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Interference of Second Language in the Acquisition of Tagalog Word Order in Children: A Case Study

Seth Ronquillo

1. Literature Review

The Austronesian language Tagalog, spoken in the Philippines, permits a relatively variable syntactic word order including the most default word order verb-object-subject (VOS), verb-subject-object (VSO), and subject-verb-object (SVO), the least common word order. To compensate for the potential ambiguity presented by such syntactic alterations, each argument of the verb in a Tagalog sentence receives a distinct case marker that indicates its grammatical function (De Guzman 1976; Rackowski 1996). Segalowitz and Galang (1976) studied the acquisition of word order in native Tagalog-speaking children, particularly with respect to the comprehension of actor-focus and patient-focus sentences, which are respectively similar to active and passive constructions in English. Segalowitz and Galang concluded that Tagalog-speaking children have better mastery of patient-focus than actor-focus in VOS structures, and that children would use the SVO structure most productively with actor-focus sentences because they associate the first noun of the sentence with the agent of the verb. Their study, however, does not provide much insight on the interaction between syntactic word order and case morphology. Laughren (2002) notes in her analysis of the Australian language Warlpiri that a specific set of case markers

indicates grammatical functions in the determiner phrase (DP) of languages that allow word order variation, such as Tagalog. English, on the other hand, does not have the same syntactic freedom as Tagalog. English has a more fixed SVO word order structure, which signals the grammatical function of DPs and supplements its deficient case marking system (Matthews, Lieven, Theakston, & Tomasello 2005; Polinsky 2006). In English, the agent of the verb is also commonly associated with the first noun of the sentence, which corresponds to the subject in the default SVO structure (Kamide, Scheeper, & Altmann 2003).

Polinsky (1995, 2010) discusses how the attrition of L1 grammar occurs for heritage speakers, bilinguals who never reach native-like competence in their L1. She argues that this results from the incomplete acquisition of the native tongue when language learners begin to receive greater input from their L2 before fully acquiring the grammar of their L1—often due to the dominance of L2 in their speech community. It is important to distinguish this phenomenon from L1 transfer, where the grammatical properties of L1 influences the acquisition of L2. Because we are considering interference in the complete acquisition of L1 caused by L2 acquisition (Polinsky, Benmamoun, Montrul 2010). In the case of Tagalog, if my child subject had fully learned how word order variation and case morphology complement each other, he should be able to form grammatical sentences using the default VOS structure. Yet, if he—as a bilingual in Tagalog (L1) and (English) L2—is unable to perform word order alterations in Tagalog and uses a fixed word order with minimal case marking instead, this could indicate the interference of English in his full acquisition of word order variability in Tagalog. While the results of this case study do not predict my child subject's likelihood of fully acquiring word order variability in Tagalog, it presents the proba-

ble areas in his L1 grammar where the syntactic interference by his L2 could be taking place.

1.1 Brief overview of Tagalog syntax: verb focus

One of the most discussed topics in Tagalog syntax involves its verb focus system, analogous to grammatical voice in English, which is indicated by verbal infixation, or the insertion of an affix inside the word stem (Aldridge 2012; Schacter & Otanes 1972). For the purposes of this paper, the discussion will be limited to actor-focus and patient-focus verbs, which roughly correspond to the active and passive voices in English. In actor-focus structures, the verb is inflected with the infix, **-um-**, and the semantic focus of the sentence is on the actor/agent of the action. The agent receives the nominative case marker and the object/patient (*complement*) of the action receives the accusative case marker (Schacter & Otanes 1972; Segalowitz & Galang 1976). In Tagalog, a determiner accompanies the noun (whether common noun or proper name), and this determiner carries the case morphology of the DP¹: The nominative is signaled by the determiner *ang*², and the accusative by the determiner *ng*³ /*na*. The agent of the action for an actor-focus verb serves as the topic of the sentence, similar to subject of the sentence in English. As such, in the default verb-initial order in Tagalog for transitive verbs (VOS), the actor-focus structure corresponds to verb-patient-agent for transitive verbs (1) and verb-agent for intransitive verbs (2):

- (1) K<um>ain ng saging ang
 bata? (Segalowitz & Galang 1976)
 <AF.Perf>eat Det.ACC banana Det.NOM
 child
 ‘The child ate the banana.’

(2) T<um>awa ang bata?
 <AF.Perf>laugh Det.NOM child
 ‘The child laughed.’

In patient-focus structures the verb is inflected by the infix **-in-** and the semantic focus of the sentence is on the object/patient of the action. The patient/object receives nominative case while the agent of the action receives the accusative case. Thus, in patient-focus structures, the patient of the action serves as the topic of the sentence, similar to how the object of a transitive action in an English passive voice becomes the subject. In the default VOS syntactic order of Tagalog for transitive verbs, this structure is verb-agent-patient for transitive verbs (3). It would not be grammatical to use a patient-focus verb for intransitive verbs, since they do not have a patient (4):

(3) K<in>ain ng bata? ang sag-
 ing (Segalowitz & Galang 1976)
 <PF.Perf>eat Det.ACC child Det.NOM
 banana
 ‘The banana was eaten by the child.’

(4) *T<in>awa ang bata?
 <PF.Perf>laugh Det.NOM child
 *‘The child was laughed’

This context of the Tagalog focus system and case marking demonstrates how word order variation operates. Because the case morphology on the determiner indicates the DP’s thematic function (agent or patient), the order in which the DPs appear in the sentence does not necessarily matter. The following shows the word order permutations of actor-focus (5) and patient-focus (6) sentences in Tagalog, which particularly

demonstrate greater variability in transitive verbs:

(5) (a) K<um>ain **ng** saging **ang**
bata?
 <AF.Perf>eat Det.ACC banana Det.NOM
child
 ‘The child ate the banana.’

