ principle. Inasmuch as these languages allow for word-order variation beyond the basic set of default patterns, such variation will always result in an agent-first order. Variation options in which undergoers are in first position are not attested. The fact that not all transitive constructions are agent-first is due to the fact that there are competing ordering biases, such as the principles dictating that word order follows constituency or the person hierarchy, as also illustrated with Austronesian data.\*

*Keywords:* agent prominence, person prominence, word order, symmetrical voice, western Austronesian

**1. INTRODUCTION.** Natural languages show a strong tendency to place agent arguments before other verbal arguments, as seen, inter alia, in the strong predominance of word-order types in which S is placed before O (SOV, SVO, and VSO account for more than 80% of the basic word orders attested in the languages of the world; see Dryer 2013).<sup>1</sup> This agent-first preference (see also Primus 1999:133 et passim) is part of a

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Author contribution: The ideas presented here have been jointly developed within our project on prominence in symmetrical voice languages (see above). SR drafted §2, §3, and parts of §5; KM drafted §4, parts of §5, and compiled the appendix; and NPH drafted §1, §6, and §7. All sections were then revised and enhanced collaboratively.

<sup>1</sup> In the tradition of word-order typology building on Greenberg’s classic paper (1963), S and O are semantically defined; that is, they refer to the more agent- and patient-like arguments of a transitive predicate, respectively. Hence, Greenberg’s universal 1 (‘In declarative sentences with nominal subject and object, the dominant order is almost always one in which the subject precedes the object’ (1963:77)) is an early statement of the agent-first preference.

In more current work, A and P (or O) are used in roughly the same function as Greenberg uses S and O. In the remainder of this article, we follow this more recent usage, where ‘A’ refers to the more agent-like and ‘P’ to the more patient-like core argument of a transitive predicate, regardless of its grammatical relation (as a grammatical subject or object). Because in symmetrical voice languages either A or P can occur in grammatical subject function in basic transitive constructions, we underline the argument that takes the subject role; for example, ‘AVP’ refers to a transitive construction where the A argument is in initial position and functions as grammatical subject. When we need to refer to grammatical relations more generally and independently of voice, we talk about subjects and ‘nonsubject (core) arguments’. Note that agents in symmetrical voice lan-

more general ‘syntactic agent prominence’ observed in many languages where the agent is usually the default, unmarked choice for the syntactically privileged argument, that is, for the subject.<sup>2</sup> In addition to occupying the subject function and often occurring in a prominent position within the clause (e.g. occurring sentence-initially), agents are frequently the only argument the predicate agrees with. Even in ergative languages, agreement with the undergoer to the exclusion of the agent is rare (cf. Siewierska 2012: 133). The well-known thematic role hierarchies proposed in the literature in various forms (see two versions in 1 and 2) are one way to capture the privileged status of agent arguments.

- (1) agent > benefactive/goal/experiencer > patient/theme  
(e.g. Jackendoff 1972, Grimshaw 1990, Pesetsky 1995)
- (2) agent > patient/theme > benefactive/goal/experiencer  
(e.g. Dik 1978, Larson 1988, Baker 1996)

While there has been considerable variation and disagreement with respect to the ordering of the lower positions on the scale (the proposals in 1 and 2 diverge regarding whether to place the experiencer before the patient or vice versa), the fact that the most agent-like argument occupies the highest position has never been questioned. Some authors have postulated the reverse order (patient > agent) for ergative languages (e.g. Marantz 1984, Dowty 1991, Van Valin & LaPolla 1997), but the assumption that ergative systems are just mirror images of accusative systems has been criticized and refuted in the literature (see e.g. Mithun & Chafe 1999 for detailed argumentation against this view). Furthermore, recent neurolinguistic experimentation has provided support for the claim that agents are universally more prominent in language processing, regardless of how grammatical relations are morphosyntactically organized (Bornkessel-Schlesewsky & Schlewsky 2009, Alday, Schlewsky, & Bornkessel-Schlesewsky 2014). Thus, Bickel and colleagues (2015) also find a processing bias that favors agents in languages with ergative systems. More specifically, even in a language such as Hindi, where agents of (typically clause-final) transitive perfective predicates regularly occur with an ergative marker, clause-initial unmarked noun phrases (NPs) tend to be interpreted as agents until the perfective verb form is encountered, requiring a reanalysis of the thematic role of the initial argument (manifested in an N400 effect).

Nevertheless, there can be no doubt that there are exceptions to all of the manifestations of syntactic agent prominence mentioned above, including the agent-first preference. Many languages allow for transitive constructions where the agent follows nonagentive arguments, and in some languages, the most basic and frequent word-order options include those in which the agent regularly follows nonagentive arguments.

A case in point is that of many western Austronesian languages, which are well known for their typologically rather unusual voice systems. Voice alternations in these languages involve two or more basic transitive constructions that are symmetrical in the sense that they are equally morphologically marked and that arguments retain core sta-

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guages can function as nonsubject core arguments, which is very unusual crosslinguistically and can easily lead to misunderstandings when they are simply called ‘object’.

<sup>2</sup> We use the term ‘subject’ here as equivalent to what is termed ‘privileged syntactic argument’ (PSA) in Van Valin 2005 and elsewhere. A PSA is defined as the syntactic element that controls coding properties such as agreement and that is the pivotal element in complex constructions such as relativization, NP deletion, control, and so forth. In our usage, a ‘subject’ is thus a language-specific and constructionally defined concept. Note also that we use ‘agent’ in reference to a thematic role as it is used in role hierarchies such as those in 1 and 2. Importantly, and unlike ‘actor’ in much current usage, ‘agent’ thus does not include experiencers and other agent-like roles.

tus in all voices (i.e. there is no argument demotion as in, for example, the active-passive alternation).<sup>3</sup> Furthermore, basic word order in at least one of these constructions is usually such that nonagentive arguments precede agentive ones, as further illustrated in §§2 and 3. Hence, these languages violate the presumed syntactic agent prominence in a number of ways.<sup>4</sup>

Such exceptions are clearly in need of an explanation if the observed non-agent-first orders are to be more than just coincidental trends in typological databases. One possible way to account for them involves competing principles for word order, including competing prominence hierarchies. In §5, we briefly show the interaction between the agent-first ordering preference, which is a manifestation of agent prominence, and another ordering preference with its own competing prominence hierarchy: namely the person or referential hierarchy, which privileges speech-act participants (SAPs) over non-SAPs. Section 6 addresses the impact of syntactic constituency on word-order options.

Our main concern in this article, however, pertains to the idea that if agent prominence is indeed a basic principle influencing on-line processing of natural languages and it impacts the shape of linguistic structures, then repercussions of this principle should also be found in the variation space provided by grammars. More specifically, we are interested in evidence for an agent-first word-ordering principle in those cases where agent-first is not already the default order in a given language or construction. We pursue the following hypothesis, stated in 3 in its most general formulation.

- (3) UNIVERSAL AGENT-FIRST HYPOTHESIS (general version): Whenever word order in transitive constructions allows for different options, the pool of alternative options will be strongly biased toward an ‘agent-first’ order. This bias is manifest both within a given language and across genetically and areally closely related languages, that is, in crosslinguistic microvariation.

Importantly, the variation in question should occur in what is essentially THE SAME CONSTRUCTION; that is, the variation should pertain exclusively to the position of the verbal arguments in a basic transitive construction. Alternations such as the prototypical active-passive alternation, in which the agent argument is demoted from core to oblique status, are not of relevance for this hypothesis. Similarly, any word-order alternation derived from syntactic operations, such as WH-movement, topicalization, and clefting, are not of interest either. Moreover, the hypothesis primarily pertains to alternations well attested in natural speech and not to examples that are found to be marginally acceptable in acceptability experiments but are not attested in spontaneous speech.<sup>5</sup>

<sup>3</sup> The analysis of the western Austronesian voice systems continues to be a matter of controversy, the symmetrical voice analysis being one of two main contenders (the other being asymmetrical, that is, assuming either an active-passive or an ergative-antipassive alternation). Riesberg 2014 provides the full argument for the symmetrical voice analysis, and Sauppe 2017 supplies processing evidence from eye tracking and pupillometry in support of the symmetrical analysis. While our exposition here is phrased in terms of the symmetrical analysis, the core observations and claims regarding the positioning of agent arguments are valid in alternative analyses as well. See also §6.

<sup>4</sup> But see Riesberg & Primus 2015 for a first brief exploration of agent prominence in symmetrical voice languages with respect to reflexive binding and the use of stative and potentive morphology.

<sup>5</sup> This is, of course, a considerably more complex issue than is indicated here. As is well known from the literature on preferred argument structure (see Haig & Schnell 2016 for a recent summary), constructions with two full NPs are quite rare in most natural speech genres, and it is often not clear how ‘realistic’ the kind of examples are that one finds in grammatical descriptions and that form the empirical core of the present investigation. The problem is somewhat alleviated by the fact that for one of the two basic types of languages we look at (the Indonesian-type languages), pronouns generally have the same ordering properties as full NPs. Still, our argument clearly rests on the assumption that the examples we use reflect natural speech, that

The hypothesis as stated above is trivial in those instances where there is only one basic order for transitive constructions and this order is *undergoer > agent*. In these cases, the only possible variation in the relative ordering of verbal arguments is for the agent to precede the undergoer. Consequently, the hypothesis may become relevant only in a larger crosslinguistic perspective, whereby languages with either *agent > undergoer* or *undergoer > agent* as the only basic order are compared. For an areally and genetically well-balanced sample of languages showing one of these basic orders, the hypothesis would predict that variants allowing *agent > undergoer* orders as alternatives to a basic *undergoer > agent* order are considerably more common than variants allowing *undergoer > agent* orders when the basic order is *agent > undergoer*.

A more direct test case is provided by languages that permit alternative basic transitive constructions, each following a different default word order. The western Austronesian symmetrical voice languages fulfill this description. By definition, these languages allow for at least two basic transitive constructions, at least one of which does not require agents to precede undergoers by default. For these languages, then, the hypothesis above can be stated more specifically as in 4.

- (4) UNIVERSAL AGENT-FIRST HYPOTHESIS (symmetrical voice languages): In symmetrical voice languages, deviations from the basic word-order set in transitive constructions will be biased in favor of agent-first orders such that divergence from the basic set resulting in agent-first is possible, while divergence leading to undergoer-first is disallowed.

Again, we are only concerned with variation that pertains to BASIC TRANSITIVE CONSTRUCTIONS, that is, variation that is provided by the grammar itself. We are not concerned with word-order alternations that are clearly marked syntactically, prosodically, or in terms of information structure (e.g. topicalization, WH-movement, clefting). Admittedly, the distinction between these two kinds of word-order alternations is not always easy to draw, and we will repeatedly return to the issue of how to properly delimit them. Importantly, the distinction is generally made by all of the descriptions we consulted. Descriptive grammar writers typically provide statements such as ‘word order in transitive constructions is generally VAP, but AVP is also possible’. This is sometimes accompanied by an observation regarding possible functional differences between the two ordering options, but these are typically rather vague. Crucially, the alternate order is not explicitly characterized as a topicalization, afterthought, or a similar construction, which are usually dealt with in a different part of the description and which exhibit different syntactic and prosodic properties.

The discussion is primarily concerned with providing evidence for the predicted bias toward agent-first orders among the attested basic (surface) word orders (in individual languages as well as across the group of symmetrical voice languages as a whole). We remain largely agnostic as to how the different orders are to be derived (e.g. whether there are different base-generated orders or whether some alternate orders involve scrambling, etc.), though §6 includes a brief discussion of issues regarding the constituent structure of the constructions investigated.

In line with the work of Bickel et al. (2015), the hypotheses and exposition are mostly phrased in terms of a diachronic trend toward agent-first word orders by either

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is, that native speakers readily accept and produce them in elicitation and that they are also at least occasionally attested in natural discourse. Clemens and Coon (2018:242 et passim) make a similar point in their recent discussion of word-order alternations in Mayan languages and provide further references and argumentation.

adding new agent-first options to, or eliminating an undergoer-first option from, an existing set of word orders. This involves assumptions about ‘older’ and ‘newer’ ordering options. While we believe that the assumptions we make in this regard are largely uncontroversial, it is important to note that the basic claim does not need to be framed in terms of a diachronic trend, but can also simply be stated as a (synchronic) crosslinguistic observation, as further detailed in §§2 and 3.

We expect that the agent-first preference is manifest both on the level of the pool of structural ordering options provided by the grammar and on the level of discourse preferences—that is, speakers make use of (the available) agent-first orders more frequently and in more contexts. As indicated in the preceding paragraphs, our main concern is with the former, the pool of available structures, and not with discourse preferences. Nonetheless, discourse preferences are certainly interesting and important, as they potentially drive structural change. We therefore mention discourse preferences where such information is obtainable from the grammatical descriptions we consulted. As detailed corpus studies do not exist for the vast majority of the languages under discussion, however, we will inevitably have to confine ourselves to vague statements along the lines of ‘the order VAP is the preferred order in language X’ (but see §3.1 for some more robust data on discourse preferences).

