Sentence-final *Already* and *Only* in Singapore English

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This Honours Thesis represents my own work and due acknowledgement is given whenever information is derived from other sources. No part of this Honours Thesis has been or is being concurrently submitted for any other qualification at any other university.

Signed  . . . . . .

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Contents

List of Abbreviations

SFP	Sentence-final particles
CP	Complementiser phrase
TP	Tense phrase
vP	Light verb phrase
VP	Verb phrase
R	Reference time
CL	Classifier
ECP	Epistemic Containment Principle
QNP	Quantifier Noun Phrase

Abstract

This work aims to determine the structural height of sentence-final adverbs in Singapore English. I formalise the semantics of two adverbs, *already* and *only*, and thereafter examine their interaction with other scope-taking operators in order to determine their structural height. I show that sentence-final *already* occurs exclusively above the TP, while sentence-final *only* has two possible positions, one above the TP and one between TP and VP—more specifically, between epistemic and deontic modals. *Already* and *only* are also shown to be in complementary distribution at the adjunction position above TP. I therefore argue that sentence-final adverbs in Singapore English are not simply right-adjoined.

CHAPTER ONE

OVERVIEW

1.1. Introduction

There exists a rich inventory of elements that occur sentence-finally in Singapore English, the most salient of which are discourse (pragmatic) particles. In part owing to their prominence, there have been a significant number of studies examining their pragmatic and semantic meanings (Kwan-Terry 1978; Wee 2004; Kim and Wee 2009; Ler 2001; Ler 2006; Bao 2009; Teo 2014) and their etymology (Lim 2007; Hiramoto 2012; Platt and Ho 1989). The discourse particle that occurs most frequently in writing is *lah*, and an example of its use is as shown in (1). Despite controversy surrounding the substrate languages of Singapore English (Bao 2001; Gupta 1994), studies have shown that the occurrence of discourse particles can largely be attributed to the local Sinitic languages, although Gupta (2006) has raised the possibility of influences from local contact varieties such as Bazaar Malay or Baba Malay.

(1) Have some more food *lah*!
'Have some more food!'
(Example taken from Wee 2004)

Another feature that occurs frequently in sentence-final position in Singapore English is a class of sentence-final adverbs such as *only*, *also*, and *already*. An example of a sentence with sentence-final *already* is presented in (2). Hiramoto (2015) observes that these adverbs occur more frequently sentence-finally in Singapore English than in British or Canadian English, suggesting that the increased use of sentence-final adverbs in Singapore English can be attributed to the non-English languages spoken in the region. Hiramoto notes the initial influence of Malay

as well as Sinitic languages such as Cantonese and Hokkien on Singapore English, arguing that sentence-final particles in these regional languages could have led to the higher frequency of sentence-final adverbs. Following Bao and Hong (2006), Hiramoto also considers Mandarin as a substrate language of Singapore English[1], and makes some comparisons between Singapore English sentence-final adverbs and Mandarin sentence-final particles. Parviainen (2012), however, attributes sentence-final adverbs in Singapore English to the influence of Indian English.

(2) I work about four months already.
'I have (already) been working for four months.'
(Example taken from Bao 1995)

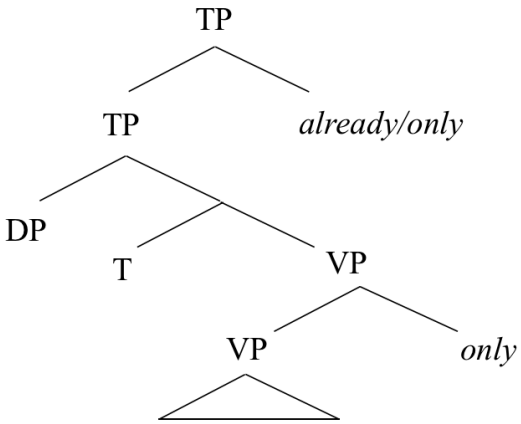
An issue that has yet to be addressed in existing literature, however, is the question of the syntactic position of sentence-final adverbs in Singapore English. English is a head-initial language, which has heads of phrases to the left in a binary branching node. However, because sentence-final adverbs are clause-final, their syntactic positions are immediately apparent, and they could be attached at several possible heights.

This paper, therefore, endeavours to determine the structural height of sentence-final adverbs in Singapore English. To this end, two specific sentence-final adverbs, sentence-final *already* and sentence-final *only*, will be examined in detail. These two sentence-final adverbs are especially useful as their semantic meanings are clearly observable, which makes the process of identifying their scope with respect to other scope-taking operators more reliable. This paper formalises the semantics for *already* and *only*, and thereafter, examines their interaction with other operators in order to determine their structural height.

[1] Hiramoto (2012) also notes, however, that the claim that Mandarin is a substrate language of Singapore English is controversial. See also Gupta (1994) and Siegel (2012).

I propose that sentence-final adverbs such as *only* and *already* in Singapore English are structured as in (3). While *already* has one specific position at the edge of the clause, *only* has two possible positions, one at the edge of the clause, and the other at a clause-medial position.

(3) Proposed structure for sentence-final adverbs in Singapore English[2]



In chapters 2 and 3, I formalise the semantics for sentence-final *already* and sentence-final *only* respectively, before proceeding to examine their scopal interactions with operators such as subject quantifiers, negation, and modals. In chapter 4, I examine the scopal interactions between *already* and *only*, and argue that the structure in (3) accurately describes the positions of sentence-final adverbs *already* and *only* in Singapore English. I then show that *already* and *only* are in complementary distribution in the position above the TP, motivating the view that they are not simply right-adjoined. In the last chapter, I conclude with some suggestions for future research.