(b) K<um>ain **ang** bata? **ng**
saging
 <AF.Perf>eat Det.NOM child Det.ACC
banana
 ‘The child ate the banana’

(6) (a) K<in>ain **ng** bata? **ang**
saging
 <PF.Perf>eat Det.ACC child Det.NOM
banana
 ‘The banana was eaten by the child.’

(b) K<in>ain **ang** saging **ng**
bata?
 <AF.Perf>eat Det.NOM banana Det.ACC
child
 ‘The banana was eaten by the child’

Tagalog also allows for an SVO word order, often referred to as *ay*-cleft or *ay*-inversion due to its characteristic linker morpheme *ay*. A sentence type rarely used colloquially. *ay*-inversion is mostly associated with a formal style of speaking. In *ay*-inversion, the topic of the sentence moves from a post-predicate to a pre-predicate position. As such, the nominative case appears on the determiner that precedes the verb. Structurally, this Tagalog SVO construction appears quite similar to the default

English word order, with the exception of the linker morpheme *ay* required to link the topic of the sentence to the predicate:

(7) (a) Ang saging **ay** k<in>ain ng
 bata?
 Det.NOM banana **LINK** <PF.Perf>eat Det.
 ACC child
 ‘The banana was eaten by the child.’

(b) ? Ang bata? **ay** k<in>ain ng
 saging
 Det.NOM child **LINK** <PF.Perf>eat Det.
 ACC banana
 ‘The child was eaten by the banana’

(8) (a) Ang bata? **ay** k<um>ain ng
 saging
 Det.NOM child **LINK** <AF.Perf>eat Det.
 ACC banana
 ‘The child ate the banana’

(b) ? Ang saging **ay** k<um>ain ng
 bata?
 Det.NOM banana **LINK** <AF.Perf>eat
 Det.ACC child
 ‘The banana ate the child.’

It should be noted that even though *ay*-inversion only permits the DP with nominative case to move to the left of the predicate, it does not have any constraints on thematic function, as both agent and patient DPs can become the topic of the SVO sentence depending on the focus of the verb.

1.2 Brief overview of English syntax and its difference to Tagalog

Unlike Tagalog, English has a fixed SVO word order structure in both the active and the passive voices. Case marking morphology only occurs on English pronouns (Matthews, Lieven, Theakston, & Tomasello 2005; Polinsky 2006). The agent theta role, the argument function assigned by a verb, is also commonly assigned to the subject position in the default SVO active voice (Kamide, Scheeper, & Altmann, 2003). To further show the preferentiality towards the SVO word order in English, the passive voice places the object/patient of the verb in the subject position of the sentence, and the agent appears in an optional **by-phrase**. Indeed, this English SVO structure, especially that of the passive voice (8), appears quite similar to *ay*-inversion in Tagalog:

(7) English: The child ate
the banana. *Active*
Tagalog: Ang bata? ay k<um>ain ng
saging *Actor-Focus*
Det.NOM child LINK <AF.Perf>eat
Det.ACC banana.

(8) English: The banana **was eaten** **by**
the child. *Passive*
Tagalog: Ang saging **ay** k<**in**>ain
ng bata? *Patient-Focus*
Det.NOM banana **LINK** <**PF**.Perf>eat
Det.**ACC** child.

2. Methods

Subject: My child subject, John (pseudonym), is a Filipino-American boy who was 7;8 at the time of the study. He was

born and raised in Los Angeles, CA, and was exposed to Tagalog as his L1. John has an older sister, who like him, was born and raised in Los Angeles and learned Tagalog as her L1. Both of John's parents are immigrants from the Philippines and have been speaking to him and his sister in Tagalog since they were born. John was first exposed to English (L2) at age 4 when he began to attend school. When I asked his parents about how often he speaks in Tagalog, they said that they teach their two children to write in Tagalog and compel them to speak it at home, because John and his sister already learn and speak English in school all day. Often though, their two children would converse in English whenever they are only speaking to each other. The parents also mentioned to me that John's Tagalog vocabulary is sometimes lacking (viz. he would say "hair over eyes" in Tagalog as he forgets or does not know the word for "eyebrows"), but they did not mention anything peculiar about his grammar. John was not available for follow-ups after the time of study.

My control for the study, Sandra (pseudonym), is a 54-year-old Filipina woman who came to the U.S. at the age of 44 and currently lives in Los Angeles, CA. Sandra was born in a rural province in the Philippines, and learned the Philippine language Bicol as her first language. She began to learn Tagalog and English when she began school at the age of 5, and has been speaking Tagalog predominantly since. Ideally, my control for this study should be another Tagalog-speaking child as old as John, but having a control like Sandra who has acquired native mastery of Tagalog is important so that John's Tagalog-speaking ability can be examined accurately. Although Sandra is much older than John, she (among other older Filipino immigrants) was the only native Tagalog speaker that was accessible during the time of the study.

Production Task: To test what word orders and case mor-

phology my subjects would produce in Tagalog, I prepared a PowerPoint slideshow that had 32 slides. Each slide contained one image to be used as stimulus for eliciting Tagalog sentences from both of my subjects. I asked my subjects to look at the image that appears and describe to me the action that they see in the photograph using one Tagalog sentence. I then recorded their production using the audio software Audacity® and subsequently transcribed them by listening to the recording.