In presenting the empirical evidence for the agent-first hypothesis, we make use of the distinction between two basic types of Austronesian symmetrical voice languages: the so-called ‘Philippine-type’ and ‘Indonesian-type’ languages. It should be stressed, though, that these terms must be used with some caution. The former, which is somewhat better established than the latter, has been defined to subsume languages that exhibit the following characteristics (Himmelmann 2005a:113):<sup>6</sup>

- at least two formally and semantically different symmetrical undergoer voices;
- at least one nonlocal phrase-marking clitic for nominal expressions;
- pronominal second-position clitics.

Indonesian-type languages, like Philippine-type languages, display symmetrical voice systems, often with two or three symmetrical alternations. Unlike Philippine-type languages, they often also make intensive use of applicative morphology and proclitic agent markers in at least some slots of the voice paradigm (see Himmelmann 2005a: 175). However, this group of languages is actually very heterogeneous and is primarily defined by the fact that it includes all western Austronesian symmetrical voice languages that do not meet the criteria for Philippine-type languages given above. Thus a more precise, but somewhat cumbersome, designation for ‘Indonesian-type languages’ would be ‘western Austronesian symmetrical voice languages not adhering to the Philippine type’. Our use of ‘Indonesian type’ in the following should be understood in exactly this sense.

Our sample consists of fifty-one languages, twenty-eight of the Philippine type, and twenty-three of the Indonesian type. All statements and generalizations made in this article are based on and refer to this sample. The appendix lists all languages investigated and the word-order patterns they follow.

<sup>6</sup> The Austronesian languages of Taiwan, widely known as Formosan languages, are often also considered to belong to the Philippine type. While this may be true for some of them (e.g. Paiwan), it is certainly not true for all. As the syntax of these languages is still not very well understood, we exclude them from the main part of our investigation, though some of the clearer Philippine-type cases are included in the appendix (e.g. Atayal (Liu 2004), Seediq (Tsukida 2005, Oiwa-Bungard 2017), Amis (Chen 1987, Wu 2006)).

The main focus of our investigation is on word-order preferences concerning full nominal expressions, including free pronouns, in voice-marked constructions. However, we also draw on the placement of pronominal clitics as additional support for our agent-first hypothesis (see §2.3). Section 2 of this article discusses data from Philippine-type languages, which are strictly verb-initial and have a strong tendency to put subjects in sentence-final position. In §3 we are concerned with Indonesian-type languages, which tend to allow for a more variable positioning of the subject: that is, the subject may occur initially or finally. We then briefly look at additional evidence for an agent-first preference in symmetrical voice languages in constructions not headed by voice-marked verbs and thus formally lacking a subject argument (§4). Such constructions include gerund-like and so-called recent perfective constructions. In both constructions, agent > undergoer appears to be the only order allowed. However, natural examples of these constructions typically involve pronominal agents. Hence, the evidence they provide has only limited force. Finally, in §5 we briefly look at the internal order of clitic pronouns, which in part also show a clear agent > undergoer preference, but also allow for alternative orders where the undergoer precedes the agent. In the latter case, other prominence scales come into play. In part, prosodic weight plays a role in that lighter clitics are placed before heavier ones. In other instances, the person hierarchy competes with agent prominence, as already briefly mentioned above. To conclude, we review our results and discuss their theoretical import (§6).

**2. WORD ORDER IN PHILIPPINE-TYPE LANGUAGES: THE VERB-INITIAL + FINAL SUBJECT WORD-ORDER SET.** In this section we look at the Philippine-type languages and what we call the verb-initial + final subject word-order set. Section 2.1 first gives an overview of the two basic word-order options in these languages, one in the undergoer voice in which the agent precedes the undergoer, and one in the actor voice in which the undergoer precedes the agent. Throughout this section, we use Tagalog for exemplification. We then turn to languages in which we find a deviation from these two orders. Two types can be observed: first, there is a group of languages in which the order undergoer > agent is no longer available, but instead there is a strict agent-first ordering in both undergoer and actor voice (§2.2). Second, some languages demand an obligatory agent clitic that directly follows the verb and thus can be argued to take the first slot in the row of verbal arguments (§2.3). Section 2.4 gives an interim summary.

**2.1. THE VOICE-DEPENDENT BASIC WORD-ORDER SET IN TAGALOG.** Tagalog exhibits all of the above-mentioned characteristics of a Philippine-type language. It displays one actor voice (example 5a) and three semantically distinct undergoer voices: in the patient voice (5b), the subject usually bears the thematic role of the patient; in the so-called conveyance voice (5c), the subject argument can be either a theme, a benefactive, or an instrument; and in the so-called locative voice (5d), typically a goal, source, or, more rarely, a stative (essive) locative argument is linked to the subject function. Common nouns are preceded by one of three phrase markers: *ang* always marks the subject, while *ng* [nang] and *sa* occur with nonsubject arguments.<sup>7</sup> The examples in 5 illustrate

<sup>7</sup> The choice of *ng* vs. *sa* is in part determined by the thematic role of the nonsubject argument: *ng* is used for marking agents, experiencers, patients, and themes; *sa* usually marks goals, recipients/benefactives, and locatives. In this article, *ang*, *ng*, and *sa* are glossed as nominative, genitive, and dative, respectively, in line with much of the current literature. But see Himmelmann 2015 for arguments against analyzing *ang* and *ng* as case markers.

the four different voices and the case marking of arguments. In all examples, the agent argument is marked in bold.<sup>8</sup>

(5) Tagalog

- a. bumabasa [ng diyaryo] [**ang titser**]  
 <um>RDP-basa ng diyaryo **ang titser**  
 <AV>RDP-read GEN newspaper NOM **teacher**  
 ‘the teacher is reading a newspaper’ (Schachter & Otnes 1972:69)
- b. kinain [**ng pusa**] [ang daga]  
 <in>kain-Ø **ng pusa** ang daga  
 <RLS>eat-PV GEN **cat** NOM rat  
 ‘the cat ate the rat’ (Kaufman 2017:603)
- c. iniabot [**ng manggagamot**] [sa sundalo] [ang itlog]  
 <in>i-abot **ng manggagamot** sa sundalo ang itlog  
 <RLS>CV-reach GEN **doctor** DAT soldier NOM egg  
 ‘the physician handed the egg to the soldier’ (Himmelman 2008:265)
- d. kinainan [**ng pusa**] [ng daga] [ang pinggan]  
 <in>kain-an **ng pusa** ng daga ang pinggan  
 <RLS>eat-LV GEN **cat** GEN rat NOM plate  
 ‘the cat ate the rat on/from the plate’ (Kaufman 2017:603)

As is characteristic of Philippine-type languages, Tagalog word order is strictly verb-initial, which means it does not provide for a clause-internal argument slot that precedes the verb.<sup>9</sup> Arguments follow the verb and, while the order of NP arguments can be considered to be free to a certain extent, there are strong tendencies: in pragmatically unmarked contexts, nonpronominal subjects (marked by *ang*) always occur in sentence-final position, as seen in all examples in 5. The genitive phrase, which in actor voice expresses the undergoer (5a) and in undergoer voice the agent (5b–d), usually immediately follows the predicate (see *ng diyaryo* in 5a, *ng pusa* in 5b and 5d, and *ng manggagamot* in 5c). Dative-marked phrases often occur between genitive-marked arguments and the final subject (e.g. *sa sundalo* in 5c), but they may also occur clause-finally (Himmelman 2005b:357).

The combination of word-order constraints and the symmetry of the voice system prevents a consistent reflection of agent prominence in the ordering of NPs. In the different undergoer voices, the agent usually precedes all other arguments and is thus in prominent position, but in the actor voice, the agent argument follows the semantically

<sup>8</sup> Spelling and glossing of examples have been modified so as to be uniform throughout this article, and thus may deviate from the original source. Inter alia, we have adopted standard Tagalog orthography here and do not mark stress or length. Nor do we indicate clitic boundaries, instead writing pronominal clitics, case clitics, and linking elements as separate words.

Abbreviations: 1: first person, 2: second person, 3: third person, ACC: accusative, ACT: undergoer voice agent, AGT: agentive, AN: animate, AND: andative, APPL: applicative, APRX: adverbial proximal, AV: actor voice, BV: benefactive voice, CAUS: causative, CPL: completive, CV: conveyance voice, DAT: dative, DEM: demonstrative, DET: determiner, DIR: directional prefix, DIST: distal, DV: dative/directional voice, DYN: dynamic, EXCL: exclusive, GEN: genitive, GER: gerund, ICPL: incompletive, INCL: inclusive, IV: instrumental voice, LOC: locative, LV: locative voice, NEG: negation, NM: nominal marker, NMLZ: nominalizer, NOM: nominative, NPST: nonpast, OBL: oblique, OV: objective voice, PFV: perfective, PL: plural, PN: proper or personal name, POT: potential, PRF: perfect, PROG: progressive aspect, PST: past, PTCL: particle, PV: patient voice, RDP: reduplication, REC: recent, RLS: realis, RPT: repetitive, SG: singular, UV: undergoer voice, UV2: undergoer voice 2, VIS: visual (direct) evidential.

<sup>9</sup> Some adjuncts may occur in immediate preverbal position, as discussed by Kroeger (1993:43–46). This is of no import for the current discussion.



lower-ranked arguments (cf. 5a). Tagalog thus exhibits the following two basic word-order options (where the underlined argument signals the subject and X signals additional arguments).

- (6) VERB-INITIAL + FINAL SUBJECT WORD-ORDER SET  
 a. VP(X)A → actor voice (undergoer > agent)  
 b. VA(X)P → undergoer voices (agent > undergoer)

However, even in this basic set there is a minor agent-first bias in the rare instance that two arguments are marked by genitive *ng*, such as *pusa* and *daga* in 5d. Here, the order is strictly agent before undergoer. This is part of a general principle we will encounter a number of times (in the current section as well as in §§4 and 6): whenever (non-pronominal) agents and undergoers are equally (un)marked, the order is strictly agent before undergoer, which in itself is strong evidence for a universal processing bias favoring agents.

Tagalog shows different constraints for pronouns, which are second-position clitics, and for personal names. Pronominal second-position clitics are further discussed in §5. Here we simply note that if the subject expression is a personal name, which is marked by *si* instead of *ang*, it often occurs immediately after the verb, as illustrated in 7a for an actor-voice construction. Note, however, that this is a tendency only and that the reverse order is also possible, as illustrated in 7b.

- (7) Tagalog  
 a. bumili [si Rosa] [ng bigas]  
 b<um>ili si Rosa ng bigas  
 <AV>buy NOM PN GEN rice  
 ‘Rosa bought some rice’ (Schachter & Otanes 1972:81)  
 b. bumili [ng bigas] [si Rosa]  
 b<um>ili ng bigas si Rosa  
 <AV>buy GEN rice NOM PN  
 ‘Rosa bought some rice’ (Schachter & Otanes 1972:81)

Example 7 is an example involving actor voice. In principle, the same variability of personal-name subjects is also found in undergoer-voice constructions, leading to undergoer > agent order in those cases where the personal-name subject is placed before an agent expression that is a full lexical NP (pronominal agents, being second-position clitics, always precede lexical NPs). However, natural examples of such an ordering are difficult to find.

With the minor exceptions just noted, Tagalog does not show a clear grammatical preference for agent-first ordering in its basic transitive constructions, because in actor-voice constructions the agent regularly follows the undergoer (see 6). Most verb-initial Austronesian symmetrical voice languages are similar to Tagalog in this regard. However, some of these languages allow for other basic word-ordering options in addition to, or as an alternate for, one of the two orders represented in 6a. The universal agent-first hypothesis stated above predicts that all additional or alternative ordering options place the agent before the undergoer and that none places the undergoer before the agent. And this is indeed what we find when examining the basic word-order options of other verb-initial Austronesian symmetrical voice languages. There are two common deviations from the orders given in 6. Either the ordering in 6a is modified in such a way that the agent is always placed before the undergoer, which we call STRICT AGENT-FIRST (§2.2), or the ordering in the actor voice in 6a obligatorily includes a pronominal referring to the agent that occurs in immediate postverbal position and thus necessarily also before the undergoer (§2.3).

**2.2. STRICT AGENT-FIRST IN PHILIPPINE-TYPE LANGUAGES.** One of the deviations from the standard verb-initial + final subject word order can be illustrated with Tatana' (Sabah). Here we can observe a crucial deviation from the Tagalog word order in the actor voice in that the order in 6a—that is,  $VPA$ —is not available in Tatana'.

