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Interference of English L2 in the acquisition of Tagalog L1 word order *

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Ronquillo, Seth H. 2015. Interference of English L2 in the acquisition of Tagalog L1 word order. *Linguistic Research* 32(1), 61-90. This paper discusses how the second language (L2) of a child could interfere with the first language (L1) acquisition of word order and case, particularly when the two languages are typologically distinct. This research is based on data from a task-oriented experiment with a Tagalog-English bilingual child, and to my knowledge, is the only recent study to investigate the effects of bilingualism on the acquisition of syntactic word order in Tagalog. Tagalog has a relatively free word order complemented by a comparatively rich case marking system on determiners (Rackowski 2002). When a child learns L2 like English, however, interference could delay or prevent the complete acquisition of L1 grammar due to an uneven amount of input between the two languages (Polinsky 1995). In this study, a bilingual child (Tagalog L1; English L2) is asked to describe the action in an image using Tagalog sentences, and then match another set of images with a stimulus Tagalog sentence. The results show that the bilingual child's elicited sentences have a fixed word order and limited case marking, more similar to English than to Tagalog. This could explain his low performance in the picture-matching task. These results suggest that there is a possible interference in the bilingual child's complete acquisition of Tagalog syntactic word order because of the input he receives from English. The paper concludes with recommendations on how to further explore the findings presented. **(University of California, Los Angeles)**

Keywords Attrition, Bilingualism, Case, English, Heritage Language, Linguistics, Tagalog, Word Order

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1. Introduction

The Austronesian language Tagalog, spoken in the Philippines, permits a relatively variable syntactic word order including VOS (most default word order), VSO and SVO (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 DPs of languages that allow word order variation, such as Tagalog. English, on the other hand, does not have the same syntactic freedom as Tagalog. It has a more fixed SVO 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).

This paper examines possible interference in the acquisition of first language (L1) word order variation and case marking by a 7-year old Tagalog-speaking child after he learns a second language (L2), English, that is typologically quite different from Tagalog. The child subject, John, was first exposed to English at age 4 when he began to attend school, and since then, has been more exposed to English than to Tagalog. This is the only recent study in my knowledge to investigate the effects of English as an L2 specifically on the acquisition of syntactic word order variation in Tagalog as an L1.

Using the example of American Russian, 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, since the topic we are considering involves the interference to the complete acquisition of L1 caused by the learning of an L2 (Polinsky, Benmamoun, Montrul 2010). In the case of Tagalog, if my child subject has 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 instead uses a fixed word order with minimal case marking similar to English, this could indicate the interference in his full acquisition of word order variability in Tagalog due to the influence of his English L2. While the results of this study do not predict my child subject's likelihood of fully acquiring word order variability in Tagalog, it presents the probable 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 (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 DP[1]: The nominative is signaled by the

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

determiner *ang*[2], and the accusative by the determiner *ng*[3] /naŋ/. 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 bataʔ (Segalowitz & Galang 1976)
<AF.Perf>eat Det.ACC banana Det.NOM child
'The child ate the banana.'
(2) T<um>awa ang bataʔ
<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 bataʔ ang saging (Segalowitz & Galang 1976)
<PF.Perf>eat Det.ACC child Det.NOM banana
'The banana was eaten by the child.'
(4) *T<in>awa ang bataʔ
<PF.Perf>laugh Det.NOM child
*'The child was laughed'

With this understanding of Tagalog focus system and case marking, it becomes

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

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

clear then 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 show 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.* This sentence type is rarely used in colloquial language though, being 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? (Segalowitz & Galang
Det.NOM banana LINK <PF.Perf>eat Det.ACC child 1976)
'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, and case marking morphology only occurs on pronouns (Matthews, Lieven, Theakston, & Tomasello 2005; Polinsky 2006). In English, the agent theta role is commonly assigned to the subject position in the default SVO active voice (Kamide, Scheeper, & Altmann, 2003). To further show the default-ness of 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 (10), appears quite similar to *ay*-inversion in Tagalog:

(9) 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.
(10) 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