The first three images were used to prime the subjects and make sure that they understood the task at hand: the first image demonstrated an intransitive action (the dog laughed); the second demonstrated a transitive action verb relating an animate and inanimate object with each other (the man ate the sandwich); the third image also demonstrated a transitive action but it related the action between two animate objects (the boy played with the girl). Once I confirmed that the subjects understood the instructions for the task, I showed them the other 29 images: 12 were transitive actions between two animate objects, 11 were transitive actions between an animate object and an inanimate object, 5 were emotion verbs (the girl loved the dog), and 1 was an intransitive action (the baby cried). I used more images depicting transitive verbs in my experiment because as shown in (5)-(6), transitive verbs allow for the most word order variability in Tagalog.

Comprehension Tasks: To test how well John comprehended the different word order permutations of the same patient-focus sentence, I prepared a PowerPoint slideshow that contained 5 pairs of images—each image pair was shown 4 times in a rotation cycle for a total of 20 slides (See Appendix §7.1 for complete list of images) Each pair of images depicted a transitive action, and each image illustrated either one of the following: a) agent performing an action on patient (e.g. The man was kissed by the woman) or b) patient of first image

performing an action on agent of first picture (e.g. The woman was kissed by the man)—i.e. reversal of argument relationship in first picture. Each picture-pair presentation was accompanied by a stimulus sentence using a word order permutation (either VOS, VSO, or SVO) of the same patient-focus sentence that shows the action in the images. Thus, in (9), the image on the right is the only image that would serve as a correct response. In one of the sentence repetitions however, I used a second SVO sentence, with the agent and patient of the actions reversed, in order to ensure that the study participants are not pointing at the same image by rote:

(9) *Stimuli: The man was kissed by the woman (image on the right)*

SVO-Inverted: The woman was kissed by the man (image on the left)

	VOS		H<in>	alikan	ng		
babae	ang		lalaki				
				<PF.Perf>kiss	Det.ACC		
woman	Det.NOM	man					
VSO		H<in>	alikan	ang		lalaki	ng
babae							
				<PF.Perf>kiss	Det.NOM	man	
Det.ACC	woman						
SVO		Ang		lalaki	ay	h<in>a-	
likan	ng			babae			
				Det.NOM	man	LINK	<PF.
Perf>kiss	Det.ACC	woman					
SVO-Inverted	Ang			babae	ay		
h<in>	alikan	ng		lalaki			
				Det.NOM	woman	LINK	<PF.

Perf>kiss Det.ACC man

Each sentence was presented twice. I then asked my subjects to point to the image they thought was being described by the sentence and their responses were recorded. One of the image pairs depicted an action where the agent and the patient of the action were unclear, so the data from this image pair will not be considered (see (5) in Appendix §7.1). Thus, in total, the performance of the subjects in 16 out of the 20 slides was used for this study.

3. Results

Production Task: John exhibited a significant amount of **lexical code-switching**, alternating word use between two languages, in comparison to Sandra. In terms of word order, John surprisingly only used the SVO word order, which as noted earlier is rarely used in casual speech in Tagalog. Sandra used all three word orders. When he was about to complete uttering a sentence with the verb-initial structure, John “corrected” himself and reverted back to a sentence with SVO word order (10):

- (10) Nag-ku~kulay yung # yung bata?
nag-ku~kulay
AF-Imp~color Det.NOM # Det.NOM child
AF-Imp~color
'The child is coloring (the pictures)'

In their SVO sentences with the *ay*-construction, both John and Sandra only gave the agent in the subject position. When Sandra gave verb-initial sentences, the agent was also the first noun of her sentences. (John did not produce any verb-initial sentences, as he only produced SVO sentences.) These results are consistent with Segalowitz and Galang's (1976) findings

that the first noun of the sentences in Tagalog is often associated with the agent of the action. Most strikingly, John never used the *ay* linker morpheme to conjoin the topic to the predicate of his SVO sentences, while Sandra always used the *ay* linker in her SVO constructions. There were instances when John either produced an incomplete sentence or had hesitations in completing a sentence, in which case I asked him to repeat the sentence he uttered:

(11) *Yung titser t<in>u~turuan paano yun po?
 Det.NOM teacher <PF>Imp~teach how
 that.DEM HON
 ‘*The teacher is teaching how that’

(12) (a) *Yung babae t<in>i~teach po? yung bata? na yung storya
 Det.NOM woman <PF>Imp~teach HON
 Det.NOM child LINK Det.NOM story

‘The child is being taught by the woman that the story’

(b) Yung babae s<in>a~sabi ano nang-ya~yari sa storya
 Det.NOM woman <PF>Imp~say what
 AF-Imp~happen Det.DAT story
 ‘What is happening in the story is being said by the woman’

Table 1 summarizes how the subjects used word order during the production task.