(8) Tatana' (Sabah)

- a. mananda' **isio** do mija'  
 MON-tanda **isio** do mija'  
 AV-make 3SG DAT table  
 'he is making a table' (Dillon 1994:43)
- b. mopo-guli' **i Gaman** do buuk di amai no  
 AV.CAUS-return NOM PN DAT book DAT uncle 3SG.GEN  
 'Gaman is giving a book back to his uncle' (Dillon 1994:65)
- c. mopo-ratu' nio **tukang** do papan intad do sowat  
 AV.CAUS-fall there **craftsman** DAT board from DAT top  
 'the carpenter is going to drop the planks from the top' (Dillon 1994:69)

Instead of the actor-voice pattern  $VP(X)\underline{A}$  shown in 6a, Tatana' has developed a  $V\underline{A}(X)P$  order in the actor voice, as illustrated in 8. This results in the fact that Tatana' exhibits strict agent-first word order in both actor and undergoer voices (i.e.  $V\underline{A}(X)P$  in actor voice and  $VA(X)\underline{P}$  in undergoer voice). Most examples Dillon (1994) cites involve either pronominal or personal-name agent subjects. As mentioned for Tagalog in §2.1 and further discussed in §5, these types of nominal expressions often behave differently from common nouns in their ordering properties. Yet the three common-noun arguments in example 8c above provide clear evidence that strict agent-first word order in Tatana' also holds for common NPs.

Other languages of the Philippine-type that, like Tatana', exhibit strict agent-first word order are Limos Kalinga (cf. Ferreirinho 1993:59), Mansaka (Svelmoe & Svelmoe 1974), and Agta (Healey 1960).

Another strict agent-first deviation from the basic word-order set in 6 is shown by those Philippine-type languages that do not distinguish different case markers, but use the same phrase marker for core arguments in different syntactic functions, such as Ilokano and Tindal Dusun. These languages usually show strict agent-first order in all voices, and word order is the only means to disambiguate the linking of role and function (see also the Tagalog example 5d above).

(9) Tindal Dusun (Sabah)

- a. minihondom **i tina?** i tanak  
 <um><in>piŋ-hondom **i t-ina?** i t-anak  
 <AV><CPL>RPT-think NM NMLZ-mother NM NMLZ-child  
 'the mother thought about the child' (Robinson 2005:11)
- b. minihondom **i tanak** i tina?  
 <um><in>piŋ-hondom **i t-anak** i t-ina?  
 <AV><CPL>RPT-think NM NMLZ-child NM NMLZ-mother  
 'the child thought about the mother' (Robinson 2005:11)
- c. p<in>o-tubow **i Bernard** bonoŋ hiri dohuri i pikap  
 <CPL>CAUS-throw:UV NM **Bernard** frog here back NM pickup  
 'Bernard threw a frog into the back of the pickup' (Robinson 2005:12)

Yet other languages can be considered to reflect an intermediate stage between the Tagalog and the Tatana'/Tindal Dusun scenarios just described. Ibaloi (Luzón), for example, shows strict agent-first order in the undergoer voices, while ordering in the actor voice seems to be more flexible (Ruffolo 2004:417). Ruffolo provides one example to

show that the nominative argument, if a full NP, ‘has a relatively free word order with respect to other complements’ (2004:370).

## (10) Ibaloi (Luzón)

- a. dimaw        **i**    **daki** chi Kabayan  
 <im>law    **?i**    **laki** di Kabayan  
 <AV.PFV>go NOM man LOC PN  
 ‘the man went to Kabayan’ (Ruffolo 2004:370)
- b. dimaw        chi Kabayan **i**    **daki**  
 <im>law        di Kabayan **?i**    **laki**  
 <AV.PFV>go LOC PN        NOM man  
 ‘the man went to Kabayan’ (Ruffolo 2004:370)

However, Ruffolo also states in reference to actor-voice clauses that ‘[t]he preferred constituent order is for the Nominative to follow the verb and precede the ... complements’ (2004:414). Thus, even though word order is more flexible in actor voice than in undergoer voice, agent > undergoer seems to be the unmarked order in both constructions.

Overall, then, there is a common tendency for agent-first word order in all voices found in Philippine languages if there is a deviation from verb-initial + final subject. This agent-first order is sometimes a strict requirement, and sometimes it is just the preferred order among a number of options. What do not seem to occur are variations of a basic agent > undergoer order such that the undergoer precedes the agent, as predicted by the agent-first hypothesis for symmetrical voice languages.

**2.3. OBLIGATORY POSTVERBAL AGENT CLITIC IN ACTOR VOICE.** Another deviation from the basic verb-initial + final subject word-order set shown in 6 that results in a generalized agent-first word order involves the obligatory occurrence of postverbal agent clitics in the actor voice. For Tboli (Mindanao), for example, Forsberg reports a fixed word order of ‘verb agent (goal) object’ (1992:56). This order holds for all undergoer voices, as illustrated in the examples in 11.

## (11) Tboli (Mindanao)

- a. hnebel        **yem maen**                    yem libun leged  
 <n>hebel        **yem maen**                    yem libun leged  
 <PV>look.for **that father:3SG.GEN** that girl industrious  
 ‘his father is looking for an industrious girl’ (Forsberg 1992:72)
- b. benlay        **Ben** ou snafang  
 <en>blay **Ben** ou snafang  
 <BV>give PN 1SG gun  
 ‘Ben gave a gun to me’ (Forsberg 1992:79)
- c. ofok        **Walan** du asay  
 IV:chop.down PN 3SG ax  
 ‘Walan chopped it down with an ax’ (Forsberg 1992:81)

In actor-voice constructions, subjects are obligatorily cross-referenced by pronominals in the postverbal slot, as shown in the following example.

## (12) Tboli (Mindanao)

- smakay    **le** ówóng yó **kem ngà**  
 <m>sakay **le** ówóng yó **kem ngà**  
 <AV>ride **3PL** airplane that **PL** **child**  
 ‘the children rode (in) that airplane’ (Forsberg 1992:63)

As illustrated in 12, common-noun agent subjects obligatorily occur in sentence-final position, just like their undergoer subject counterparts in the undergoer voices in 11.

However, they are obligatorily cross-referenced by a coreferential pronoun occurring in immediate postverbal position. Thus, in this language, the first slot in the ordering of arguments in all voices is generally occupied by an element that either refers to or cross-references the agent.<sup>10</sup>

It is important to note that these clitics are attested only for agents in the actor voice, that is, in the voice where the sentence-final position of the subject would otherwise lead to an undergoer > agent word order (as in Tagalog). There are, of course, some Philippine-type languages in which both agent and undergoer can be cross-referenced in undergoer voice (e.g. Ivatan; cf. Reid & Liao 2004:446f.). The order of clitics in clitic clusters is a different matter and is discussed in §5. For our argument here the crucial point is that the mirror image of Tboli, that is, a language that has only obligatory undergoer clitics in the undergoer voice, does not, to our knowledge, exist.<sup>11</sup>

**2.4. INTERIM SUMMARY.** In the preceding sections we made the following argument. Symmetrical voice languages of the Philippine type, which tend to be strictly verb-initial, show two basic word-ordering options for agent and undergoer, depending on the voice marking of the verb. In actor voice, the standard order is undergoer > agent, while in undergoer voice the standard order is agent > undergoer. Only the latter ordering complies with a putatively universal agent-first bias; the former contradicts it. The fact that a basic order which places the undergoer before the agent exists in the first place is, of course, in need of explanation. We address this issue in §6. Here we argue in line with the universal agent-first hypothesis that the bias for agent-first orders is visible also in Philippine-type languages, once we take other ordering options into account. That is, we predict that if the grammar of a Philippine-type language allows for basic (i.e. not information-structurally, prosodically, or syntactically clearly marked) ordering options in addition to the ones given in 6, these additional (or alternative) options will always involve an agent > undergoer ordering and never an undergoer > agent ordering.

Seen in a dynamic developmental perspective, the three languages Tagalog, Ibaloi, and Tatana' thus potentially reflect a development from a consistent subject-final order, to an intermediate state in which both  $VP\bar{A}$  and  $V\bar{A}P$  are allowed, to a strict agent-first order.

$$(13) \begin{array}{ccc} VP(X)\bar{A} & \rightarrow & VP(X)\bar{A} \text{ and } V\bar{A}(X)P & \rightarrow & V\bar{A}(X)P \\ \text{Tagalog} & & \text{Ibaloi} & & \text{Tatana'} \end{array}$$

Importantly, the order in the undergoer voice is the same in all three languages: that is, the one provided in 6b, in which the agent precedes the undergoer. No change that would place the undergoer before the agent occurs.

<sup>10</sup> Note, however, that in Tboli, as in many other Philippine languages that exhibit pronominal indexing in cooccurrence with argument NPs, the third-person singular clitic pronoun is zero. Thus, strictly speaking, clauses with third-person singular subjects must be considered exceptions to the agent-first principle in Tboli.

<sup>11</sup> Another possible option is the obligatory cross-referencing of the agent, and only the agent, in all undergoer voices found in some of the Formosan languages, as illustrated below for Tsou. In the actor voice, cross-referencing of the agent is also possible, but not obligatory.

- (i) *i-ta*            *ima*    *si*    *cxumu*  
 UV:NPST-3SG UV:drink NOM water  
 'the water has been drunk by him' (Zeitoun 1992:11)
- (ii) *mi-ta*            *mimo*    *ta*    *cxumu*  
 AV:NPST-3SG AV:drink OBL water  
 'he is drinking some water' (Zeitoun 1992:11)

While this is clearly another manifestation of the agent-first principle, we are not systematically including Formosan languages in our discussion (cf. n. 6).

As additional evidence we take the fact that in some languages an obligatory agent clitic takes the first slot after the verb in otherwise agent-last constructions. This never happens for the undergoer in those constructions that adhere to the agent-first principle.

While we have presented the argument (partially) in terms of historical developments, it can also be phrased in terms of a (synchronic) claim regarding attested word orders in Philippine-type languages: whenever a Philippine-type language allows for basic word-order options other than the ones given in 6, these other options will be agent-first orders.

In concluding this section, it should be noted that if Tagalog is assumed to reflect an early stage in the development of symmetrical voice languages—as we do here—it is also possible that a symmetrical voice language loses even the little bit of flexibility we noted for Tagalog with regard to examples 5a and 7. This is the case in Malagasy, which places the subject argument strictly in sentence-final position. Just like Tagalog, Malagasy grammar thus provides both an agent > undergoer and an undergoer > agent order, depending on the voice of the construction.

(14) Malagasy (Madagascar)

- a. manasa lamba amin'ny savony **ny lehilahy**  
 AV:wash clothes with'DET soap **DET man**  
 'the man washes clothes with the soap' (Travis 2010:40)
- b. sasan'ny **lehilahy** amin'ny savony ny lamba  
 PV:wash'DET **man** with'DET soap **DET clothes**  
 'the man washes the clothes with the soap' (Travis 2010:40)
- c. anasan'ny **lehilahy** lamba ny savony  
 CV:wash'DET **man** clothes **DET soap**  
 'the man washes clothes with the soap' (Travis 2010:40)

Note that Malagasy does not distinguish the argument functions of full NPs by case markers (nor does it have pronominal second-position clitics and thus is not, strictly speaking, a Philippine-type language according to our definition). It stands to reason that the very rigid word order in Malagasy may at least in part be linked to the lack of case marking. While it does not contradict the universal agent-first hypothesis as applied to symmetrical voice languages, Malagasy makes it very clear that there are languages that systematically allow for agent-last orders. We address this issue in §6.

**3. WORD ORDER IN INDONESIAN-TYPE LANGUAGES: THE FLEXIBLE SUBJECT + VP WORD-ORDER SET.** We now turn to the Indonesian-type languages. As in the previous section, we first describe the basic word orders available in the majority of languages of this type, using Totoli as a prototypical representative (§3.1). Indonesian-type languages usually allow for two basic word orders in both actor and undergoer voice, which thus adds up to four in total. Again, agent > undergoer and undergoer > agent order are equally attested. We then present data from languages that do not exhibit these four 'standard' word orders, and we show that deviations always consist in increasing the number of agent-first orders relative to the symmetrical  $2 \times 2$  distribution. This occurs either when one of the agent-final orders is prohibited (§3.2), or when new agent-first orders are added to the basic set (§3.3), or both (§3.4). Importantly, there are no changes to the basic inventory that would lead to increasing the number of undergoer-first orders.

**3.1. THE VOICE-DEPENDENT BASIC WORD-ORDER SET IN TOTOLI.** Totoli is an Indonesian-type language spoken in the northern part of Central Sulawesi, Indonesia. It possesses one actor voice and two undergoer voices. The latter, however, though formally

different, are lexically determined and, unlike the different undergoer voices in Philippine-type languages, are not semantically distinct—that is, in both undergoer voices in Totoli either a patient or a theme argument is linked to subject position. Instead, Totoli exhibits a complex interplay of voice and applicative morphology (see Himmelmann & Riesberg 2013). As is characteristic of Indonesian-type languages, NPs in Totoli are not marked for case, and there is no distinct second-position slot for pronominal clitics.