[2] Section 4.2 discusses the unsuitability of right-adjunction as an analysis for sentence-final adverbs in Singapore English. However, for the trees in this work, sentence-final adverbs *already* and *only* will be presented as right-adjoined for clear and consistent presentation.

1.2. Some terminology

This section outlines the use of certain terminology in this paper, namely, the use of the terms "sentence-final adverbs" and "Singapore English".

There are conflicting analyses of sentence-final *already* in the existing literature on Singapore English. Some have categorised *already* as a sentence-final particles, while others make a distinction between sentence-final particles, which are mostly assumed to be discourse related, and sentence-final adverbs. Gupta (1992:36) classifies sentence-final *already* as a sentence-final particle, but makes a clear distinction between *already* and the other discourse particles in her study by analysing *already* as a non-pragmatic particle. Bao (1995:182), in his study on *already*, also points out that there may be particles that are regular words in Standard English but perform grammatical and pragmatic functions similar to the particles found in the local languages of Singapore. On the other hand, Hiramoto (2015) and Parviainen (2012) do not classify sentence-final *already* as a particle but as an adverb, which seems to be the more intuitive class for *already*.

This work recognises this discussion, and will use the term sentence-final adverb instead of sentence-final particle to refer to *already* and *only*. Particles, in the case of the Sinitic languages, have been analysed predominantly as heads in the CP domain (Paul 2009; Paul 2014; Li 2006; a.o.). As a case has yet to be made for the syntactic status of *already* and *only*, and because *already* and *only* resemble traditional English adverbs, which have not been analysed as heads, the term "adverb" will be used. However, this use of terminology does not rule out their possible status as sentence-final particles.

In this work, I also refer to the contact variety of English used in Singapore as "Singapore English", which has also been called "Singlish" and "Colloquial

Singapore English" in other studies. It is important to note that, in this paper, this term refers to the use of English by fluent native speakers in Singapore, and, as Gupta (2006) points out, must be differentiated from seemingly similar learner varieties.

1.3. Sentence-final adverbs in Singapore English

As mentioned in section 1.1, the structural position of sentence-final adverbs in Singapore English is not immediately apparent. In addition to this, the relation between adverbs and the constituent that it modifies (for example, VP or TP), is unclear and somewhat controversial. Therefore, this section outlines three possible analyses of sentence-final adverbs in Singapore English.

Firstly, sentence-final adverbs in Singapore English could be analysed as adjuncts. The classic analysis of adverbs present them as adjoined to the clause at different heights, which can iterate to facilitate stacking (Carnie 2013; Ernst 2002). Ernst (2002) argues that a postverbal adjunct of a certain head is adjoined to the right, in a position higher than the head, which is known as right-adjunction. Ernst also motivates this analysis of adverbs by arguing that right-adjunction allows for a less rigid order of adverbs.

The second analysis of adverbs, adopted by others like Larson (1988, 2004) and Cinque (1999, 2003), is in direct opposition to right-adjunction. These analyses argue that adverbs are not adjuncts but rather complements or specifiers. Larson (1988) argues that adverbs are generated as the lowest complement, to the right, or specifier, to the left, of the verb. The verb then undergoes successive raising and strands the adverb in its postverbal position. Building on Larson's (1988) analysis, Cinque (1999) argues that sentence-final adverbs are merged in the specifier of VP, and their postverbal positions are due to a leftward movement of the VP over the

adverb. Larson's (2004) later analysis also supports his earlier view, which he terms the "right descending" analysis. He argues for the validity of the "right descending" analysis by comparing the compatibility of Davidson's (1967) analysis of adverbs as quantifying over events and Diesing's (1992) "Mapping Hypothesis" in terms of their similar descriptions of the elements that appear in the restrictor and scope.

The third analysis of sentence-final adverbs is that they are not adverbs at all, but rather, head-final heads. This view predicts a rigid order for sentence-final adverbs, and would be similar to what has been analysed for sentence-final particles in Sinitic languages (Paul 2009; Paul 2014; Li 2006; Law 2002; a.o.).

In chapters 2 and 3 of this paper focusses on determining the structural height of sentence-final *already* and *only*, and these three analyses will only be revisited in section 4.2, where I will discuss the validity of these analyses in view of the arguments put forth in this paper. For the trees in the following chapters, sentence-final adverbs *already* and *only* will be presented as adjoining on the right for clear and consistent representation.

CHAPTER TWO

ALREADY IN SINGAPORE ENGLISH

This chapter seeks to describe the semantics of *already* in Singapore English. Following Soh and Gao's (2006) work on Mandarin sentence-final *le*, I propose that *already* modifies the proposition in its scope with an additional presupposition that the proposition is not true before the reference time (R). I will then go on to determine the structural position of *already* through its interaction with negation, subject quantifiers and modals, and then argue that it is structurally higher than TP.