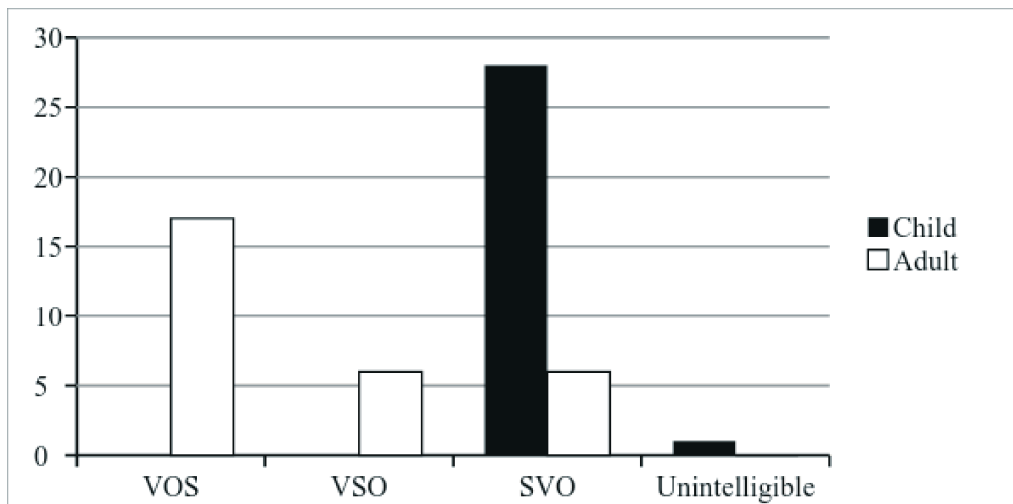


Table 1: Production task – Number of sentences uttered by subjects, categorized by the word order they used

It is important to note that there were also some peculiarities in the way John used case marking in comparison to Sandra. Considering that all of his sentences are SVO, he would use the nominative case marker for both the agent DP (pre-predicate) and the patient DP (post-predicate) whenever he would use a verb with the patient-focus inflection. Typically though, the nominative case marker only assigns case to the patient of the action. This means that John used the same case marker was twice in the sentence, which is ungrammatical in Tagalog. (13) shows John's utterance, and (14) shows the grammatical sentence produced by Sandra:

- (13) Yung bata? k<in>ick yung bola
 Det.NOM child <PF.Perf>kick Det.NOM
 ball

‘The ball is kicked by the child’

- (14) S<in>ipa ng bata? yung
bola
 <PF.Perf>kick Det.ACC child Det.NOM
ball
 ‘The ball was kicked by the child’

In the actor-focus sentences he produced, John correctly assigned nominative and accusative case to the agent and patient, respectively. Thus, his actor-focus sentences would have been grammatical if he used the *ay* linker between the topic and the predicate of the sentence. (15) shows John’s utterance, and (16) shows the grammatical sentence produced by Sandra:

- (15) Yung bata? k<um>a~kain ng
watermelon
 Det.NOM child <AF>Imp~eat Det.ACC
watermelon
 ‘The child is eating the watermelon’

- (16) K<um>a~kain sya ng pakwan
 <AF>Imp~eat 3rd.sg.NOM Det.ACC wa-
termelon
 ‘He is eating watermelon’

Comprehension Task: Sandra made no errors in the comprehension task, but John performed poorly in comparison, getting 8 out of the 16 sentences correct. However, if these 16 sentences are broken down into VOS, VSO, and SVO sentence types, a clearer picture of John’s performance can be seen. Interestingly, he comprehended the VOS patient-focus sentences best and made no errors with them, even though he never uttered them

during the production tasks. The results of the comprehension task are given in Table 2.

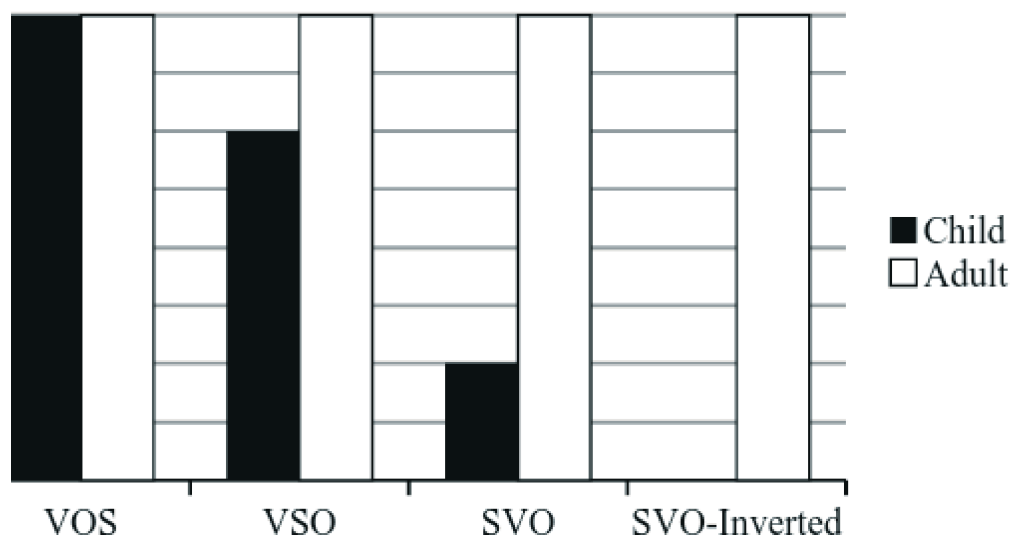


Table 2: Comprehension task – Number of patient-focus sentences that the subjects correctly matched with the designated image

He showed the worst performance on SVO patient-focus sentences, even though this was the only word order he used during the production task. It might be interesting to note that the one and only instance that John chose the correct image for the SVO sentence stimulus was when the agent DP and the patient DP of the sentence were both proper nouns. That the determiner of proper nouns in Tagalog has a different morphology from the determiner of common nouns could be a factor for this nuance. (See (1) in Appendix §7.1)

4. Discussion

Even though John's L1 is Tagalog, the data shows clear patterns that suggest linguistic interference. Because of John's early exposure to his English L2, this could have affected his full acquisition of his native Tagalog, resulting in his use of English features on Tagalog sentences. His code-switching in-

dicates his deficient Tagalog vocabulary, and more importantly, his morphosyntactic ability in Tagalog shows a level of competence that is low for a child his age. If he had fully acquired the syntax of Tagalog, John’s performance in both the production and comprehension tasks should be comparable to Sandra’s.