Totoli displays two basic word orders, subject-verb-nonsubject and verb-nonsubject-subject, which occur in both actor and undergoer voice. In both of these orders, the verb and the nonsubject argument form a verb phrase (VP), that is, a tightly integrated constituent with fixed ordering.<sup>12</sup> The position of the subject NP, in contrast, is flexible; it can occur either before or after the verb+nonsubject complex. Crucially, the preverbal subject slot is clause-internal; that is, in these cases the subject NP is not topicalized/left-dislocated, as commonly happens in strict verb-initial languages, such as Tagalog.<sup>13</sup> In the following, this set of word-order options is called the FLEXIBLE SUBJECT + VP WORD-ORDER SET. Examples 15 and 16 illustrate the two word-order possibilities in the actor voice and in the undergoer voice, respectively. Again, in all examples the agent argument is marked in bold.

(15) Totoli (Sulawesi)

- a. **kita** majaga isia  
**kita** moN-jaga isia  
**1PL** AV-guard 3SG  
 ‘we look after him’ (Mansur’s\_work.1189)<sup>14</sup>
- b. ana mo-gutu=mo gauan **kita**  
 if AV-make=CPL garden **1PL**  
 ‘if we want to make a garden ...’ (monkey\_turtle.063)

(16) Totoli (Sulawesi)

- a. buta ni-bangun **tau pomoo**  
 earth UV.RLS-stand.up **person first**  
 ‘the ancestors cultivated the earth’ (tatabua.93)
- b. pate-i **kamuu** tau  
 kill-UV2 **2SG** person  
 ‘you killed a person’ (tau\_bentee.206)

As can be seen from the examples above, the flexible position of the subject and the symmetrical nature of the Totoli voice system lead to the fact that agent prominence is not reflected in all basic word-order options in the language: in the actor voice the agent argument CAN occur in sentence-initial position and thus before the undergoer, as in 15a, but it can just as well be realized in sentence-final position following the undergoer argument, as in 15b. In the undergoer voice, by contrast, the agent can never occur in sentence-initial position, as this position is reserved for the undergoer subject. As the agent occupies the function of the nonsubject argument, it will always be realized directly after the verb. Thus, the undergoer subject can precede the agent if it occurs sen-

<sup>12</sup> With some exceptions that are not further discussed here, no other constituents can occur between the verb and the nonsubject argument.

<sup>13</sup> Unlike Tagalog, arguments in preverbal position are not separated by a special particle (*ay* in the case of Tagalog). There is also no prosodic break between the preposed subject and verb. Finally, it is impossible to use a resumptive pronoun after the verb; that is, in 15a it is impossible to say *\*kita majaga isia kita*.

<sup>14</sup> Totoli examples are all from the online corpus of Totoli natural speech, which also includes comprehensive metadata; see Leto et al. 2005–2010. The references here provide the name of the recording and the line (= intonation unit) where the example occurs.

tence-initially, as in 16a, or it can follow the agent if it occurs sentence-finally, as in 16b. The basic word-order options of Totoli can thus be summarized as in 17.

- (17) FLEXIBLE SUBJECT + VP WORD-ORDER SET
- a. i. A[VP] → actor voice (agent > undergoer)
  - ii. [VP]A → actor voice (undergoer > agent)
  - b. iii. P[VA] → undergoer voice (undergoer > agent)
  - iv. [VA]P → undergoer voice (agent > undergoer)

Compared to the two ordering options in 6 for strict verb-initial symmetrical voice languages, flexible subject + VP languages allow twice as many basic ordering options, because of the flexible position of the subject in each of the two voices. This immediately raises the question of whether these really can be considered to be equally ‘basic’ and what determines the choice among these options. As stated in §1, we use ‘basic’ here for all word-order alternations that are not clearly marked information-structurally, syntactically, or prosodically (e.g. topicalization, WH-movement, clefting). That is, it is not necessarily the case that the word orders we consider here are equally basic in all regards. In fact, there tend to be preferences in terms of frequency for one of the two orders in each voice (more on this below), and there may be correlations between a particular order and a particular discourse context or information status (e.g. AVP may be preferred at episode boundaries or when the agent was recently mentioned). But these are tendencies at best, and there is always considerable variation across speakers, genres, and languages.

As already mentioned in the introduction, the distinction we make here between ‘basic’ and ‘clearly marked’ word orders reflects common practice in the descriptive literature we draw on. The following quote is typical of the way the different ordering options are stated: ‘Balinese is a morphologically agglutinating language with primarily SV(O) word order (though V(O)S is also common)’ (Clynes 1995:179; see also Artawa 1998). Though most authors are silent on this point, some authors make an attempt to correlate the alternate orders with differences in discourse structure and information status (e.g. Arka 2003 on Balinese). But it is also clear that the alternate orders do not involve dedicated constructions for topicalization, afterthoughts, predicate focus, and the like. Such dedicated constructions usually involve major prosodic breaks and are flagged as clearly marked by the authors of the descriptions. Thus, for example, Artawa (1998:19) and Mayani (2013:172) argue that VAP order in actor-voice constructions in Balinese and Tajio, respectively, is highly marked and possible only if there is contrastive focus on the verb and the undergoer argument is prosodically separated from the rest of the construction (indicated by ‘/’ in 18). In the Tajio example below, the speaker thus wants to stress the fact that the subject BOUGHT the durian, instead of, say, stealing or selling it (Mayani 2013:172). In cases like these, we do NOT consider them as basic and therefore do NOT include them in our sample.

- (18) Tajio (Sulawesi)
- |                      |              |     |           |
|----------------------|--------------|-----|-----------|
| nongoli              | <b>sisia</b> | /   | teruriang |
| non-oli              | <b>sisia</b> | te= | ruriang   |
| AV.RLS-buy           | <b>3PL</b>   | NM= | durian    |
| ‘they BOUGHT durian’ |              |     |           |

(Mayani 2013:172)

It is very likely that the cooccurrence of the four ordering options and the variation observable across Indonesian-type languages is due to the fact that these languages are undergoing a change from subject-final order to subject-initial order. Cumming (1991) provides a diachronic study on the emergence of subject-initial word order in Malay

and shows that a preference for AVP order in actor voice and for VAP order in undergoer voice constitutes the major transitional stage in this development. As we will see in this section, these preferences are widely attested across the area.

The preferences just mentioned belong to the discourse level—that is, given a number of alternative grammatical options, speakers may have a choice as to which option they use most often. Obviously, agent-first as a universal processing bias should also be manifest on this level, as the discourse level should reflect processing biases even more clearly than the pool of grammatical options for the order of verbal arguments (which is our main concern here). A brief look at discourse distributions may be useful to show that agent-first is also found as a strong tendency on the discourse level in Austronesian symmetrical voice languages. The universal agent-first hypothesis would predict that in actor-voice constructions subject-initial order is preferred (hence, agent preceding undergoer), while in undergoer-voice constructions the reverse preference holds (i.e. subject-final, hence undergoer follows agent). This is indeed borne out by our corpus data for Totoli:<sup>15</sup> 70% of the transitive actor-voice clauses are AVP (i.e. agent > undergoer), and only 30% show VPA order (i.e. undergoer > agent). In the undergoer voice the preference is reversed, with 73% VAP order (i.e. agent > undergoer) and 27% PVA (i.e. undergoer > agent).<sup>16</sup> Thus, it is indeed the case that, with regard to actual usage, agent-first is the dominant pattern in Totoli—even though the basic grammatical system allows both agent-first and undergoer-first and does not clearly privilege one order over the other.

Returning to our main argument, the following sections review deviations from the inventory of the four word orders shown in 17, which we consider to be basic for Indonesian-type symmetrical voice languages.

**3.2. PROHIBITION OF VPA IN ACTOR VOICE.** A first deviation from the flexible subject + VP basic word-order set that can be observed in a few languages (mostly in Sulawesi) is the prohibition of VPA order in the actor voice. In these languages (e.g. Tondano and Rampi'), the symmetry between actor voice and undergoer voice regarding word-order possibilities (subject-verb-nonsubject and verb-nonsubject-subject) is abandoned: in the actor voice, only an agent-first order with the subject in preverbal position (AVP) is possible (19a), while in the undergoer voice(s), the same two options as in Totoli are available (PVA in 19b and VAP in 19c). This state of affairs is illustrated in the following examples from Tondano.

(19) Tondano (Sulawesi)<sup>17</sup>

- |                            |                                     |                     |
|----------------------------|-------------------------------------|---------------------|
| a. <b>sioki'ku</b>         | mateles raaren                      |                     |
| <b>si=oki'=ku</b>          | ma-teles raaren                     |                     |
| <b>AN.SG=small=1SG.GEN</b> | AV-buy                              | vegetable           |
|                            | 'my child buys a/some vegetable(s)' |                     |
|                            |                                     | (Brickell 2014:142) |

<sup>15</sup> We annotated 2,077 clauses (4,807 intonation units, 01:54 hours) from different spoken texts (narratives, procedurals, and conversations), of which 638 were transitive and 234 had an overt subject expression and were thus relevant for our research question.

<sup>16</sup> For Tondano, the numbers are similar. Brickell and Schnell (2017) report a ratio of 66% VAP to 34% PVA in the undergoer voice. In the actor voice, word order is 100% AVP since Tondano does not allow for postverbal subjects in actor voice; see §3.3.

<sup>17</sup> Brickell does not provide any ungrammatical examples in his grammar of Tondano. Yet he explicitly states: 'In [actor voice] transitive clauses the PIV [pivot] argument has a fixed pre-predicate position. In [undergoer voice] transitive clauses the PIV may either precede or follow the predicate' (Brickell 2014:95). We can thus assume that the order \**mateles raaren sioki'ku* for 'my child buys a/some vegetable(s)' is ungrammatical. As a referee reminds us, the prohibition of VPA in actor voice is probably a recent phenomenon and only clearly emerges in Brickell's recent description. In older sources on Tondano, VPA order is attested.



- b. toto'            nipèrèt            kinaan            **nitim**  
 toto'            ni=pèrèt            k<in>aan            **ni=Tim**  
 breast.NOM AN.SG.GEN=bat <PST>eat:UV AN.SG.GEN=PN  
 'Tim ate the bat's breast (meat)' (Brickell 2014:150)
- c. wo tu pemurkimurkiten            **nitim**            kokong  
 wo tu peN-CVCV-purkit-en            **ni=Tim**            kokong  
 and then DYN-RDP-turn.over-PV AN.SG.GEN=PN head  
 'and then Tim is turning over the head' (Brickell & Schnell 2017:184)

Another language that possibly falls into this class is West Coast Bajau, for which Miller states that the predominant word order in the actor voice is AVP (Miller 2007: 149). The prohibition of the VPA order seems to be, however, less strict than in Tondano. Miller writes that VPA and, in fact, VAP also 'are sometimes considered grammatical by some speakers, though they are not common and seem to have marked pragmatic status' (Miller 2007:149). The fact that apparently some speakers seem to accept a VAP order in the actor voice makes Bajau also a possible candidate for our second deviation pattern, which allows for two agent-first positions in actor voice (see §3.3 below). But since Miller explicitly mentions the pragmatically marked status of both VPA and VAP ordering options, we do not consider them to be basic, and therefore classify Bajau as a language that prohibits undergoer > agent as a basic order in actor voice.

For other languages that exhibit both AVP and VPA orders in actor voice, it is sometimes stated that AVP is the 'preferred' order (see e.g. Clayre 2014:132 on Lundaye).

**3.3. ALLOWING FOR TWO AGENT-FIRST POSITIONS IN ACTOR VOICE.** Another deviation from the set of default orders illustrated in 17 can be observed, for example, in Kelabit (Sarawak) and Pitu Ulunna Salu (Sulawesi). These languages allow for three different orderings in actor-voice constructions, two of which place the agent before the undergoer: in addition to the default subject-verb-nonsubject and verb-nonsubject-subject orders, these languages also allow verb-subject-nonsubject (i.e. VAP) order in actor-voice constructions. That is, in the actor voice the constituent of verb+undergoer is broken up in order to place the agent first. This is illustrated in 20 for Pitu Ulunna Salu and in 21 for Kelabit.

- (20) Pitu Ulunna Salu (Sulawesi)  
 um-batta-m-äq **kao** bittiq-ku  
 AV-cut-PRF-1SG 1SG foot-1SG  
 'I cut my foot' (Campbell 1989:130)
- (21) Kelabit (Sarawak)  
 ne-kuman **la'ih sineh** buaq kabér  
 PFV-AV:eat **man DEM** fruit pineapple  
 'the man ate pineapple' (Hemmings 2016:448)

Importantly, no alternative VPA order is reported in undergoer voice, which would position the undergoer subject before the agent.

**3.4. PROHIBITION OF VPA AND TWO AGENT-FIRST POSITIONS IN ACTOR VOICE.** In at least one language, we find a combination of the two ordering restrictions described in the two preceding sections: a prohibition of VPA in actor-voice constructions AND the availability of two agent-first positions in actor voice. Begak (Sabah) is representative of this type. This language displays different ordering options in actor voice and in undergoer voice. While both voice constructions allow for the verb-medial ordering (subject-verb-nonsubject), the alternative verb-initial order in undergoer voice is VAP, but in actor voice it is VAP. Goudswaard describes word order in Begak as following two

different principles: '(i) The verb-initial word order is semantically based and is Verb-Agent-Undergoer, irrespective of the voice marking of the verb. (ii) The subject-initial or verb-medial word order is syntactically based and is Subject-Verb-Object, irrespective of voice marking of the verb' (Goudswaard 2005:125). The data in 22 illustrate these options for both actor voice (a and b) and undergoer voice (c and d).