2.1. The semantics of *already*

Sentence-final *already* in Singapore English has been noted as an aspectual marker (Bao 1995; Platt and Weber 1980). In addition to this, Bao (2005) notes that the use of *already* with stative sentences, or the inchoative *already* in (4), marks a transition to a new state. The change of state for the inchoative *already* takes place at the reference time R, which is before the speech time. However, unlike the inachotive *already*, Bao notes that the use of *already* in non-stative sentences instead corresponds loosely to the English perfect or simple past. Sentence-final *already*, then, is analysed as having different functions for different types of predicates.

(4) Mary live in New Orleans *already*.
'Mary is currently living in New Orleans.'
(Example taken from Bao 2005)

Before R: Mary does not live in New Orleans (¬P)

After R: Mary lives in New Orleans (P)

Some parallels have been observed between sentential (sentence-final) *le* in Mandarin Chinese and sentence-final *already* in Singapore English (Bao 2005; Hiramoto 2015). These studies have cited substrate transfer from local Sinitic languages as a possible reason for the occurrence of sentence-final *already* in Singapore English. Substrate transfer also explains the similarity of function between *already* and Hokkien *liau* and Cantonese *zo*, both of which are substrate languages of Singapore English. Hiramoto (2015) also attributes the occurrence of *already* in sentence-final position to colloquial Malay. Following Soh and Gao's (2006) unification of Mandarin sentence-final *le* as a transition marker, and due to the similarities that have been noted between *already* and *le*, I show that this approach can be extended to *already*, and propose a unified account for *already.*

Bao argues for three aspectual meanings of *already*, the completive, the inchoative, and the inceptive, depending on whether the predicate is stative or non-stative. A similar distinction can also be noted in Mandarin Chinese (Soh and Gao 2008), in which the sentential *le* gives rise to a completive reading for a sentence with a telic (bounded) situation, and yields an inchoative reading for a sentence with an atelic (unbounded) situation.

The example in (5), Bao argues, shows the use of the completive *already*, which necessitates that the event has taken place before speech time, and therefore, the reference time R is before the speech time. It should be noted that the sentence-final *already* in this example also marks a transition between events. More specifically, ¬P 'I did not wash my hand' is true before R.

(5) I wash my hand *already.*
'I have washed/washed my hand.'
(*Example taken from Bao 2005)*

Before R: I did not wash my hand (¬P)

After R: I wash my hand (P)

This approach also applies to Bao's inceptive *already*, with which an event can be interpreted as having just started or being about to start. Similarly, in example (6), *already* marks a transition between 'not raining' and 'raining'. The only difference between sentences with the completive *already* and those with the inceptive *already* is that, with the inceptive *already*, the reference time R may coincide with the speech time.

(6) Raining *already*[3].
'It has started to rain.' *(Adapted from Bao 2005)*

Before R: It is not raining (¬P)

After R: It is raining (P)

[3] A sentence with *already* but without the *–ing* suffix can be interpreted in two ways, as shown in (4'):
(4') It rain *already*.
Reading 1: 'It rained / has rained.'
Reading 2: 'It has started to rain.'

In order to avoid this ambiguity, and the one that Zhang (1997) describes regarding sentential inchoative *le* (summarised in Soh and Gao, 2008), I suggest that, in Singapore English, the progressive suffix *–ing* is used to describe a situation that continues into the present. An example of this is presented below in (3'):
(3') Mary living in New Orleans *already*.
'Mary is currently living in New Orleans.'
* 'Mary lived / has lived in New Orleans.'

I believe this also to be the case for sentences with the inceptive *already*, where the suffix *–ing* is often used for an unambiguous interpretation of a situation that continues into the present, as illustrated in (4"):
(4") It raining *already*.
'It has started to rain.'
* 'It rained / has rained.'

I have shown that what Bao notes for the inchoative *already* can be extended to both completive and inceptive *already*, which have the same presupposition, namely, ¬P before R. This analysis is congruous with Soh's (2009) study on sentential *le* in Mandarin Chinese, which proposes there is a presupposition that P is false in the past. Soh and Gao (2006) explain that the inchoative and completive readings for Mandarin *le* differ in the points of transitions between atelic and telic situations. They claim that the transition for atelic situations takes place at the beginning of the state, while the transition for telic situations takes place at the end of the situation. This analysis is similar to the case of *already*, and therefore, it becomes possible to unify Bao's three aspectual meanings of *already* into one, which is that of a transition marker.

Following this description of *already*, I propose that the semantic type of *already* is <t,t>, and that its denotation is as outlined in (7). I will go on to show that this proposed semantics for sentence-final *already* extends to all of Bao's three aspectual meanings of *already* and yields the desired meaning of the sentence. In this semantics of already, the notion of "interval" is referred to. This interval t_1, which is a concept expounded upon by Ogihara (2007), can be defined as a period of time before R. The length of the interval t_1 is also determined by the context.

(7) [[already]] = λP_t . P = 1 at R
Presupposition: P = 0 before R, for the duration of the interval t_1.

As shown in the computations in (8), this denotation for *already*, when merged with VP, accurately captures the meaning of the sentence in (4), that Mary lives in New Orleans now, but this was not the case before.