John appears to recognize that in Tagalog *ay*-inversion, a DP should receive the nominative case *ang* when it moves to a pre-predicate position, as it becomes the topic of the sentence (Schachter and Otnes 1972). After all, he produced nominative case on all DPs that appeared before the predicate, whether the sentence was actor- or patient-focus. If syntactic interference by English indeed took place in John’s Tagalog grammar, it is reasonable to speculate that his exposure to English word order could motivate his preference for Tagalog SVO word order, as well as his disregard for the *ay* linker—a linker that does not exist in English sentences where the agent of the action is pre-predicate. This could also explain his “correction” from a verb-initial to an SVO construction in (10). However, he also seemed to have his own rule where only the agent of the action can move to the pre-predicate position. Analyzing his utterances, it is clear how analogous his Tagalog word order is to the English parallel of the same sentence:

(17)	Thematic:	Agent DP	Verb
	Patient DP		
	English:	The	child kick
the	ball		
	Tagalog	Yung	bata? k<in>ick
yung	bola		
Det.NOM	child	<PF.PERF>kick	Det.NOM ball
	‘The ball was kicked by the child’		

The sentence in (17) is problematic, however, because the verbal

patient-focus infix –in- should mark only the *patient* as the topic of the sentence, and not the agent. For actor-focus sentences, John had case morphology distinctions, which means that he did not repeat the use of a particular case marker (see (15)). In his patient-focus constructions though, he used the nominative case twice. Thus, John appears to have a mastery for case marker assignment in actor-focus sentences, but not for patient-focus sentences. This lack of mastery of patient-focus structures could also explain John’s difficulty with case-marking on the DPs in patient-focus sentences during the production task, as well as his poor performance on patient-focus SVO sentence during the comprehension task.

I posit that for John’s patient-focus sentences such as the one in (18), he used the nominative case in the pre-predicate position because he recognized that pre-predicate DPs were always nominative in order for the sentence to be grammatical as discussed by Schachter and Otnes (1972). But to account for John’s use of a second nominative case in the post-predicate position, I posit that he used this second nominative case in an attempt to correctly indicate the DP where the semantic focus of the patient-focus verb is placed. (18) shows a possible structure for John’s patient-focus utterances, and how this constituency could influence the case morphology he applied on DPs.

- (18) [_{CP} Yung bata? [_{VP} k<in>ick yung bola]]
 Det.NOM child <PF.PERF>kick Det.
 NOM ball
 ‘The ball was kicked by the child’

One might wonder though why John did not just use the actor-focus structure for all his utterances so that he would

have the correct case markers in his DPs. As Seagalowitz and Galang (1976) concluded in their study, Tagalog child speakers prefer patient-focus sentences over actor-focus sentences. Thus, while interference by English might be taking place in John's Tagalog syntax, this did not seem to happen in his semantic cognition. With this, I suggest the following chain of rules that John used to construct Tagalog sentences:

(19) *Word Order Rule*: Use an SVO word order, like in English

No Linker Rule: Do not put *ay* linker between preverbal DP and the verb

Agent Rule: Place the agent of the verb in pre-predicate position

Nominative Case Rule: Assign nominative case to the DP in pre-predicate position

Patient Focus Preference: Inflect the verb with the patient-focus morpheme

Patient Nominative Case Rule: Assign nominative case to the patient of a patient-focus verb.

The above chain of rules show the possible interaction between John's English and Tagalog, as the first three rules resemble English, while the last two rules apply to Tagalog only. (The *nominative case rule* naturally applies to both languages.)

While John has a preference to produce SVO in Tagalog, it is interesting to see how much better he performed in understanding VOS sentences (see table 2). Referring again to

Seagalowitz and Galang (1976), this could be due to a tendency for Tagalog child-speakers to have a preference for patient-focus sentences. Their study also notes that Tagalog-speaking children associate the agent of the action with the first noun of the sentence, and because VOS is the default word structure in Tagalog and the first noun of VOS is the agent in a patient-focus sentence (refer to (3) in §1.1), this could explain John's above average performance in comprehending this sentence type. It is very likely also that his parents often speak to John in Tagalog using the default verb-initial constructions since SVO is quite rare in Tagalog. This influence of input frequency could also be affecting his acquisition of patient-focus SVO sentences and his ability to comprehend them.

Since I elicited Tagalog sentences, his performance in the production task might not necessarily represent his natural Tagalog speech when he speaks to others (e.g. his parents) in an everyday situation. Could the observer's paradox have caused John to respond to the production task stimuli in such a way? It would have been also beneficial to see his use of Tagalog before he learned English and compare that to his current Tagalog grammar. Additionally, it would be prudent to do a longitudinal study of his Tagalog acquisition as he grows older and see whether he develops a full mastery grammar of the language or becomes a heritage speaker in the long run. Studying the language development of other L1 Tagalog-speaking children who live in English-speaking communities could also provide better insight about the issue at hand. This would open an opportunity to compare the data collected from John and see whether the rules I posited above exist in the grammar of other Tagalog-speaking children predominantly exposed to English.

5. Conclusion

Tagalog and English are indeed quite distinct from each other morpho-syntactically. As such, seeing how they work together—or more appropriately, in interference—provides some insight into the language development of a child when he learns an L2 before fully acquiring his L1. As shown by Polinsky’s work on American Russian, John’s Tagalog word order variability and case marking restrictions become undone, possibly due to the influence of L2 English in his L1 Tagalog grammar (Polinsky 1995, 2006). Further studies should be done on other Tagalog-English bilingual children to test the data presented in this study.