Originally, my research question was simply to investigate how a monolingual Tagalog-speaking child would produce and comprehend SVO sentences, since the aforementioned research supports that this sentence type is uncommon and not preferred by L1 learners. However, finding a monolingual Tagalog-speaking child proved to be difficult. Since they were exposed to an optimal amount of Tagalog, I initially advertised through my social media networks in the Philippines to solicit child participants there who can take part in the study through video chat, but no parent responded to my request. I subsequently reached out to the local Los Angeles Filipino community to solicit child participants, but all of the Filipino-American children that were available were English monolinguals. Others who were able to speak Tagalog spoke English predominantly and were too old to be primary participants in a study on language development (ages 13 and over). The only child subject who ended up participating in this study was bilingual, making my original research inquiry inappropriate. As such, I had to alter my study in order to test instead how an L2 that is typologically different from a child's L1 could affect a child's production and comprehension of sentences that have variable syntactic word order.

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. He has an older sister. Both of his 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 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, since they 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. With his upbringing, John demonstrates that he has had substantial exposure to a bilingual environment before the age of full language development, making his linguistic performance ripe for an investigation on

language interference. 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 Bikol as her L1.[4] 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 (monolingual) Tagalog-speaking child as old as John, but having a control like Sandra who has acquired native mastery of and predominantly speaks the language is important so that John's Tagalog-speaking ability can be examined accurately. Additionally, even though Sandra is much older than John, the challenges in finding predominantly Tagalog-speaking children and youth proved to be a challenge during the time of this study, as mentioned earlier.

Production Task: To test what word orders and case morphology 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. Comparing the utterances of the participants provides data on their ability to use and preferences in syntactic variations in Tagalog.

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 is also transitive but it relates 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 of which were transitive actions between two animate objects, 11 transitive actions between an animate object and an inanimate object, 5 emotion verbs (the girl loved the dog), and 1 is 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

4 Reid and Liao (2004) discuss the typological similarity of Philippine languages, including Tagalog and Bikol.

order variability in Tagalog and because of how the main focus of this study is to test the production of verbs with an agent-patient relation. The single intransitive image and the 5 emotion verbs were dispersed throughout the slideshow, in order to prevent the participants from defaulting into repetitive word orders in their responses during the production task. Additionally, non-physical elements, such as floating hearts and thought bubbles, were incorporated in images that depicted emotion verbs to ensure that the participants would not confuse them with simple transitive actions that only involved a direct, physical action between agent and patient. I presented all of the production stimuli to the subjects before providing them with the comprehension tasks.

Comprehension Tasks: To test how well John comprehends 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 (11), 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:

(11) *Stimuli: The man was kissed by the woman (right)*
SVO-Inverted: The woman was kissed by the man (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.Perf>kiss	Det.ACC man

Each sentence was presented twice. I then asked my subjects to point to the image they think is 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. It was important to present all of the comprehension tasks to the subjects after providing them with the production stimuli, so that my utterances would not influence the word order they use for the production task. This comprehension task complements the production task, since the SVO word order—uncommon in Tagalog—is intentionally utilized to test if the child subject has fully acquired it in his grammar.

3. Results

Production Task: John exhibited a significant amount of lexical code-switching 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 (12):

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

In their SVO sentences, both John and Sandra only assigned the agent theta-role to the pre-predicate, 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:

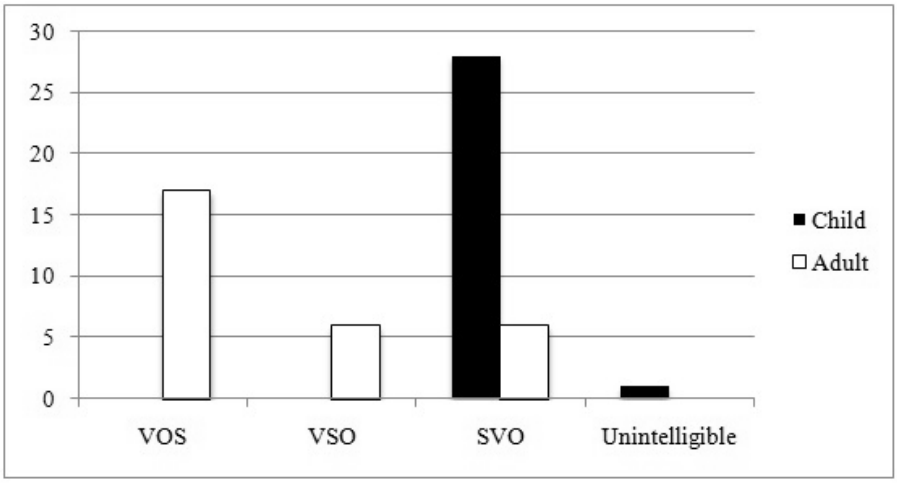
(13) *Yung titser t<in>u~turuan paano yun poʔ
Det.NOM teacher <PF>Imp~teach how that.DEM HON
'*The teacher is teaching how that'

(14) (a) *Yung babae t<in>i~teach poʔ yung bataʔna
Det.NOM woman <PF>Imp~teach HON Det.NOM child LINK
yung storya
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 some peculiarities in the way John used case marking in comparison to Sandra. 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 perfectly grammatical if he had just 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 bataʔ 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 watermelon
'He is eating watermelon'

However, when it came to John's patient-focus sentences, the opposite was true.

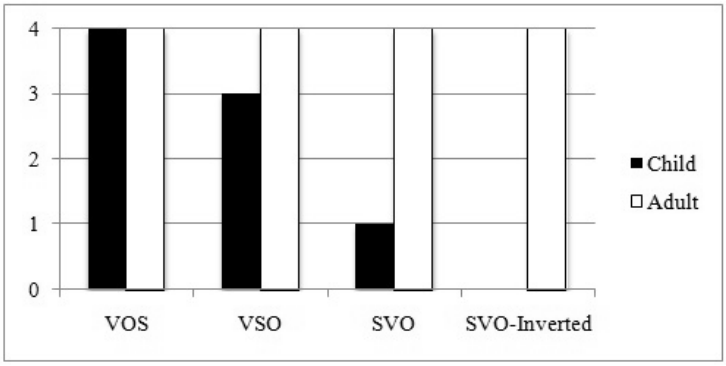
Considering that all of his sentences are SVO, he would use the nominative case marker for *both* the agent DP (pre-predicate) and the patient DP (post-predicate) whenever he would use a verb with the patient-focus inflection, which normally assigns the nominative case only to the patient of the action. In other words, John used the same case marker twice in patient-focus sentences, which is ungrammatical in Tagalog, even though he would use distinct case markers in actor-focus sentences. (17) shows John's utterance, and (18) shows the grammatical sentence produced by Sandra:

(17) Yung bata? k<in>ick yung bola
Det.NOM child <PF.Perf>kick Det.NOM ball
'The ball is kicked by the child'

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

Comprehension Task: Sandra made no errors in the comprehension task, but John performed poorly overall, 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, making no errors with them, 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

Polinsky (1995, 2006) describes the grammar of heritage speakers who speak American Russian, a reduced version of Russian spoken by child immigrants who learned the language as L1 but became more English-dominant during their childhood upon arrival in the U.S. In her description of the language of 20 to 30-year-old speakers, Polinsky characterizes some of the morphosyntactic differences between American Russian and Russian speakers, including the following: American Russian speakers have a deficient lexicon in both their production and comprehension of the full language; the case system of the reduced language appears more like English, being less complex than Russian which has a six-case system; the word order is more restricted, similar to English which normally permits SVO only, in comparison to Russian which has variable word order. Polinsky notes that there is a relationship between the lexical deficiency and syntactic attrition of American Russian speakers, and argues that there is a continuum of speaker proficiency amongst these heritage speakers when their grammars are compared to native Russian speech.