(8) Truth conditions for (4), with inchoative reading:

$[[VP]]^g$ = 1 iff Mary lives in New Orleans

$[[VP\ already]]^g$ (Functional Application)

= 1 iff Mary lives in New Orleans at R

Presupposition: Mary does not live in New Orleans before R

Similar to the inchoative and completive *already*, the denotation of *already* outlined in (7) yields the correct meaning for the completive and inceptive *already*, as seen in (9) and (10), which are based on examples (5) and (6), respectively. Another area that non-stative sentences, such as those in with the completive *already* (9) and the inceptive *already* (10), differs from the inchoative *already* is in the length of the period of time before R for which the proposition was false. For the inchoative *already*, this period can be taken to be indefinite, as in (4), Mary was in an indefinite state of not living in New Orleans, and the proposition P would be false for every interval preceding R. However, it could also be the case that the period for which P is false is not indefinite, in that Mary could have lived in New Orleans, and then moved away before moving back to New Orleans again. For the completive and inceptive readings, this period is not indefinite. Therefore, in order for a clearer reading of the duration of time before R that is ¬P, it seems necessary to invoke Ogihara's (2007) concept of intervals, where t_1 is the interval that marks the entire duration before R for which P is false.

(9) Truth conditions for (5), with completive reading:

$[[VP]]^g$ = 1 iff g(3) washed[4] g(3)'s hands

$[[T']]^g = [[VP]]^g([[already]])$ (Functional Application)

= 1 iff g(3) washed g(3)'s hands at R

Presupposition: g(3) did not wash g(3)'s hands before R, for the duration of the interval t_1

$[[TP]]^g$ = 1 iff I washed my hands at R

Presupposition: I did not wash my hands before R, for the duration of the interval t_1

(10) Truth conditions for (6), with inceptive reading:

$[[VP]]^g$ = 1 iff it is raining

$[[T']]^g = [[already]]([[VP]]^g)$ (Functional Application)

= 1 iff it is raining at R

Presupposition: it was not raining before R, for the duration of the interval t_1

This analysis of sentence-final *already* as a transition marker can account for more situations than the three meanings explained by Bao (2005), such as when the sentence seems to be referring to a future event, as in (11). The computations in (12) presents the truth conditions for the sentence in the second part of (11), "You die *already*", using the denotation of *already* proposed in this paper, showing that it yields the desired meaning of the sentence. The only difference between the three aspectual meanings of *already* and this current meaning of *already* is in the reference time. While the inchoative and completive readings referred to a time before speech time, and the inceptive reading referred to one that coincides with the speech time, this example refers to a time that occurs after the speech time.

(11) Today you never do homework ah? You die *already*.
'You didn't do your homework today? You will die later (in class)'

(9') You die *already.*

Asserts: You will die later (in class)

Presupposes: You were not dead before.

(12) Truth conditions for (9'), "You die *already*":

$[[\textit{already}\ \text{VP}]]^{g}$ = You die at R

Presupposition: You did not die before R

The computations in (12) show that this semantics for *already* does capture the meaning of a future event, as seen in (9').

In this section, I have argued for sentence-final *already* as a transition marker, similar to what has been analysed for Mandarin sentence-final *le* (Soh and Gao 2006). I have also outlined a denotation for *already,* and have shown that it does accurately capture the desired meaning for various sentences. This analysis of sentence-final *already* as a transition marker is also similar to Soh's (2012) analysis of Malay sentence-final particle *dah* as marking change, which Hiramoto (2015) notes could have contributed to the increased use of *already* in the sentence-final position.

2.2. The structural height of *already*

Because of the sentence-final position of *already*, its structural height remains unclear. There are many possible positions that *already* could occur, such as at the clause-edge or in a clause-medial position. In this section, I examine the interaction between *already* and other operators, such as negation, quantifier NPs and modals, in

order to determine the structural height of *already*, which I propose is consistently at the edge of the clause, above TP.

2.2.1. Negation and *already*

In order to examine the interaction between negation and *already*, all three aspectual meanings of *already* will be examined, as there are minor differences in their interaction with negation.

In Singapore English, the negative marker 'not', occurring above VP, is used to negate the sentence with the inchoative *already*, such as in example (13). The sentence in (13), "Mary don't live in New Orleans *already*", asserts that Mary doesn't live in New Orleans now, and presupposes that Mary used to live in New Orleans before.

(13) Mary don't live in New Orleans *already*.
Asserts: 'Mary doesn't live in New Orleans now.'
Presupposes: 'Mary lived in New Orleans before.'

Depending on whether *already* takes scope below or above negation, there are two ways that the truth conditions of example (13) can be computed, as shown in examples (14) and (15). In (14), *already* is structurally higher than negative particle 'not', and therefore, *already* takes scope over it. Both the assertion and the presupposition that are computed in example (14) capture the meaning of (13), namely, the assertion that Mary doesn't live in New Orleans at R and the presupposition that Mary lived in New Orleans before R. In example (15), *already* is structurally lower than negative particle 'not', and *already* takes scope below 'not'. When the truth conditions of (13) are computed in (15), the assertion is similar to that of the sentence in (13) and of the truth conditions in (14). However, while the

presupposition of the sentence in (13) is that Mary lived in New Orleans before, the computations in (15) shows the presupposition that Mary didn't live in New Orleans before. Therefore, the computations in (15) do not accurately capture the presupposition of the sentence in (13).