6. Appendix

Abbreviations for Gloss	
ACC	Accusative Case
AF	Actor Focus
CAUS	Causative
Cont	Contemplated Aspect
DAT	Dative
DEM	Demonstrative
Det	Determiner
DP	Determiner Phrase
HON	Honorific
Imp	Imperfective Aspect
Inv	Involuntary
LINK	Linker
NOM	Nominative Case

PAT	Patient
PN	Personal Name
PF	Patient Focus
Perf	Perfective Aspect
Vol	Voluntary

6.1. Images

- (1) *Stimuli: Marge was kicked by Bart (image on the left)*
SVO-Inverted: Bart was kicked by Marge (image on the right)

VOS S<in>ipa? ni Bart si
Marge.
 <PF.Perf>kick Det.PN.ACC Bart
 Det.PN.NOM Marge

VSO S<in>ipa? si Marge ni
Bart.
 <PF.Perf>kick Det.PN.NOM Marge
 Det.PN.ACC Bart

SVO Si Marge ay s<in>ipa?
ni Bart.
 Det.PN.NOM Marge LINK <PF.
 Perf>kick Det.PN.ACC Bart

SVO-Inverted Si Bart ay s<in>ipa?
ni Marge.
 Det.PN.NOM Bart LINK <PF.Perf>-
 kick Det.PN.ACC Marge

- (2) *Stimuli: The dog was bitten by the man (image on the left)*
SVO-Inverted: The man was bitten by the dog (image on the right)

aso
 VOS K<in>agat ng lalaki ang
 <PF.Perf>bite Det.ACC man Det.
 NOM dog
 VSO K<in>agat ang aso ng
 lalaki
 <PF.Perf>bite Det.NOM dog Det.
 ACC man
 SVO Ang aso ay k<in>agat ng
 lalaki
 Det.NOM dog LINK <PF.Perf>bite
 Det.ACC man
 SVO-Inverted Ang lalaki ay k<in>agat
 ng aso
 Det.NOM man LINK <PF.Perf>bite
 Det.ACC aso

- (3) *Stimuli: The man was kissed by the woman (image on the right)*
SVO-Inverted: The woman was kissed by the man (image on the left)

VOS H<in>alikan ng babae ang
 lalaki
 <PF.Perf>kiss Det.ACC woman Det.
 NOM man
 VSO H<in>alikan ang lalaki ng
 babae
 <PF.Perf>kiss Det.NOM man Det.
 ACC woman
 SVO Ang lalaki ay h<in>alikan
 ng babae

Det.NOM man LINK <PF.Perf>kiss
 Det.ACC woman
 SVO-Inverted Ang babae ay h<in>alikan
 ng lalaki
 Det.NOM woman LINK <PF.Per-
 f>kiss Det.ACC man

- (4) *Stimuli: The kite was flown by the child (image on the left)*
SVO-Inverted: The child was flown by the kite (image on the right)

VOS P<in>a-lipad ng bata?
 ang saranggola
 <PF.Perf>CAUS-fly Det.ACC child
 Det.NOM kite
 VSO P<in>a-lipad ang sarang-
 gola ng bata?
 <PF.Perf>CAUS-fly Det.NOM kite
 Det.ACC child
 SVO Ang saranggola ay p<in>a-li-
 pad ng bata?
 Det.NOM kite LINK <PF.Perf>-
 CAUS-fly Det.ACC child
 SVO-Inverted Ang bata? ay p<in>a-lipad
 ng saranggola
 Det.NOM child LINK <PF.Perf>-
 CAUS-fly Det.ACC kite

- (5) *Stimuli: The tiger was loved by the child (images ambiguous, omitted)*
SVO-Inverted: The child was loved by the tiger (images ambiguous, omitted)

VOS M<in>ahal ng bata? ang
 tiger
 <PF.Perf>love Det.ACC child Det.
 NOM tiger
 VSO M<in>ahal ang tiger ng
 bata?
 <PF.Perf>love Det.NOM tiger Det.
 ACC child
 SVO Ang tiger ay m<in>ahal
 ng bata?
 Det.NOM tiger LINK <PF.Perf>love
 Det.ACC child
 SVO-Inverted Ang bata? ay m<in>ahal
 ng tiger
 Det.NOM child LINK <PF.Perf>love
 Det.ACC tiger

6.2.1. Transcription of production task for John, child subject

(1) Yung lalaki k<in>i~kis po? yung babae.
 Det.NOM man <PF>Imp~kiss HON Det.NOM
 woman
 'The woman is being kissed by the man'

(2) Yung babae s<in>untok po? yung
 lalaki
 Det.NOM woman <PF.Perf>punch HON Det.NOM
 man
 'The man is punched by the woman'

- (3) Yung lalaki h<in>u~hugasan yung kotse
 Det.NOM man <PF>Imp~wash Det.NOM car
 ‘The man is washing the car’
- (4) *Yung meilman na-kagat sa aso
 Det.NOM mailman <AF.Perf>bite Det.DAT dog
 ‘The mailman bit (to) the dog’ but the image shows ‘The dog bit the mailman.’
- (5) Yung bata nag-try kuha-nin yung
 football
 Det.NOM child <AF.Perf>try get<PF> Det.NOM
 football
 ‘The child tried to get the football’
- (6) *Yung titser t<in>u~turuan paano yun po?
 Det.NOM teacher <PF>Imp~teach how that.DEM
 HON
 ‘The teacher is teaching how that’
- (7) Yung pusa? t<in>a~try-ing⁴ kuha-nin yung
 mouse
 Det.NOM cat <PF>Imp~try-PROG get-PF Det.
 NOM mouse
 ‘[The cat]₁ is trying [it]₁ to get the mouse’
- (8) Yung bata? nag-hu~hugas ng kamay
 Det.NOM child AF-Imp~wash Det.ACC hand
 ‘The child is washing the hands’
- (9) Yung babae h<in>a~hag yung aso
 Det.NOM woman <PF>Imp~hug Det.NOM dog
 ‘The dog is being hugged by the woman’