(22) Begak (Sabah)

- a. **Pius** (da) gə-dagang pait di' Dəngon  
 PN PROG AV-buy fish LOC PN  
 'Pius is buying fish in Dəngan'
- b. (da) gə-dagang **Pius** pait di' Dəngon  
 PROG AV-buy PN fish LOC PN  
 '... Pius is buying fish in Dəngan, ...'
- c. pait ino degang **Pius** di' Dəngon  
 pait ino <i>dagang **Pius** di' Dəngon  
 fish yonder <CPL>buy:UV PN LOC PN  
 'this fish was bought by Pius in Dəngan'
- d. (bay) degang **Pius** pait di' Dəngon  
 bay <i>dagang **Pius** pait di' Dəngon  
 PRF <CPL>buy:UV PN fish LOC PN  
 'this fish was bought by Pius in Dəngan'

(Goudswaard 2005:126)

Goudswaard states that AVP, rather than VAP, is the preferred word order in actor-voice constructions, and the only possible order that can be used 'as an opening sentence of a story or conversation' (2005:126). In the undergoer voice, by contrast, VAP is the preferred choice, while PVA orders are less common. Just like in Tondano (and the other languages mentioned in §3.2), Begak thus displays strict agent-first order in actor voice, and a preference for an agent-first word order in the undergoer voice as well.

4. A NOTE ON WORD ORDER IN SUBJECT-LESS CONSTRUCTIONS. The previous sections examined variation in basic word order for constructions with voice-marked verbs and showed that all divergences from the two basic word-order sets observed in Austronesian symmetrical voice languages result in placing the agent before the undergoer, but never the other way around. The present section briefly deals with constructions involving special verbal forms, which lack voice and thus are neither actor- nor undergoer-oriented. Unlike voice-marked predicates, which select a participant with a particular thematic role as the subject, these constructions lack an argument morphosyntactically identifiable as a subject. Instead, all arguments are coded as nonsubject arguments.

Typical examples for such constructions are gerunds and so-called recent perfectives, both of which appear to be mostly restricted to Philippine-type languages. In each construction type, the only possible word order seems to be agent-first. In naturally attested examples, however, agents are typically pronominal. Hence, the evidence for agent-first ordering provided by these constructions is somewhat limited.

Example 23 illustrates a typical use of the recent perfective (or recent complete) form.

(23) Tagalog

- ka-ka-kain **ko** (pa) l(am)ang ng/sa karne  
 REC.CPL-RDP-eat 1SG.GEN PTCL PTCL GEN/DAT meat  
 'I have just eaten some/the meat'

(Schachter & Otanes 1972:374)

As shown in example 23, recent perfective forms do not assign subject status to any of the verb's arguments. All arguments are marked as nonsubjects, and word order appears

to be determined by their thematic role. Importantly, the agent consistently precedes the undergoer. Note, however, that in grammatical descriptions such as Schachter and Otnes's (1972) Tagalog grammar, all examples for recent perfectives (and, for that matter, gerunds) make use of pronominal agents if further arguments are overtly expressed, as in 23 above. That is, examples such as 24 below, which contain two full NPs, are rare in natural speech.<sup>18</sup>

(24) Tagalog

- a. ka-ka-kain        **ng leon** ng tigre  
 REC.PRF-RDP-eat GEN lion GEN tiger  
 'the lion ate the tiger' (\*the tiger ate the lion) (Guilfoyle et al. 1992:396)
- b. ka-ka-kuha        lang **ng asawa ko**        ng Iphone4 nya  
 REC.PRF-RDP-get just GEN spouse 1SG.GEN GEN iPhone 4 3SG.GEN  
 'my spouse just got her iPhone 4' (<http://tipidcp.com/viewtopic.php?tid=18094>)

Still, despite the artificiality of examples such as 24a, native speakers apparently do produce them once in a while (see 24b) and generally appear to agree that the first postverbal NP must be interpreted as referring to the agent.<sup>19</sup> There is very little discussion of recent perfective constructions in other languages, but as far as we have been able to ascertain, there is no language in which recent perfective sentences diverge from the observations made for voice-marked sentences, and which does not consistently follow an agent-first word order.<sup>20</sup>

For gerunds, observations similar to those for recent perfectives hold, though the range of uses for gerunds is much broader and more varied than that for recent perfectives. The use of major interest in the current context is as the head of a temporal adverbial clause, illustrated by example 25.

(25) Tagalog

- pag-bili **ko**        ng isda  
 GER-buy 1SG.GEN GEN fish  
 'when I bought a fish ...' (Kaufman 2011:742)

In this case, too, there is no ambiguity as to which of the genitive-coded arguments is the agentive one. According to Schachter and Otnes (1972:163), '[t]he performer of the action expressed by a gerund ... if designated ... is expressed by a possessive modifier ... immediately following the gerund'. As in the case of recent perfectives, however, examples with two full NP arguments are not attested in our text collections. All relevant examples in Schachter & Otnes 1972 also involve pronominal agents.

No explicit information concerning word-order options in gerund constructions for other Philippine-type languages was found in the literature consulted. Still, no counterexamples to a consistently agent-first order were found. In short, in all available ex-

<sup>18</sup> We are grateful to Dan Kaufman for pointing us to the example in 24b and a similar one also found on the internet.

<sup>19</sup> In one of his experiments, Sauppe (2017:53) made Tagalog speakers produce recent perfective sentences with two full NPs. In roughly 10% of the examples resulting from this experiment, the undergoer argument precedes the agent; hence, 90% were agent-first. As the actual examples are not provided in Sauppe's publication, however, it is difficult to evaluate them in the present context.

<sup>20</sup> In Tindal Dusun and Eastern Kadazan (both spoken in Sabah) as described by Robinson (2005) and Hurlbut (1988), respectively, recent perfective sentences seem not to behave as they do in Philippine languages. According to Robinson (2005:24), in Tindal Dusun recent perfectives (in her data) 'have actor focus interpretation' (i.e. mark the agent as subject). Hurlbut (1988:34) reports that in Eastern Kadazan, recent perfectives pattern like undergoer-voice constructions.

amples of gerunds used as heads of temporal adverbial clauses, the agent argument precedes nonagentive arguments, in line with the hypothesized agent-first preference. However, since agents are generally pronominal and nonagents tend to be full(er) NPs, this finding is of somewhat limited import for our current investigation.

**5. INTERNAL ORDERING OPTIONS FOR PRONOMINAL CLITICS: COMPETITION BETWEEN DIFFERENT ORDERING PRINCIPLES.** This section now turns to ordering constraints pertaining to pronominal clitics, focusing on those instances where these differ from the ordering of full NPs and free pronouns. In part, the internal ordering of pronominal clitics adheres even more strongly to the agent-first principles than fuller referential expressions do. In a number of languages, however, agent-first seems to be overridden by other ordering principles that are partially prosodic and partially involve the person hierarchy ( $SAP > 3$  or  $1 > 2 > 3$ ). The main purpose of this section is thus to provide a brief illustration of other biases impacting the linear order of verbal arguments in Austronesian symmetrical voice languages, that is, SAPs-first and prosodic weight. Such competing biases, we believe, are the reason why not all word-order options are agent-first, as further discussed in §6.

As in the discussion concerning the ordering of fuller referential expressions in §§2 and 3, we make a distinction between Philippine-type and Indonesian-type languages. Philippine-type languages have second-position pronominal clitics, while pronominal clitics in Indonesian-type languages tend to be verb-adjacent, often enclitic but in some languages also proclitic. We discuss these two types and their respective ordering constraints in turn.

Our concern is with clitic-internal order. The positions available for pronominal clitics by definition differ from the positions available for full NPs, including independent pronouns. That is, all clitics discussed here are special clitics, in the terminology of Zwicky 1985 and much of the current literature on clitics. As they are either second-position or verb-adjacent clitics, they typically precede all nonpronominal arguments in verb-initial constructions and all postverbal arguments in subject-initial constructions. As agents are much more likely to be pronominally expressed than nonagentive arguments,<sup>21</sup> clitics contribute to an overall agent-first preference on the discourse level. However, they also lead to undergoer > agent orders when the undergoer is pronominal and the agent is nonpronominal, as in 26.

- (26) Tagalog  
 na-kita            siya        **ni Pedro**  
 UV.POT.RLS-see 3SG.NOM GEN PN  
 ‘Pedro saw him’

(Schachter & Otnes 1972:183)

Clitic pronouns usually come in the same formal classes as full NPs. Thus, in Philippine-type languages, for example, there are nominative clitics that occur in subject function, genitive clitics that typically mark possessors as well as nonsubject agents, and dative forms that are used, *inter alia*, for recipients. More details are provided below.

**5.1. PHILIPPINE-TYPE SECOND-POSITION CLITICS.** As mentioned at the end of §1, second-position clitics are one of the defining properties of Philippine-type languages.

<sup>21</sup> In our above-mentioned corpus study on Totoli (see n. 14), only 14% of all agent arguments in transitive main clauses are realized as lexical NPs, as opposed to undergoers, which are realized lexically in 42% of all cases.

Their exact placement regularities are complex (cf. Kaufman 2010a for the most comprehensive account available to date on Tagalog), but to give a rough outline we may say that they occur after the first content word of the constituent they belong to (Schachter & Otnes 1972:183, Himmelmann 2005b:360).

The most common pattern for ordering clitic pronouns in Tagalog is that the genitive argument occurs before the nominative argument. The order of pronominals is thus in principle the same as for full NPs, with the major exception that the genitive clitics may only be used for nonsubject agent arguments. Hence, in the undergoer voices, the ordering is generally agent > undergoer, as shown by 27a and b.

(27) Tagalog

a. hindi yata **nila** sila dito ka-ka-usap-in  
 NEG probably 3PL.GEN 3PL.NOM here RDP-co-talk-PV  
 ‘they probably won’t talk to them here’ (Kaufman 2010a:2)

b. tulung-an **ninyo** ako  
 help-LV 2PL.GEN 1SG.NOM  
 ‘(if) you help me ...’ (Himmelmann 2005b:366)

In Tagalog and many other Philippine languages, however, genitive pronouns may not be used for nonsubject undergoers (in this regard, Indonesian-type languages are quite different, as further discussed in the next section). There is thus no construction directly corresponding to the undergoer > agent order typical for full NPs in actor voice (cf. 5a). Instead, when a pronominal undergoer occurs in an actor-voice construction, the free (i.e. nonclitic) dative form (preceded by the locative preposition *sa*) must be used, as illustrated in 28.

(28) Tagalog

mag-pa-ligtas **siya** sa kaniya  
 AV-CAUS-save 3SG.NOM LOC 3SG.DAT  
 ‘let him save him (now)’ (Matthew 27:43)

This means that the order is agent > undergoer when both arguments are pronominal in the actor voice as well. Note, however, that it is not by chance that example 28 is taken from the Bible. Tagalog and most other Philippine-type languages have a strong preference to use undergoer voice in main clauses whenever the undergoer is definite or specific. In the case of pronominal expressions, this preference is almost a grammatical requirement, and examples such as 28 occur very rarely, and mostly in writing. Still, the generalization remains that in clauses involving two pronominal core arguments, the order is generally agent > undergoer.

As Billings and Kaufman (2004:16) note, in many languages of the Philippines, agent > undergoer order is, in fact, the only possible order in clauses involving two core arguments expressed by pronominal clitics. In other languages (mainly from the Central Philippine subgroup, to which Tagalog belongs), prosody can override the default agent > undergoer order. In Tagalog, the genitive agent before nominative undergoer order, illustrated in example 27 above, holds only if the pronominals have the same number of syllables (i.e. if both are disyllabic). If one is monosyllabic and the other is not, the shorter one must precede the longer, regardless of case or thematic role. In the examples in 29 below, the reverse ordering of the pronominal clitics is not grammatical.

(29) Tagalog

a. na-kita ka **niya**  
 UV.POT.RLS-see 2SG.NOM 3SG.GEN  
 ‘he saw you’ (Schachter & Otnes 1972:184)

- b. na-kita            **ko**            siya  
 UV.POT.RLS-see **1SG.GEN** **3SG.NOM**

‘I saw him’

(Schachter & Otones 1972:185)

In the current context, however, it will be useful to note that the only pronominal clitic in Tagalog that triggers the reversed order (undergoer > agent) is the one seen in example 29a, namely the second-person singular nominative *ka*, all other nominative clitics in Tagalog being disyllabic. Given that there are quite a few nonpronominal clitics in Tagalog (e.g. aspect, focus, politeness, mood; see Kaufman 2010a for extensive exemplification and discussion) and the fact that prosodic weight is clearly the fundamental factor in determining their internal order, it makes sense to consider the positioning of *ka* in 29a to be due to its relatively smaller prosodic weight, and not due to its position on the person hierarchy (SAP > 3 or 2 > 3).