(14) Truth conditions for (13) *already > not*

[[not P]]^{g} = 1 iff Mary doesn't live in New Orleans

[[[not P] *already*]]^{g} = 1 iff Mary doesn't live in New Orleans at R

Presupposition: Mary lives in New Orleans before R

(15) Truth conditions for (13) **not > already*

[[P *already*]]^{g} = 1 iff Mary lives in New Orleans at R

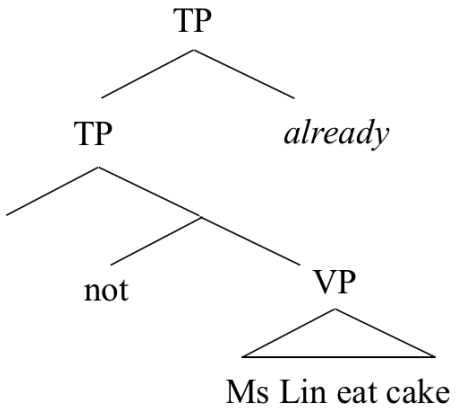
Presupposition: Mary doesn't live in New Orleans before R

[[not [P *already*]]]^{g} = 1 iff Mary doesn't live in New Orleans at R

Presupposition: Mary doesn't live in New Orleans before R

The interaction between *already* and negation, then, suggests that *already* takes scope over negation, and therefore, is structurally higher than negation in Singapore English. This leads us to the conclusion that, structurally, *already* should be above VP. The trees that follow illustrate the possible position of *already* above TP.

(16) Inchoative *already* takes scope above negation:



The inceptive *already* patterns similarly to the inchoative *already*, also taking scope above negation. However, it should be noted that when Bao's (2005) examples of sentences with the inceptive *already* are negated, the resulting sentences take on an inchoative reading, as illustrated in (17). In view of this, the progressive suffix *–ing*, which can be used for an unambiguous inceptive reading, has been included in example (18) in order for the negative sentence to retain its inceptive reading.

(17) Inchoative reading with negation:

It don't rain *already*.
Asserts: 'It absolutely does not rain anymore.'
Presupposes: 'It used to rain before.'

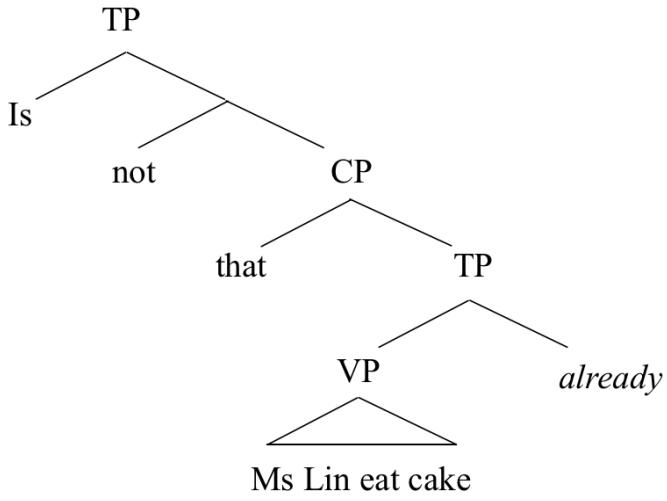
(Example adapted from Bao 2005)

(18) Inceptive *already* takes scope above negation:

Is not raining *already*.
Asserts: 'It is not raining now.'
Presupposes: 'It was raining before.'

The completive *already* does not interact with negation in the same manner as the inchoative and inceptive, as sentences with the completive *already* cannot be negated with the lower negation without the resulting sentence taking on an inchoative reading, as seen in example (20). This can be attributed to the fact that negating telic situations such as accomplishments and achievements results in the situation no longer being an accomplishment or achievement, in the same way an event not taking place is no longer an event. This is similarly noted by Paul (2009) in Mandarin Chinese, where sentential *le* is incompatible with a sentence containing negation *mei*, which negates the accomplishment of a certain event. Therefore, it seems that the completive *already* can only take scope below higher (biclausal) negation, and does not interact with the lower negative particle 'not', as has been shown in the other examples before. However, this proves to be unproblematic for the analysis that *already* is above the TP, as shown in the tree in (19) and its computations in (21).

(19) Completive *already* takes scope below higher (biclausal) negation:



(20) Inchoative *already* (not completive) takes scope above negation:

I don't wash hand already
Asserts: 'I do not wash my hands now.'
Presupposes: 'I used to wash my hands before.'

(21) Completive *already* takes scope below higher (biclausal) negation:

Is not that I wash hand *already*.
Asserts: 'I have not washed my hands yet.'
Presupposes: 'I did not wash my hands before this.'

I have shown that *already* must be above sentential negation, and suggest that *already* is consistently structurally above TP.

2.2.2. Subject quantifiers and *already*

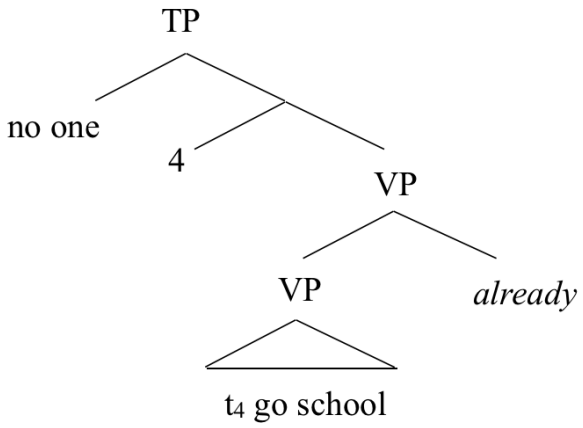
In this section, I examine the interaction between *already* and subject quantifiers. As quantifier NPs are found structurally higher in the clause as the specifier of TP, examining the scopal relations between subject quantifiers and *already* can provide further evidence for the position of *already.* The scopal relations between subject quantifiers and all three types of *already* are similar, and therefore, only the sentence with an inchoative reading, as in (22), will be presented.