John's knowledge of Tagalog shows some of the same patterns as found in Polinsky's American Russian speakers. Like the speakers of American Russian, my child speaker's code-switching indicates 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. Even though his L1 is Tagalog, the data shows that a possible interference from his exposure to his English L2 could have affected his full acquisition of his native Tagalog. 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's greatest difficulties concerned the morphosyntax of Tagalog patient-focus, similar to English passives. It has long been observed that the passive construction in English is also one of the later aspects of grammar to be acquired by children (Maratsos & Abramovitch 1975; Maratsos, Fox, Becker, & Chalkley 1985; Borer & Wexler 1987). In production, John did poorly with case-marking on the DPs in patient-focus sentences and also with the SVO word order in the comprehension of such sentence. While Segalowitz and Galang (1976) concluded in their study that children learning Tagalog have a preference for passive-focus sentences, the well-documented difficulty of acquiring the English passive for children might be the cause for the vulnerability of John's understanding of patient-focus in Tagalog, considering that the patient-focus and the passive are analogous.

Schachter and Otanes (1972) explain that in Tagalog *ay*-inversion, a DP gets the nominative case *ang* when it moves to a pre-predicate position, as it becomes the topic of the sentence. John appears to recognize this rule since he produces nominative case on all DPs that appear before the predicate, whether the sentence is actor- or patient-focus. If syntactic interference by English indeed takes 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 (12). However, he seems also 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:

(19)	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*, and not the agent, as the topic of the

sentence. For actor-focus sentences, John has case morphology distinctions, which means that he does not repeat the use of a particular case marker (see (17)). In his patient-focus constructions, he uses the nominative case twice. Thus, John's appears to have a mastery for case marker assignment in actor-focus sentences, but not for patient-focus sentences.

I posit that for John's patient-focus sentences such as the one in (20), he uses the nominative case in the pre-predicate position because he recognizes that pre-predicate DPs are always nominative in order for the sentence to be grammatical as discussed by Schachter and Otanes (1972). But to account for John's use of a second nominative case in the post-predicate position, I posit that he uses this second nominative case in an attempt to correctly indicate the DP where the semantic focus of the patient-focus verb is placed. (20) shows a possible structure for John's patient-focus utterances, and how this constituency could influence the case morphology he applies on DPs.

(20) [$_{CP}$ Yung bataʔ [$_{VP}$ 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 does 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 though, 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 does not seem to happen in his semantic cognition. With this, I posit the following chain of rules that John uses to construct Tagalog sentences:

(21) *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.)

Laughren (2002) examined the Australian language Warlpiri, which has word order variations like Tagalog, but much less restricted. She discusses how distinct case markers indicate grammatical functions in the DPs of a language that allows such a syntactic variability. Indeed, Laughren's analysis inversely complements John's syntactic patterns, since his fixed word order and the above rules allow him to overlook the Tagalog case marking system.

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, John's 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 an adult-like 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, since it 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

Seeing how Tagalog and English work together—or more appropriately, in interference—in John's grammar provides new insight into the language development of a child when he learns an L2 before fully acquiring his L1. As complemented by research on American Russian, John's Tagalog word order variability and case marking restrictions became undone, possibly due to the influence of L2 English in his L1 Tagalog grammar (Polinsky 1995, 2006). Indeed, this data only highlights how variability in word order variation is inversely related to the richness of a case marking system, as shown by John's reduced sensitivity to case as he adheres to a more rigid word order syntax (Laughren 2002). Through the lens of the patient-focus construction, John's performance also provides a different perspective in the challenges of acquiring passives, as challenges were most prevalent in his ability to assign case and comprehend word order variations in the Tagalog analogue of the passive (Maratsos & Abramovitch 1975; Maratsos, Fox, Becker, & Chalkley 1985; Borer & Wexler 1987). Most importantly, this study presents an alternative insight in the linguistic cognition of a child, particularly in furthering research on how different syntactic rules of distinct languages interact during the stages of language development for a child learning two (or more) languages.