The distinction between prosodic weight and the relative position of arguments on the person hierarchy (SAP > 3 or 1 > 2 > 3) is of import, because in many southern Philippine languages the person hierarchy is the relevant factor determining the order of pronominal clitics.<sup>22</sup> In these languages, a first- or second-person pronoun will precede a third-person pronoun, regardless of case and thematic role. Consider the two Sarangani Manobo clauses in 30, where we find both orders (agent > undergoer and undergoer > agent), yet in both cases a first-person precedes a third-person pronominal.<sup>23</sup>

(30) Sarangani Manobo (Mindanao)

- a. k<in>ita        **ko**        dan  
 <PV.PRF>see **1SG.GEN** **3PL**

‘I saw them’

(DuBois 1976:48)

- b. k<in>ita        **a**        dan  
 <PV.PRF>see **1SG.NOM** **3PL**

‘they saw me’

(DuBois 1976:48)

In the preceding examples, both clitics are of equal prosodic weight, if weight is determined in terms of number of syllables. Alternatively, one could argue that the third-person clitic *dan* is heavier because it has a coda segment. The following examples in 31 from Tagakaulo are unambiguous in this regard, showing clearly that person is the relevant category, as here disyllabic forms precede a monosyllabic one.

(31) Tagakaulo (Mindanao)

- a. kallatan aku        **nan**  
 love    1SG.NOM **3SG.GEN**  
 ‘... he loves me’

- b. pigusip kami        **nan**  
 ask    1PL.EXCL.NOM **3SG.GEN**  
 ‘he asked us ...’

<sup>22</sup> Person-based pronominal order has been reported for a number of languages spoken in Mindanao: Agusan Manobo (Weaver & Weaver 1964), Sarangani Manobo (DuBois 1976), Obo Manobo (Brainard & Vander Molen 2005), Binukid Manobo (Peng & Billings 2008). A more comprehensive list of Manobo languages in which person-based ordering is attested can be found in Hung & Billings 2009. Person-based pronoun ordering has also been reported for a variety of Atayal and a variety of Puyuma, both Formosan languages. For an account of the phenomenon in Formosan languages see Jiang & Billings 2015 and references therein.

<sup>23</sup> Note that in Sarangani Manobo (as in a number of the languages in which the person hierarchy seems to be the decisive principle with respect to the ordering of pronominal arguments), third-person pronouns do not exhibit separate sets of nominative and genitive forms.

- c. pigdawat kitadun      **nan**  
 accept 1PL.INCL.NOM 3SG.GEN  
 ‘he accepted us’

(Lee &amp; Billings 2004:199)

A somewhat different way of allowing the person hierarchy to determine the order of pronominal clitics is found in Kimaragang, a language spoken in northeastern Borneo. Here the normal order in undergoer-voice clauses is genitive before nominative (agent > undergoer). In clauses involving SAPs, however, strict 1 > 2 > 3 order is observed. Consider example 32.

- (32) Kimaragang (Sabah)

ong taak-an okuh      **dikan** do siin potolibon  
 if give-DV 1SG.NOM 2SG.DAT GEN money CAUS:pass.by:OV  
 tekaw  
 1SG.GEN.2SG.NOM

‘if you give me money I will let you go past’

(Kroeger 2005:408)

The basic genitive form for second singular pronouns in Kimaragang is =*nuh*, and this is the default form for expressing a second singular agent in undergoer-voice constructions. Hence, in 32 the default order would yield \*=*nuh*=*okuh* ‘=2SG.GEN=1SG.NOM’. But a competing ordering principle based on the person hierarchy disallows this order and requires that first-person pronouns precede pronouns referring to other arguments, regardless of their thematic role (recipient in 32). The conflict is resolved by choosing the dative form for the pronoun referring to the agent (i.e. *dikan*), which always comes last in a series of pronominal clitics, resulting in an undergoer > agent order in 32.

In some languages, such a switch to alternative forms is also triggered when the resulting order of the clitics is agent > undergoer. Thus, in Maranao (Kaufman 2010b), the second-person nominative clitic *ka* in an undergoer-voice construction must be replaced by the free form *seka* when the agent is first person (contrary to Tagalog where this does not happen; cf. 29a).

- (33) Maranao (Mindanao)

m-bono-on **aken** seka den  
 DIST-kill-PV 1SG.GEN 2SG.NOM CPL

‘I’ll surely kill you’

(McKaughan 1958:13, cited in Kaufman 2010b:192)

To conclude, the internal ordering of pronominal clitics in Philippine-type languages is strongly biased toward an agent-first order insofar as there are no clitic pronouns to represent undergoers in actor-voice constructions (where otherwise one could expect an undergoer > agent order; cf. example 27). However, there is also evidence for other factors that influence the internal ordering of pronominal clitics, namely prosodic weight and the person hierarchy (SAPs-first). Both may lead to undergoer > agent order where otherwise an agent > undergoer order would be expected (i.e. in undergoer-voice constructions where generally agents precede undergoers; cf. 6b).

**5.2. PRONOMINAL PROCLITICS IN INDONESIAN-TYPE LANGUAGES.** As noted earlier in §2, pronominal clitics in Indonesian-type languages, unlike those of the Philippine type, are usually not second-position clitics, but rather cluster around the verb.<sup>24</sup>

<sup>24</sup> In several South Sulawesi languages there is restricted mobility in that some postverbal clitics may be positioned directly after a clause-initial negation, conjunction, or the like, a topic that is not of direct concern in this context as these phenomena probably involve different positioning domains. See Kaufman 2010a,b on positioning domains for second-position clitics in western Austronesian languages and Jukes 2006:317–29 for detailed exemplification from Makassarese.

Overall, clitic pronominal arguments in Indonesian-type languages show roughly the same ordering possibilities as NPs and free pronouns. More often than not, in fact, the only clitic series available is the genitive series, which is often incomplete, being restricted to, for example, singular pronouns. While not as strictly constrained as in Philippine-type languages, genitive clitics in Indonesian-type languages are primarily used for nonsubject (i.e. undergoer voice) agents only, nonsubject (i.e. actor voice) undergoers usually being referred to by free pronouns.<sup>25</sup>

The major aspect of pronominal clitics in Indonesian-type languages that is of interest in the current context is the fact that in many of these languages PROCLITIC pronouns exist, often restricted to the first, or to the first and second, persons. In Totoli, the relevant paradigm is restricted to the first-person singular in nonrealis mood, all other pronominal clitics being enclitics, as illustrated by the examples in 34.

## (34) Totoli

- a. **ku**=tenggeam-an isia  
**1SG.ACT=let:UV-APPL1 3SG**  
 ‘I’ll just leave him alone’ (improvisation\_3.050)
- b. tapi dei ngia no-ita=**ku** kajalan elam  
 but LOC APRX UV.POT.RLS-see=**1SG.GEN** horse red  
 ‘but here I see a red horse’ (QUIS\_animalgame\_SP 029)
- c. kalambotimu aku nokulia  
 ko-lambot-i=**mu** aku no-kulia  
 UV.POT-remember-APPL2=**2SG.GEN 1SG AV.RLS-study**  
 ‘you remember me studying’ (farming\_2.2037)
- d. goot-i=**ta**=ko dokter=ko kau  
 carry-UV2=**1PL.INCL.GEN=AND** doctor=AND 2SG  
 ‘we will bring you to the doctor’ (improvisation\_1.082)
- e. lau=po soting-an=**na** kau  
 presently=**ICPL UV:shoot-APPL1=3SG.GEN 2SG**  
 ‘he is shooting you’ (conversation\_4.240)

Example 34a shows the proclitic used in a nonrealis undergoer-voice construction with a first-person agent. In 34b, the first-person agent occurs in a realis undergoer-voice construction and hence is realized as an enclitic. Examples 34c–e illustrate the fact that second-person, first-person inclusive, and third-person agents in nonrealis undergoer-voice constructions are also always enclitics.

As seen in the examples in 34, the use of the proclitic pronoun may be restricted to marking nonsubject agents. This holds not only for Totoli, but also for many varieties of Malay, Batak, and other languages of Indonesia. In other languages, the proclitic pronoun more generally marks a subject function, regardless of thematic role (e.g. Tondano; Brickell 2014). And in still other cases, the proclitic has a nominative distribution, being used for transitive agents and the single core argument of intransitive verbs.<sup>26</sup> What do not seem to occur are proclitics that mark only undergoers or absolutes, that is, transi-

<sup>25</sup> In some languages, however, genitive enclitics can be used to refer to undergoers in actor-voice clauses, usually only in the singular, as seen in the following example from Indonesian.

- (i) **Narti** menungguku/mu/nya  
**Narti** meN-tunggu=ku/=mu/=nya  
 PN AV-wait=1SG/=2SG/=3SG  
 ‘Narti is waiting for me/you/him’ (Sneddon et al. 2010:170)

<sup>26</sup> See Haaksma 1933, Himmelmann 1996, and van den Berg 1996 for fuller exemplification and discussion.



tive undergoers and the single core argument of intransitive verbs. As for enclitic paradigms, by contrast, the absolutive function is quite common in some Indonesian-type languages (e.g. South Sulawesi languages), alongside the function of marking nonsubject core arguments. In short, while enclitic pronominal arguments may convey a range of thematic functions, proclitics always include the agent role, and sometimes are actually confined to it. Once again, the more general ordering pattern emerging from this state of affairs is agent > undergoer.

This section, then, has shown that the internal ordering of clitics in western Austronesian symmetrical voice languages is also clearly biased toward an agent-first order. However, there are some exceptions that strongly suggest that other factors also influence the ordering of clitics: namely, prosodic weight and the person hierarchy. This, in turn, is highly relevant for the fundamental question of why not all orders of verbal arguments are agent-first, which we take up in the next section.

**6. DISCUSSION.** This article is concerned with the claim that agents are universally more prominent than undergoers and that there is a processing bias favoring agents over undergoers, such that agents tend to occur first in constructions involving more than one verbal argument (cf. Primus 1999, Bornkessel-Schlesewsky & Schlewsky 2009, Alday et al. 2014, Bickel et al. 2015; evidence for a more general (nonlinguistic) prominence of agents in human cognition is provided by Leslie 1995, New et al. 2007, Spelke & Kinzler 2007, Gelman 2009, *inter alia*). From a comprehension point of view, the processing claim holds that speakers, regardless of the language they use, tend to interpret the first argument expression in a sentence as agentive unless such an interpretation is excluded by other evidence (an accusative case marker, for example). From a production point of view, it implies that speakers tend to place expressions for agentive arguments as early as possible when uttering a clause. This means that, since the bias is constantly active in on-line speech processing, speakers are always disposed to place agents first.

If such a processing bias indeed exists, a number of predictions follow. One prediction, not further investigated here, is that agent expressions should occasionally occur prematurely in spontaneous speech in all languages, and that this should not happen, or at least not to the same extent, for nonagentive arguments. A second prediction is that an agent-first bias should be found in discourse-frequency data, such that agent-first orders are more frequent than other orders in languages in which the set of basic word-order options includes both an agent > undergoer and an undergoer > agent order. As briefly shown in §3.1, this prediction is confirmed by discourse data for two Indonesian-type symmetrical voice languages (Totoli and Tondano).

Further evidence could also be provided by careful psycholinguistic experimentation with speakers of these languages. In fact, Sauppe (2017) does exactly this for Tagalog. Investigating eye-tracking and pupillometric evidence, he finds that the basic processing of actor-voice and undergoer-voice constructions is very similar in both comprehension and production, thus supporting the symmetrical voice analysis of the Tagalog voice system. At the same time, however, he also finds evidence for an agent bias in processing in that the production and comprehension of undergoer-voice sentences, while following the same time course, are 'more effortful' (Sauppe 2017:147).

The preceding predictions are all closely tied to on-line language processing and thus pertain to actual language use (or performance, in the generative tradition). Our main concern in this article, in contrast, is with the structures considered grammatical in a particular language (competence). Our universal agent-first hypothesis in §1 predicts an

agent-first bias in the inventory of grammatical structures in a particular language or found across genetically and areally closely related languages. Specifically, it predicts that if a particular grammar allows for different basic orderings of verbal arguments, the number of agent-first orders is always at least equal to the number of non-agent-first orders, and typically it is higher.

In linking this prediction to the agent-first bias in processing, we assume that processing, and thus actual language use, may have an impact on the grammatical structures available in a given speech community at a particular time (i.e. that performance impacts competence). More specifically, in line with Bickel et al. (2015), we predict that the agent-first bias on the structural level manifests itself as a diachronic trend. Agent-first orders are more often innovated, and once innovated, they are more likely to be integrated into the pool of basic word-order options than other ordering options. How exactly the impact of the agent-first processing bias on grammatical word order is to be modeled is a question that goes beyond the scope of the current article (and our expertise). Our main goal here is to show an agent-first bias on the structural level in languages that allow for basic non-agent-first ordering options, such as the western Austronesian symmetrical voice languages.