(22) No one go school *already*.
Asserts: 'No one goes to school.'
Presupposes: 'Someone used to go to school before.'

I will try to compute the truth conditions for the sentence in (22) in two ways, depending on the relative scope of *already* with respect to the subject quantifier.

When *already* takes scope below the subject quantifier *no one,* as in (23) and (24), the scope of *already* is [x goes to school], and it is presupposed that 'x didn't go to school before R', as seen in the truth conditions in (24).

(23) *Already* below *no one* (incorrect for (24)): **no one > already*



(24) Truth conditions for (22) as (23): **no one > already*

$[[vP]]^g$ = 1 iff g(4) goes to school

$[[$*already* VP$]]^g$ = 1 iff g(4) goes to school at R (FA)

Presupposition: g(4) didn't go to school before R

$[[TP]]^g$ = 1 iff $\forall x \in D_e$ [x is animate $\rightarrow$ x didn't go to school at R]

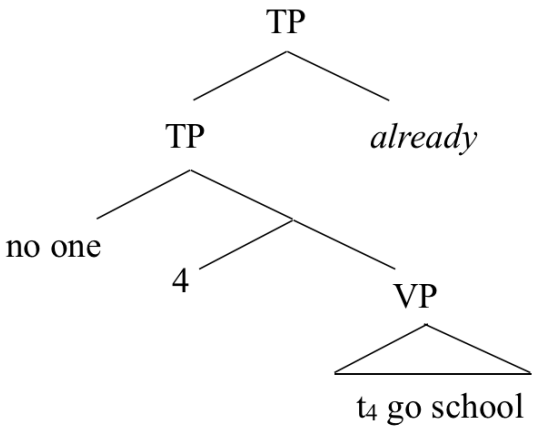
Presupposition: $\forall x \in D_e$ [x is animate $\rightarrow$ x didn't go to school before R[4]]

The second way can be seen in (26), where *already* takes scope over the subject quantifier *no one*, and is merged with TP in sentence-final position, as in the

[4] The presupposition generated by an negative existential quantifier is controversial. Some (Heim 1983) describe it as triggering a universal presupposition while others (Beaver 2001) describe it as triggering an existential presupposition. Chemla (2009) provides evidence that the presupposition triggered by the negative existential quantifier projects universally. Therefore, following Chemla (2009), the negative existential 'no student' is assumed to trigger a universal presupposition (i.e. all students study Spanish) instead of an existential (i.e. at least one student studies Spanish) one.

tree diagram in (25). In (26), the scope of *already* is 'no one goes to school,' and it is presupposed that 'it is false that no one went to school before R'. The presupposition in (26) accurately reflects that of the original sentence in (22).

(25) *Already* takes scope over *no one*, above TP *already > no one*



(26) Truth conditions for (22), (24) *already > no one*

$[[VP]]^g = 1$ iff g(4) goes to school

$[[TP]]^g = 1$ iff $\forall x \in D_e$ [x is animate $\rightarrow$ x doesn't go to school]

$[[TP\ already]]^g = 1$ iff $\forall x \in D_e$ [x is animate $\rightarrow$ x doesn't go to school] at R

Presupposition: $\exists x \in D_e$ [x is animate $\rightarrow$ x goes to school] before R.

Upon ruling out the position of *already* below the subject quantifier *no one*, the structural height of *already* must be above TP. This result is similar to what Sybesma and Li (2007) analyse for Cantonese sentence-final *laa3*, the counterpart of Mandarin sentence-final *le*. Extending Rizzi's (1997) split-CP approach to Cantonese sentence-final particles, sentence-final *laa3* is said to be found in DeikP, which is above the TP

but below the outermost Force head in Cantonese. However, this position of sentence-final *already* in Singapore English is contrary to what Erlewine (to appear) and Lin (2010) argue for Mandarin sentence-final *le*. Erlewine (to appear) analyses *le* as a sister to vP based on its scopal interactions between other operators such as negation and subject quantifiers, while Lin (2010) notes that the subject of a sentence takes scope above sentence-final *le*, and therefore, *le* must be found in a position within the TP.

2.2.3. Modals and *already*

According to the analysis presented in the previous two sections, where *already* is argued to be found above TP, the scopal interaction between modals and *already* is expected to be *already* taking scope above modals at various heights. This interaction can be demonstrated in example (27), which is shown below.

(27) Because she finish her homework, Jodie can go out *already*
'Because she has finished her homework, Jodie is now allowed to go out.'

When *already* takes scope above deontic modal *can* in example (27), the scope of *already* is [∃w [w is compatible with rules and regulations and Jodie goes out]], which yields the desired meaning that, at the reference time, Jodie goes out because she has complied with the rules regarding going out (i.e. finishing her homework). However, when *already* takes scope below ability modal *can*, its scope is [Jodie goes out], which does not capture the meaning that, at the reference time R, w is compatible with rules and regulations. The truth conditions in (28) and (29) also show the difference between the scope of *already*, lending support to the argument for the position of *already* above TP, as it seems not to take scope below deontic modal *can*.