(10) Yung lalaki t<in>i~tink na lab po? yung babae
 Det.NOM man <PF>Imp~think LINK love HON
 Det.NOM woman
 ‘The man thinks that loves the girl’

(11) (a) *Yung Cookie Monster s<in>ipa yung
 Elmo # si Elmo
 Det.NOM cookie monster <PF.Perf>kick Det.
 NOM Elmo # Det.PN.NOM Elmo
 ‘*Elmo is kicked by Cookie Monster’

(b) Si Cookie Monster s<in>ipa? si
 Elmo
 Det.PN.NOM Cookie Monster <PF.Perf>kick
 Det.PN.NOM Elmo
 ‘Elmo is kicked by Cookie Monster’

(12) Yung babae p<in>a~pa-kain yung bata?
 Det.NOM woman <PF>Imp~CAUS-eat Det.NOM
 child
 ‘The child is being fed by the woman’

(13) Yung bata? k<um>a~kain ng watermelon
 Det.NOM child <AF>Imp~eat Det.ACC watermel-
 on
 ‘The child is eating the watermelon’

(14) Yung lalaki s<um>i~sigaw sa babae
 Det.NOM man <AF>Imp~shout Det.DAT woman
 ‘The man is shouting at the woman’

- (15) Yung babae na-gu~gustu-han yung lalaki
 Det.NOM woman Inv-Imp~like-PF Det.NOM
 man
 ‘The man is being liked by the woman’
- (16) (a) *Yung babae t<in>i~teach po? yung
 bata? na yung storya
 Det.NOM woman <PF>Imp~teach HON Det.NOM
 child LINK Det.NOM story
 ‘*The child is being taught by the woman that the story’
- (b) Yung babae s<in>a~sabi ano nang-ya~yari
 sa storya
 Det.NOM woman <PF>Imp~say what AF-Imp~hap-
 pen Det.DAT story
 ‘What is happening in the story is being said by the
 woman’
- (17) Yung babae nag-ka~kat ng papel para
 mero-ng
 Det.NOM woman AF-Imp~cut Det.ACC paper pur-
 pose.clause existential-LINK
 gawa-in
 do-PF
 ‘The woman is cutting paper, so that there could be some-
 thing to be done’
- (18) Yung meilman mero-ng bi-bigay sa
 bata?
 Det.NOM mailman existential-LINK Cont-give Det.
 DAT child
 ‘The mailman has something to give to the child’

- (19) Yung babae nag-la~laro ng videogames
 Det.NOM woman AF-Imp~play Det.ACC videogames
 'The woman is playing videogames'
- (20) Yung bata? nag-hu~hugas sa aso
 Det.NOM child AF-Imp~wash Det.DAT dog
 'The child is washing the dog'
- (21) Yung lalaki na-gu~gustu-han yung babae
 Det.NOM man Inv-Imp~like-PF Det.NOM woman
 'The woman is being liked by the man'
- (22) Yung bata? k<in>ick yung bola
 Det.NOM child <PF.Perf>kick Det.NOM ball
 'The ball is kicked by the child'
- (23) Yung lalaki w<in>a~water po? yung hala-
 man
 Det.NOM man <PF>Imp~water HON Det.NOM
 plant
 'The plant is being watered by the man'
- (24) Nag-ku~kulay yung # yung bata? nag-ku~ku-
 lay
 AF-Imp~color Det.NOM # Det.NOM child
 AF-Imp~color
 'The child is coloring (the pictures)'
- (25) Yung bata? um-i~iyak
 Det.NOM child AF-Imp~cry
 'The child is crying'

- (26) Yung bata? b<um>a~basa
 Det.NOM child <AF>Imp~read
 ‘The child is reading’
- (27) Yung lalaki um-i~isip ano yung ga-gaw-
 in sa pensil
 Det.NOM man AF-Imp~think what Det.NOM
 Cont-do-PF Det.DAT pencil
 ‘The man is thinking what is to be done with the pencil’
- (28) Yung bata? nag-drip ng ice cream sa
 lalaki
 Det.NOM child AF.Perf-drip Det.ACC ice cream
 Det.DAT man
 ‘The child dripped ice cream on the man’
- (29) Yung babae nag-la~lagay ng dirt para
 mag-grow
 Det.NOM woman AF-Imp~place Det.ACC dirt
 purpose.clause Vol-grow
 yung halaman
 Det.NOM plant
 ‘The woman is placing dirt so that the plant would grow’

6.2.2. Transcription of production task for Sandra, adult control

- (30) H<in>a~halikan ng lalaki yung dal-
 aga
 <PF>Imp~kiss Det.ACC man Det.NOM
 young.woman
 ‘The young woman is being kissed by the man’