Given the presumed agent-first processing bias, the question naturally arises of why basic non-agent-first word order occurs at all in some languages, including the western Austronesian symmetrical voice languages. While not our primary concern, this question requires a brief discussion in order to provide a more precise delimitation of the scope of our hypothesis. The obvious answer to this question is that other ordering principles for verbal arguments exist, which are in competition, and occasionally in direct conflict, with the agent-first preference. Note that the hypothesis of an agent-first bias in language processing does not preclude the occurrence of other, orthogonal ordering biases. What the hypothesis predicts is that there is no mirror-image principle in the thematic domain: that is, no undergoer-first bias. To the best of our knowledge, there is indeed no evidence for such a mirror-image principle. Whenever non-agent-first orders are attested, they result from ordering biases not rooted in the thematic domain.

One such competing ordering bias is grounded in the referential or person hierarchy, according to which arguments referring to speech-act participants are ordered before other arguments. As illustrated in §5, this hierarchy sometimes plays a role in the ordering of clitic pronouns in Austronesian symmetrical voice languages. In particular, in southern Philippine languages, first- and second-person clitic pronouns are regularly placed before third-person clitic pronouns (and, in a smaller subset, first-person clitic pronouns before second-person clitic pronouns), regardless of their thematic role. The resulting orders in part comply with the agent-first preference, but in part also contravene it when the higher-ranking pronoun is in the undergoer role.

Still, while in some languages linking defaults and word order are primarily based on the person hierarchy,<sup>27</sup> this is clearly not the case in western Austronesian symmetrical voice languages. Hence, the question remains as to where the basic non-agent-first ordering options in 6 and 17, including the VPA order in, for example, 5a and 15b (repeated here as 35 and 36, respectively), come from.

<sup>27</sup> Such languages are widely known as INVERSE LANGUAGES. See Zúñiga 2006 for a thorough survey and Haude & Zúñiga 2016 for a direct comparison of inverse and symmetrical voice alignment systems. See Haude 2014 for evidence from discourse data that the inverse language Movima shows reflections of the agent-first bias in cases where only third-person participants are involved, that is, in cases where the person hierarchy is vacuous.

## (35) Tagalog

bumabasa ng diyaryo **ang titser**  
 <um>RDP-basa ng diyaryo **ang titser**  
 <AV>RDP-read GEN newspaper **NOM teacher**  
 ‘the teacher is reading a newspaper’

(Schachter &amp; Otanes 1972:69)

## (36) Totoli

ana mo-gutu=mo gauan **kita**  
 if AV-make=CPL garden **1PL**  
 ‘if we want to make a garden ...’

(monkey\_turtle.063)

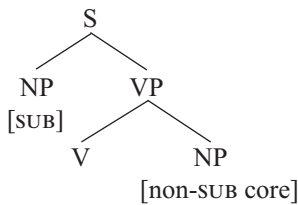
The major ordering principle that appears to apply here is that word order basically also reflects hierarchical structure. Words that together form a constituent occur adjacent to each other.<sup>28</sup> Of major import in the current context is the fact that in western Austronesian symmetrical voice languages, the nonsubject argument typically forms a (surface)<sup>29</sup> constituent with the verb, regardless of its thematic role. In actor voice the verb forms a constituent with the undergoer argument, while in undergoer voice the agent forms a constituent with the verb. Following Kaufman (p.c.), we call this the VP-PRINCIPLE, which means that the nonsubject argument should follow immediately to the right of the verb, regardless of its thematic role.

In Indonesian-type languages, which typically show flexible subject + VP word-order sets, the evidence for the VP-principle is clear and mostly uncontroversial. The development of a VP in western Austronesian is assumed to be a syntactic innovation. Ross describes this process as follows:

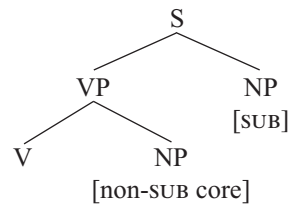
The noun phrase immediately following the verb has become strongly bound to it so that verb + noun phrase form a single constituent. The postverbal noun phrase is the patient with the actor voice and the actor with the patient voice. ... [this] seems to represent the grammaticisation of frequently occurring (but not rule governed) constituent sequences resulting from the Philippine-type tendency to place the pivot noun phrase at the end of the clause. (Ross 2002:54f.)

For language-specific evidence for a VP constituent in Indonesian-type languages see, for example, Arka 2003 on Balinese, Himmelmann 2005a on Totoli, Manning 1996 on Toba Batak, Mayani 2013 on Tajio, and Quick 2008 on Pendau. In these languages the verb and the nonsubject core argument form a prosodic and syntactic unit that typically cannot be broken up. The structures in 37 are adapted from Quick (2008:72).

## (37) a.



## b.

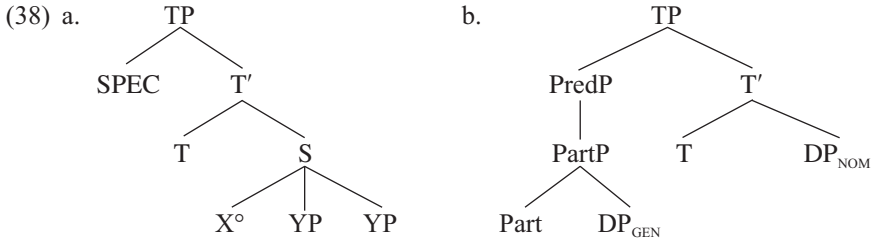


For Philippine-type languages (i.e. verb-initial + final subject languages), there is no uncontroversial evidence for a VP, and hence authors disagree about whether a VP con-

<sup>28</sup> This principle has been stated in various ways. Probably the earliest modern statement is Behaghel's first law (1932:4): 'Das oberste Gesetz ist dieses, daß das geistig eng Zusammengehörige auch eng zusammengestellt wird' ('The principal law is this: that what belongs together mentally is also placed close together'). Phrased in this way, it is basically a semantic principle that assumes that syntactic constituency reflects semantic dependency. Among many others, see Rijkhoff 2004, 2015 for further details, discussion, and references.

<sup>29</sup> We are only concerned with surface word order here and the evidence for constituency that can be found on this level. We remain agnostic regarding the question of whether similar surface word orders may be derived from different underlying orders.

stituent should be assumed for these languages. Based on evidence from clitic placement, Kroeger (1993) argues that there is no VP in Tagalog and postulates the flat structure in 38a for Tagalog verbal clauses (Kroeger 1993:137). Kaufman (2009, 2018), by contrast, claims that the VP-principle also holds in Philippine-type languages. However, following the hypothesis that all predicates are inherently nominal, this ‘VP’ structure shares the syntax of nominal possessors, forming a constituent with the sentence-initial predicate, as illustrated in 38b (Kaufman 2009, 2018, Kaufman & Chen 2017).<sup>30</sup> Note that according to this analysis, nonsubject arguments regularly form a lower-level constituent with the verb, although the constituents are not of exactly the same type.



Kroeger (1993:111) argues that the word-order variability in Tagalog—and, we would add, in Philippine-type languages more generally—is due to a conflict between two principles: (i) the agent tends to precede all other arguments (i.e. our agent-first), and (ii) the argument that bears nominative case tends to follow all other arguments (i.e. our VP-principle; see also Billings 2005). In the undergoer voice, both principles are satisfied and hence there is little variability within and across languages. But in the actor voice, a conflict arises. Here the undergoer, rather than the agent, forms a constituent with the verb. If the agent were to precede the undergoer in order to comply with the agent-first principle, it would have to break up the VP unit of verb+nonsubject, and would thus violate the VP-principle. Consequently, we find the kind of variation documented in §2.2. More generally, we may note that ALL deviations from the basic word-order sets observed in §§2 and 3 occur in the actor voice, where the two ordering principles conflict, and none in the undergoer voice, where no conflict arises.

Another factor that appears to affect word-order options pertains to the overt marking of verbal arguments. It can be widely observed that word order is more flexible if NPs are overtly marked for case/thematic role, but is fixed to agent > undergoer if overt case marking is lacking. In §3.1 above, we noted that in a number of Philippine languages the same marker is used for both core arguments of a transitive construction, with the consequence that the order is fixed to agent > undergoer. Takbanuad Bunun is a Formosan language that allows for both options, that is, both case-marked and bare NPs. A

<sup>30</sup> Most current generative approaches to Austronesian syntax assume a universal underlying SVO structure where undergoer arguments underlyingly always form a lower-level constituent with the verb. While this is unproblematic in actor-voice constructions, such approaches have to assume various movement operations in order to derive the correct surface orders in which agent arguments are typically closer to the verb than undergoer arguments (i.e. VAP). Guilfoyle, Hung, and Travis (1992), for example, assume a deep structure where both A and P are base-generated within the VP, the agent in the SPEC of VP, the undergoer as a sister of V. Either the agent or the undergoer can then move to the SPEC of IP (the head to the RIGHT of I') in order to receive case (and become the surface subject), while the verb moves to INFL and thus ends up in sentence-initial position. In more recent generative approaches it is assumed that agents are universally base-generated in a leftward SPEC position (following a universal specifier-head-complement branching order; cf. Kayne 1994). Different surface word orders are then derived by fronting rules, for example, VPA order by VP fronting (cf. Rackowski & Travis 2000, Pearson 2018).

nominative-marked agent, such as *a Paiʔan* in 39a and 39b, can either precede or follow the accusative-marked undergoer. For the bare nouns, however, the argument in postverbal position is to be interpreted as the agent, and thus 39d is ungrammatical for the reading ‘Paiʔan is eating meat’.

(39) Takbanuad Bunun (Taiwan)

- a. maʼun a **Paiʔan** i titiʔ  
 AV:eat NOM PN ACC meat  
 ‘Paiʔan is eating meat’ (Jeng 1977:285)
- b. maʼun i titiʔ a **Paiʔan**  
 AV:eat ACC meat NOM PN  
 ‘Paiʔan is eating meat’ (Jeng 1977:285)
- c. maʼun **Paiʔan** titiʔ  
 AV:eat PN meat  
 ‘Paiʔan is eating meat’ (Jeng 1977:284)
- d. \*maʼun titiʔ **Paiʔan**  
 AV:eat meat PN  
 intended: ‘Paiʔan is eating meat’ (Jeng 1977:285)

Similar phenomena are found in many unrelated languages. Tibeto-Burman, Papuan, and Australian languages are famous for their ‘optional’ agent marking.<sup>31</sup> In many of these languages, the agent in its unmarked, initial position in which it precedes other verbal arguments may or may not be case-marked, depending on semantic and/or pragmatic factors. But when it does not precede the other arguments, case marking becomes obligatory. Importantly, in those cases in which no case marking is present, the initial NP must be interpreted as the agent.

(40) Qiang (Tibeto-Burman)

- a. **χumtʂi(-wu)** khumtʂi zə-dzə-u  
**χumtʂi(-AGT)** khumtʂi DIR-hit-VIS  
 ‘χumtʂi hit Khumtʂi’ (LaPolla & Huang 2003:78)
- b. khumtʂi **χumtʂi-wu** zə-dzə-u  
 khumtʂi **χumtʂi-AGT** DIR-hit-VIS  
 ‘Khumtʂi was hit by χumtʂi’ (LaPolla & Huang 2003:78)

(41) Yali (Trans-New Guinea)

- a. **hiyap tu(=en)** wam wat-tuk  
**woman DEM(=AGT)** pig hit-PROG  
 ‘the woman is hitting the pig’ (Riesberg, fieldnotes)
- b. wam itno **hiyap tu=en** wat-tuk  
 pig DET **woman DEM=AGT** hit-PROG  
 ‘the woman is hitting the pig’ (Riesberg, fieldnotes)

The preceding examples provide further strong evidence for the claim that agent-first is the universally preferred order in the thematic domain. To the best of our knowledge, there are no converse examples such that the order of arguments is rigidly undergoer > agent when arguments are unmarked,<sup>32</sup> but more flexible when they are marked for case. As shown by Malagasy (§2.4), however, it is not necessarily the case that the lack of overt marking on the argument necessarily leads to agent-first order. In Malagasy, the

<sup>31</sup> See inter alia Meakins 2015 for Australian languages; Scott 1986, Suter 2010, Pennington 2013, Riesberg 2018 for Papuan languages; Saxena 1991, Tournadre 1991, Peterson 2011 for Tibeto-Burman.

<sup>32</sup> Excepting cases of incorporation where a bare object noun is incorporated into the verb and may thus occur before the agent in V-initial languages (see Kaufman 2008:43–46 for illustration and further references).

order is rigidly subject-last, which in actor-voice constructions necessarily leads to VPA order. In the case of Malagasy, then, we have to assume that the VP-based ordering principle generally outranks the thematic role-based principle AGENT-FIRST.