(28) Truth conditions for (27): *already* > *can*

[[vP]] = 1 iff Jodie goes out

[[*can* vP]]^{w} = 1 iff ∃w [w is compatible with rules and regulations and Jodie goes out]

[[TP *already*]]^{w} = 1 iff ∃w [w is compatible with rules and regulations and Jodie goes out] at R

Presupposition: not true that ∃w [w is compatible with rules and regulations and Jodie goes out] before R.

(29) Truth conditions for (27): **can* > *already*

[[vP]] = 1 iff Jodie goes out

[[vP *already*]] = 1 iff Jodie goes out at R

Presupposition: Jodie does not go out before R

[[TP]]^{w} = 1 iff ∃w [w is compatible with rules and regulations and Jodie goes out at R]

Presupposition: Jodie does not go out before R

In this chapter, I have formalised the semantics of *already* in Singapore English, following Soh and Gao's (2006) work on Mandarin sentence-final *le*. I have proposed that, similar to Mandarin sentence-final *le*, *already* modifies the proposition in its scope with an additional presupposition that the proposition is not true before the reference time (R), for the duration of the interval t_1. Ogihara's (2007) concept of intervals has been included in this denotation in order to account for situations in which there is a definite duration that ¬P is valid. I have also shown that, through its

interaction with negation, subject quantifiers, and modals, that sentence-final *already* is structurally higher than both VP and TP in Singapore English.

CHAPTER THREE

ONLY IN SINGAPORE ENGLISH

This chapter aims to outline a denotation for sentence-final *only* and then go on to determine the structural height of *only* through its scopal interactions with elements that are structurally higher, such as subject quantifiers, and others that are structurally lower, like negation and modals. I argue that there are two position for sentence-final *only* in Singapore English, one above the TP and one lower than the TP, specifically, between epistemic and deontic modals.

In this chapter, I will be using Rooth's (1985) notations such as $[[\alpha]]^f$ to represent the focus semantic value, which is the set of alternatives including the prejacent, and $[[\alpha]]^o$ to represent the ordinary semantic value of a phrase α.

3.1. The semantics of *only*

Only has been described as a focus-sensitive operator (Jackendoff 1972), that associates with focus (Rooth 1985) and is, therefore, sensitive to a set of alternatives generated by the placement of focus (Krifka 2006). There are also other focus-sensitive operators in English, such as adverbs *also* and *even*. *Only* has been argued to alter the truth conditions of a sentence by asserting the falsity of alterative propositions that are not the prejacent value, while the prejacent value is presupposed to be true.

Hiramoto's (2015) study on sentence-final adverbs in Asian Englishes shows that sentence-final *only* in Singapore English (13.1%) is used significantly more

frequently than in Canadian English (1.7%) or British English (0.6%)[5]. This increased use of sentence-final *only* in Singapore English, she argues, is a result of substrate transfer from the local languages, such as Malay and regional Sinitic languages, rather than from Indian English, as Parviainen (2012) suggests. Parviainen (2012) argues that sentence-final focus adverbs such as *only* and *also* have been transferred to Singapore English from Indian English. This transfer is also said to have occurred between Indian English and other Asian Englishes such as Hong Kong English and Philippine English.

In Singapore English, sentence-final *only* can associate with elements in the predicate, as in example (30). This is congruous with Law's (2004) analysis for Cantonese sentence-final *zaa* ('only') as well as what Erlewine (2010) and Tang (1998) note for Mandarin sentence-final *eryi* ('only'). It is also possible for sentence-final *only* to associate with other elements in the predicate, as well as the entire VP, as in examples (31)-(33)[6].

(30) Clara lend the book to [Jing]$_F$ *only*, (never lend to other people.)
'Clara lent the book only to [Jing]$_F$, (not to anyone else.)'

(31) Clara [lend]$_F$ the book to Jing *only,* (never give to her.)
'Clara only [lent]$_F$ the book to Jing, (she didn't give it to her.)'

(32) Clara lend [the book]$_F$ to Jing *only,* (never lend other things.)
'Clara lent only [the book]$_F$ to Jing, (not anything else.)'

(33) Clara [lend the book to Jing]$_F$ *only,* (never do other things.)'
'Clara only [lent the book to Jing]$_F$, (she didn't do anything else.)'

Sentence-final *only* in Singapore English can also associate with the subject, as in example (34), where the subject is F-marked. This association with the subject is also

[5] These percentages reflect the occurrences of sentence-final *only* as a proportion of all occurrences of the adverb *only*.
[6] Following von Fintel (1994), I mark the focussed (F-marked) element as [ ]$_F$.

evidenced by the possible continuation that no one other than Clara has lent their book to Jing. This finding is similar to Law's (2004) account of Cantonese sentence-final *zaa*[7], but unlike what Erlewine (2010, to appear) notes for Mandarin sentence-final *eryi*, where association with the subject is considered ungrammatical.

(34) $[\text{Clara}]_F$ lend her book to Jing *only*, (other people never lend her.)
'Only $[\text{Clara}]_F$ lent her book to Jing, (no one else lent theirs to her.)'

Following this description of sentence-final *only* in Singapore English and according to Horn's (1969) and Rooth's (1985) analysis of English *only*, the denotation of [[α *only*]] that will be used in this paper is as outlined in (35). This denotation asserts that, for all propositions p in the set of alternatives, if p is not the prejacent value, then p is false; and presupposes that the prejacent is true.