- (31) S<in>untuk ng babae yung
 mama?
 <PF.Perf>punch Det.ACC woman Det.NOM
 adult.man
 ‘The man was punched by the woman’
- (32) Yung lalaki ay nag-li~linis ng ko-
 tse
 Det.NOM man LINK AF-Imp~wash Det.ACC
 car
 ‘The man is washing the car’
- (33) K<in>agat ng aso yung kartero
 <PF.Perf>bit Det.ACC dog Det.Nom mailman
 ‘The mailman was bitten by the dog’
- (34) S<in>a~salo ng bata? yung bola
 <PF>Imp~catch Det.ACC child Det.NOM ball
 ‘The ball was being caught by the child’
- (35) Siya ay nag-tu~turo
 3rd.sg.NOM LINK AF-Imp~teach
 ‘She is teaching’
- (36) H<in>abol ni Tom si
 Jerry
 <PF.Perf>chase Det.PN.ACC Tom Det.PN.NOM
 Jerry
 ‘Jerry is being chased by Tom’
- (37) Ang bata? ay nag-hu~hugas ng
 kamay

Det.NOM child LINK AF-Imp~wash Det.ACC
hands

‘The child is washing his hands’

- (38) Ni-ya~yakap nung ale yung
aso
PF-Imp~hug Det.ACC adult.female Det.NOM
dog

‘The dog is being hugged by the woman’

- (39) Yung bata? ay in-lab doon sa kat-
abi nya-ng
Det.NOM child LINK in.love there Det.DAT
adjacent 3rd.sg.ACC-LINK
babae

woman

‘The boy is in love with the girl next to him’

- (40) S<in>ipa? ni Cookie Monster si
Elmo
<PF.Perf>kick Det.PN.ACC Cookie Monster Det.
PN.NOM Elmo

‘Elmo was kicked by Cookie Monster’

- (41) P<in>a~pa-kain ng nanay yung
kanya-ng anak
<PF>Imp~CAUS-eat Det.ACC mother Det.NOM
3rd.sg.GEN-LINK offspring

‘[Her]_i child is being fed by [the mother]_i’

- (42) K<um>a~kain sya ng pakwan
<AF>Imp~eat 3rd.sg.NOM Det.ACC watermelon

‘He is eating watermelon’

- (43) S<in>igawan nung matanda-ng lalaki yung
bata?
<PF.Perf>shot Det.ACC old-LINK man Det.
NOM child
‘The child was yelled at by the old man’
- (44) ?<in>i~isip nung babae ang
kanyang mahal
<PF>Imp~think Det.ACC woman Det.NOM 3rd.
sg.GEN-LINK love
‘[Her]_i love is being thought of by [the woman]_I’
- (45) Sya ay nag-tu~turo? sa mga
bata?
3rd.sg.NOM LINK AF-Imp~teach Det.DAT PL
child
‘He is teaching the children’
- (46) G<in>unting nya ang karton
<PF.Perf>scissors 3rd.sg.ACC Det.NOM box
‘The box is being cut by her (using scissors)’
- (47) ?<in>a~abot ng kartero ang ka-
hon sa bata?
<PF>Imp~reach Det.ACC mailman Det.NOM box
Det.DAT child
‘The box is being handed over to the child by the mail-
man’
- (48) Nag-la~laro sya ng Nintendo
AF-Imp~play 3rd.sg.NOM Det.ACC Nintendo

‘She is playing Nintendo’

- (49) P<in>a~pa-liguan ng bata ang
kanyang alaga-ng aso
<PF>Imp~CAUS-bath Det.ACC child Det.NOM
3rd.sg.GEN pet-LINK dog
‘[His]_i pet dog is being bathed by [the child]_i’

- (50) T<in>i~tingnan ng lalaki ang larawan
ng kanyang
<PF>Imp~look Det.ACC man Det.NOM picture
of 3rd.sg.GEN-LINK
s<in>i~sinta-ng dilag
<PF>Imp~adore-LINK young.woman
‘The image of the woman that [he]_i adores is being
looked at by [the man]_i’

- (51) S<in>ipa ng bata? yung bola
<PF.Perf>kick Det.ACC child Det.NOM ball
‘The ball was kicked by the child’

- (52) Nag-di~dilig sya ng halaman
AF-Imp~water 3rd.sg.NOM Det.ACC plant
‘She is watering the plants’

- (53) Sya ay nag-do~drowing
3rd.sg.NOM LINK AF-Imp~draw
‘He is drawing’

- (54) ?<um>i~iyak ang bata?
AF-Imp~cry Det.NOM child
‘The child is crying’

- (55) Nag-ba~basa sya ng libro
 AF-Imp~read 3rd.sg.NOM Det.ACC book
 ‘He is reading a book’
- (56) Naka-kita sya ng lapis
 Inv.Perf-see 3rd.sg.NOM Det.ACC pencil
 ‘She saw a pencil’
- (57) Na-ga~galit ang tatay doon sa bata-ng
 d<in>umihan
 AF-Imp~anger Det.NOM father there Det.DAT
 child-LINK <PF.Perf>mess
 ang kanya-ng ulo
 Det.NOM 3rd.sg.GEN-LINK head
 ‘The father is being angry at the child who got mess on
 his head’
- (58) Nag-ta~tanim ang bata? ng dalya
 AF-Imp~plant Det.NOM child Det.ACC sunflow-
 er ‘The child is planting sunflower’

Notes

¹Tagalog is actually an absolutive-ergative language (Aldridge 2012), but for this paper, we will use the nominative-accusative case distinction to simplify typological theory.

²For this study, we will treat *yung* and *ang* as allomorphs of the nominative case determiner.

³For the purposes of this study, we will treat *nung* and *ng* as allomorphs of the accusative determiner.

⁴This –ing appears to be the English verb progressive morpheme that arises due to John's code-switching in his speech. Notice that it happens in the same verb that has the Tagalog imperfective aspect.

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