Nonetheless, further research should be done on other Tagalog-English bilingual children to more deeply examine the data presented in this study. For one, a more ethnographic approach to data collection of the child subject's utterances in his natural environment can avoid complications presented by unspontaneous elicitation. Additionally, conducting a latitudinal study of multiple Tagalog-speaking children in a predominantly English-speaking environment can provide a better understanding of how John's linguistic performance compares to that of other children in his situation. Pursuing a longitudinal approach in investigating the language development of Tagalog-speaking children immersed in predominantly English-speaking communities can also provide an opportunity to describe the features of the final grammar that a Tagalog heritage speaker might have when influenced by English. Lastly, it would be interesting to see what the data would be like if the circumstances were reversed: What might be the features of the grammar of a child whose L1 is English but is predominantly exposed to Tagalog as his L2? As languages today continue to interact more closely with each other, exploring these linguistic inquiries can provide

a better understanding of full language acquisition and how typologically dissimilar languages interact with each other.

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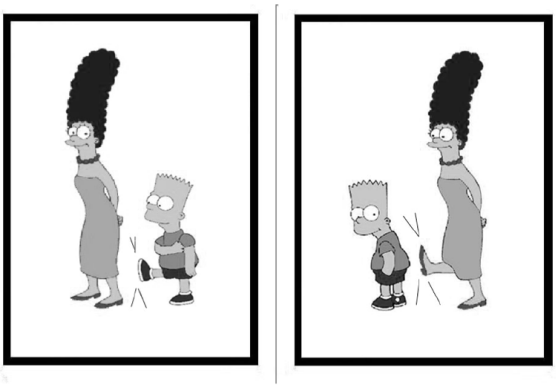
Appendix

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

1. Images

(1) *Stimuli: Marge was kicked by Bart (left)*
SVO-Inverted: Bart was kicked by Marge (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 (left)*
SVO-Inverted: The man was bitten by the dog (right)

VOS	K<in>agat	ng	lalaki	ang	aso	
	<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 (right)*
SVO-Inverted: The woman was kissed by the man (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.Perf>kiss	Det.ACC man

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

VOS	P<in>a-lipad	ng	bataʔ	ang	saranggola
	<PF.Perf>CAUS-fly	Det.ACC	child	Det.NOM	kite
VSO	P<in>a-lipad	ang	saranggola	ng	bataʔ
	<PF.Perf>CAUS-fly	Det.NOM	kite	Det.ACC	child
SVO	Ang saranggola	ay	p<in>a-lipad	ng	bataʔ
	Det.NOM kite	LINK	<PF.Perf>CAUS-fly	Det.ACC	child
SVO-Inverted	Ang bataʔ	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 (ambiguous, omitted)*
SVO-Inverted: The child was loved by the tiger (ambiguous, omitted)

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

1.1. Transcription of production task for John, child subject

(1) Yung lalaki k<in>i~kis poʔ 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 poʔ 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 poʔ
Det.NOM teacher <PF>Imp~teach how that.DEM HON
'The teacher is teaching how that'

(7) Yung pusaʔ t<in>a~try-ing[5] 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 bataʔ 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 poʔ yung babae

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[5] This -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.

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>ipaʔ 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 bataʔ
Det.NOM woman <PF>Imp~CAUS-eat Det.NOM child
'The child is being fed by the woman'

(13) Yung bataʔ k<um>a~kain ng watermelon
Det.NOM child <AF>Imp~eat Det.ACC watermelon
'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 poʔ yung bataʔ 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'

(17) Yung babae nag-ka~kat ng papel para mero-ng
Det.NOM woman AF-Imp~cut Det.ACC paper purpose.clause existential-LINK
gawa-in
do-PF

'The woman is cutting paper, so that there could be something to be done'

(18) Yung meilman mero-ng bi-bigay sa bataʔ
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 bataʔ 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 bataʔ 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 poʔ yung halaman
Det.NOM man <PF>Imp~water HON Det.NOM plant
'The plant is being watered by the man'

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

(25) Yung bataʔ um-i~iyak
Det.NOM child AF-Imp~cry
'The child is crying'

(26) Yung bataʔ 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 bataʔ 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'

1.2. Transcription of production task for Sandra, adult control

(30) H<in>a~halikan ng lalaki yung dalaga
<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 mamaʔ
<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 kotse
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 bataʔ 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 bataʔ 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 katabi 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 kahon 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 mailman'

(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 bataʔ ng dalya
AF-Imp~plant Det.NOM child Det.ACCsunflower
'The child is planting sunflower'

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