The preceding observation points to a major unresolved issue in the explanation of differing word orders that we have sketched in this section: it is not yet clear how exactly the competition between the differing ordering principles, and the processing biases that presumably underlie them, actually works.<sup>33</sup> One major aspect in need of explanation in this regard is the fact that the outcomes of these conflicts differ substantially across languages. While in some languages, including many Austronesian voice languages, the person hierarchy hardly plays a role in ordering verbal argument expressions, so-called inverse languages appear to use the person hierarchy as the most basic organizing principle for their syntax (cf. DeLancey 1981, Zúñiga 2006, Jacques & Antonov 2014). In many other languages, including the southern Philippine languages discussed here, the person hierarchy plays a strictly confined, minor role in ordering verbal arguments—confined, that is, in the sense that it pertains only to the ordering of clitic pronouns. Similarly, some languages follow fairly strictly a constituency-based ordering principle, while others allow constituency-based order to be overridden by thematic role- or person hierarchy-based orders.

What is clear, however, is that more often than not different ordering principles actually concur in selecting the most prominent argument: referents higher on the person hierarchy, often summarily characterized as ‘animate’, frequently have an agentive role and are therefore also high on the agency hierarchy. Hence, what has been discussed here almost exclusively in terms of agent prominence in most instances manifests agent-cum-animate prominence, and, with regard to our specific topic of investigation, an animate agent-first preference in ordering verbal arguments. The pervasiveness and strength of the agent-first bias observable in grammatical structures thus in all likelihood reflects multiple biases.

Finally, as already mentioned in the introduction, the (animate) agent-first preference in word order is part of a more comprehensive set of grammatical phenomena reflecting agent prominence in human language and cognition. As argued by Himmelmann and Primus (2015), it is a core characteristic of prominence relations that they may change in ongoing discourse. That is, an element that is prominent at one stage of an ongoing discourse does not necessarily maintain its prominence status. With respect to agentivity, it may thus be the case that the agent involved in a particular state of affairs is not relevant at a given point in the unfolding discourse. For such instances, constructions are needed that are agentless or where the agent is not in a prominent position (passives, for example). Hence, the fact that not all linguistic utterances evince agent-first order is to be expected even if a universal agent-first processing bias is assumed. This is part of the flexibility necessary for human languages to convey the full range of states of affairs deemed to be worth talking about.

**7. CONCLUSION.** The present investigation provides evidence for the hypothesis that natural languages show a universal processing bias toward placing agent arguments as early as possible in clausal constructions, specifically before other verbal argument expressions. The empirical evidence we provide here comes from Austronesian symmetrical voice languages. Due to the symmetrical relation between the actor and undergoer

<sup>33</sup> One obvious possibility for modeling this interaction is allowing for different constraint rankings, as envisaged in optimality-theoretic approaches to syntax.

voices in such languages, default word orders are not unequivocally agent-first, but also allow for undergoer > agent sequences.

Tagalog and Totoli were used to exemplify two basic word-order sets, the verb-initial + final subject word-order set and the flexible subject + VP word-order set, which are widely found in western Austronesian languages. Both basic sets include constructions in which the agent argument precedes the undergoer. But they also include constructions in which the undergoer precedes the agent. Hence, in these languages neither order can be claimed to be more basic than the other. Importantly, however, and in line with our hypothesis, whenever ordering options exist that go beyond or against the basic sets, the divergence is always in favor of an agent > undergoer order, thus showing a clear bias toward agent-first ordering. To illustrate this briefly again with an example from Kelabit, we see in the data below that in addition to the expected ‘standard’ ordering options— $\underline{A}VP$  (agent > undergoer) in 42a and  $VP\underline{A}$  (undergoer > agent) in 42b—there is an additional third option that places the agent before the undergoer, as in 42c, giving  $V\underline{A}P$ . No comparable additional option exists to place the undergoer before the agent.

- (42) Kelabit (Sarawak)
- a. **la’ih sineh** ne-kuman buaq kaber  
**man DEM** PFV-AV.eat fruit pineapple  
 ‘the man ate pineapple’ (Hemmings 2016:447)
- b. ne-kuman buaq kaber **la’ih sineh**  
 PFV-AV.eat fruit pineapple **man DEM**  
 ‘the man ate pineapple’ (Hemmings 2016:447)
- c. ne-kuman **la’ih sineh** buaq kaber  
 PFV-AV.eat **man DEM** fruit pineapple  
 ‘the man ate pineapple’ (Hemmings 2016:448)

In the appendix, we list all of the languages for which we found information on basic word order and its variants. Clearly, as far as we have been able to ascertain to date, all variation patterns conform to the prediction that they follow the order agent > undergoer. Recall, however, that this holds only for the ordering of full NPs, including free pronouns. Clitic pronouns largely also show a clear agent > undergoer preference, but may follow an ordering preference based on the person hierarchy as well.

While there is no space here to substantiate this in detail, it should be noted that all of the deviations from the basic word-order sets noted in §§2 and 3 are in all likelihood innovations, from a historical point of view. There is no doubt that the basic word-order set illustrated for Tagalog in 6— $VP(X)\underline{A}$  and  $VA(X)\underline{P}$ —is indeed the basic set for Philippine-type languages and probably characteristic of an early stage in the history of the Austronesian languages.<sup>34</sup> The history of the syntax of the Indonesian-type languages is not yet very well understood, but it is commonly assumed that the word-order set illustrated for Totoli in 17 is an innovation deriving from a verb-initial set similar to the one found in Tagalog and other Philippine-type languages (cf. e.g. Cumming 1991, Wolff 1996, Kaufman 2018).

That agent-first ordering is not an absolute universal in natural languages is due to the fact that there are competing ordering biases. One such competing bias is the ten-

<sup>34</sup> This is intentionally phrased somewhat vaguely because the widely accepted picture of the early development of Proto-Austronesian proposed by Blust (e.g. Blust 1977, 2013) has been challenged with regard to a number of important details, which in turn has repercussions for hypotheses about the default word order in Philippine-type languages. For details, see in particular Ross 2009 and Smith 2017.

gency to place argument expressions referring to SAPs before other argument expressions (person prominence as opposed to agent prominence; cf. §5). Another important word-order principle demands that word order reflect hierarchical structure (constituency), as briefly illustrated in §6.

A fundamental question not further pursued here pertains to the motivations for an agent-first bias in language (but see some of the literature quoted at the beginning of §6 above). Most modern syntactic theories that include an account for (surface) word order have an agent-first bias built into the theory. This is particularly clearly articulated in the many generative approaches which assume that the base-generated order of arguments always places the agent higher than other arguments (examples based on western Austronesian data include Rackowski & Travis 2000, Travis 2010, Pearson 2018). It is also very clearly built into force-dynamic approaches (e.g. Talmy 1988, Langacker 1991, Croft 2012), which generally assume that agents rather than undergoers constitute the starting point in a causal chain and that this is iconically reflected in the preference for agent > undergoer orders. A common challenge to all of these approaches, in our view, is to provide a convincing account for the complex and dynamic state of affairs that we claim is found across Western Austronesian symmetrical voice languages. These languages, on the one hand, systematically violate the agent-first principle by including at least one non-agent-first order among their basic word orders. On the other hand, all innovative word orders that go beyond the basic set typical for these languages follow the agent-first principle and thus support the idea of an agent-first bias in human language.

#### APPENDIX: LANGUAGE SAMPLE AND SOURCES

This appendix lists all of the languages investigated and the main sources consulted for them. As mentioned in n. 6 in the main text, our empirical survey also included Formosan languages. However, we did not include data from these languages in our main argument, because this would have required detailed justification regarding whether a given Formosan language is a symmetrical voice language, and because the syntax of these languages is still not very well understood. In the present appendix, we have included those Formosan languages that, we believe, are uncontroversially symmetrical voice languages.

We use V for ‘verb’, A for ‘agent’, and P for ‘undergoer’. In compiling this list, we adhere to the same approach described in the main text; that is, we include only basic transitive constructions that reflect the pragmatically (and prosodically) unmarked order of full NPs (including free pronouns). An exception is group 1b, which includes additional postverbal actor clitics, here denoted as =A.

#### Group 1: Verb-initial + final subject languages (VPA and VAP)

Malagasy	Madagascar	Fugier 1999, Rasoloson & Rubino 2005
Aklanon	Philippines (Visayas)	Zorc & de la Cruz 1968, Chai 1971
Cotabato Manobo	Philippines (Mindanao)	Errington 1979, Kerr 1988
Ibanag	Philippines (Luzón)	Dita 2010
Pangasinan	Philippines (Luzón)	Benton 1971
Sama/Sinama	Philippines (Sulu)	Akamine 2003, 2005
Tagalog	Philippines	Schachter & Otanes 1972, Himmelmann 2005b
Atayal (Squiliq)	Taiwan	Liu 2004
Seediq	Taiwan	Tsukida 2005, Oiwa-Bungard 2017

#### Group 1a: Strict agent-first/agent-first preferred (VAP and VAP)

Agta (Centr. Cagayan)	Philippines (Luzón)	Healey 1960
Eastern Bontoc	Philippines (Luzón)	Fukuda 1997
Ibaloi	Philippines (Luzón)	Ruffolo 2004
Ilokano	Philippines (Luzón)	Vanoverbergh 1955, Rubino 1997, 2005
Kalinga	Philippines (Luzón)	Ferreirinho 1993
Yogad	Philippines (Luzón)	Davis et al. 1998
Cebuano	Philippines (Visayas)	Bunye & Yap 1971, Wolff 1972, Tanangkingsing 2009
Hiligaynon	Philippines (Visayas)	Wolfenden 1975, Spitz 2001
Mamanwa	Philippines (Mindanao)	Miller & Miller 1976



Mansaka	Philippines (Mindanao)	Svelmoe & Svelmoe 1974
Northern Subanen	Philippines (Mindanao)	Sanicas Daguman 2013
Eastern Kadazan	Sabah	Hurlbut 1988
Tatana'	Sabah	Dillon 1994
Tindal Dusun	Sabah	Robinson 2005
Amis	Taiwan	Chen 1987, Wu 2006

**Group 1b: Postverbal agent clitic in actor voice (V=A PA and VAP)**

Tboli	Philippines (Mindanao)	Forsberg 1992
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In northern Philippine languages, such as the ones listed below, the grammar of coreferential clitic pronouns is considerably more complex and usually occurs in both actor and undergoer voice. Kapampangan provides the most regular and systematic example. Note that several of the other languages listed here also occur in the previous category as they also show a preference for putting agentive full nominal expressions before other arguments. In these instances, there is usually no clitic.

Agta (Dupaningan)	Philippines (Luzón)	Robinson 2011
Bontoc (Central)	Philippines (Luzón)	Reid 1970
Ivatan	Philippines (Luzón)	Reid 1966
Ilokano	Philippines (Luzón)	Vanoverbergh 1955, Rubino 1997, 2005
Kankanaey	Philippines (Luzón)	Allen 2011
Kapampangan	Philippines (Luzón)	Mirikitani 1972

**Group 2: Flexible subject + VP languages (AVP, VPA, PVA, and VAP)**

For several of the languages listed here it is a matter of debate to what extent VPA order in actor voice is actually possible/highly marked.

Belait	Brunei	Clynes 2005
Indonesian	Indonesia	Sneddon et al. 2010
Besemah	Sumatra	McDonnell 2016
Karo Batak	Sumatra	Woollams 1996, 2005
Balinese	Bali	Clynes 1995, Arka 2003
Javanese	Java	Ogloblin 2005
Javanese (Tengger)	Java	Connors 2008
Madurese	Madura/Java	Davies 2010
Sundanese	Java	Hardjadibrata 1985, Müller-Gotama 2002
Balantak	Sulawesi	van den Berg & Busenitz 2012
Buol	Sulawesi	Zobel 2005
Dondo	Sulawesi	Garantjang et al. 1984, Himmelmann fieldnotes
Pendau	Sulawesi	Quick 2007
Tajjo	Sulawesi	Mayani 2013
Totoli	Sulawesi	Leto et al. 2005–2010, Himmelmann & Riesberg 2013, Riesberg 2014
Toratán	Sulawesi	Himmelmann & Wolff 1999

**Group 2a: Prohibition of VPA in actor voice**

One option in actor voice only: AVP; in undergoer voice: PVA/VAP.

Batui	Sulawesi	McConvell 2016
Rampi'	Sulawesi	McConvell 2017
Tondano	Sulawesi	Brickell 2014
West Coast Bajau	Sabah	Miller 2007, 2014

**Group 2b: Two agent-first options in AV (AVP, VAP)**

Note that these languages often also allow a third word-order option in actor voice: agent-last VPA.

Kelabit	Sarawak	Hemmings 2016
Pitu Ulunna Salu	Sulawesi	Campbell 1989

**Group 2c: Prohibition of VPA and two agent-first positions in actor voice (AVP, VAP)**

In undergoer voice: PVA, VAP.

Begak (Ida'an)	Sabah	Goudswaard 2005
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