(35) $[[\alpha \textit{ only}]]^o = 1 \Leftrightarrow \forall p \in [[\alpha]]^f (p \neq [[\alpha]]^o \rightarrow p = 0)$
Presupposition: $[[\alpha]]^o$ is true

(Taken from Erlewine 2016)

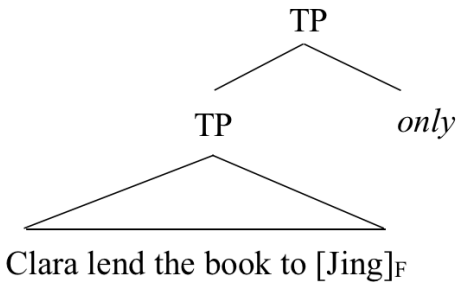
Assuming that sentence-final *only* is above TP and merges with TP, the computations in (38) show that this denotation for sentence-final *only* yields an accurate meaning

[7] Law (2004:29) disagrees with Tang's (1998) judgement that sentence-final *zaa* ('only') cannot associate with the subject, supporting her judgement with two other informants. The sentence in (i) shows that it is possible for the subject of the sentence to be the focussed element in Cantonese. This is evidenced by the grammaticality of the continuation, which states that everyone else other than Clara is not willing to.

(i) $[\text{Clara}]_F$ 一 个 人 肯 借 本 书 给 我 *zaa* 其 他 人 都 唔 肯
$[\text{Clara}]_F$ yat go yan hung jze boon syu bei ngo *zaa*, kae ta yan dou mm hung
$[\text{Clara}]_F$ one CL person willing lend CL book give me SFP, other people all not willing
'Only $[\text{Clara}]_F$ is willing to lend me the book, everyone else is not.'

for the sentence (30), as seen in (37). This assumption about the height of *only* will be tested in the next section.

(36) Tree for sentence in example (3)



(37) Clara lend the book to $[Jing]_F$ *only*
Asserts: Clara did not lend the book to anyone else
Presupposes: Clara lent the book to Jing

(36) Truth conditions for (30), (36):

$[[Jing]]^o$ = Jing

$[[Jing]]^f$ = {Jing, Sarah, Nicole}

$[[TP]]^{o,g}$ = 1 iff Clara lent the book to Jing (PFA)

$[[TP]]^{f,g}$ = {1 iff Clara lent the book to Jing, 1 iff Clara lent the book to Sarah, 1 iff Clara lent the book to Nicole}

$[[TP\ \textit{only}]]^o$ = 1 iff $\forall p \in [[TP]]^f (p \neq [[TP]]^o \rightarrow p = 0)$

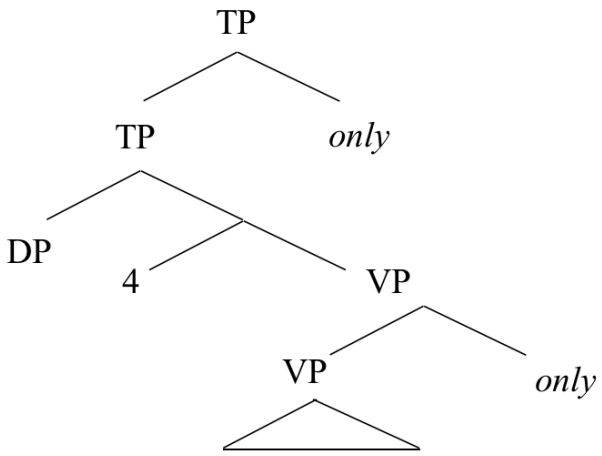
= 1 iff Clara did not lend the book to Sarah and Clara did not lend the book to Nicole

Presupposition: Clara lent the book to Jing

3.2. The structural height of *only*

In this section, I examine the interaction between sentence-final *only* and operators such as subject quantifiers, negation, and modals in order to determine the structural height of *only*. I argue that there are two positions for the sentence-final *only* in Singapore English, one above the TP and the other within the TP, as shown in the tree in (39)[8].

(39) Proposed positions for sentence-final *only*



3.2.1. Subject quantifiers and *only*

A sentence such as the one in (40) can be ambiguous in Singapore English. The first reading can be understood in a context where teachers of Spanish are disappointed that students do not learn new languages in university. However, teachers of French and Japanese dispute this claim, and utter the sentence in (40), with the meaning that it is only the case that no students study Spanish, but students study other languages like French and Japanese. The second reading is more accessible, and can be

[8] The clause-medial node that directly c-commands sentence-final *only* will be labelled *onlyP* to facilitate clear presentation of the computations and trees.

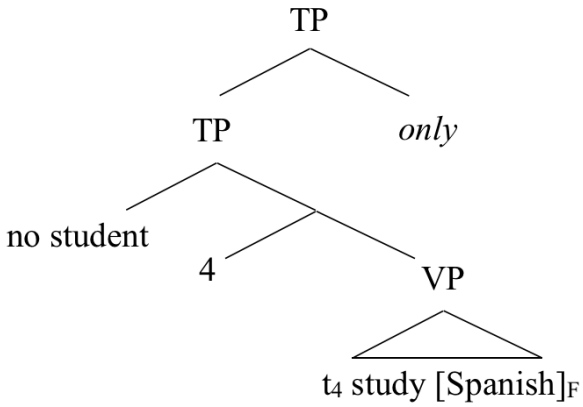
understood in a context where all students in the university study other languages in addition to Spanish.

(40) No student study [Spanish]$_F$ *only*.
Reading 1: It is only the case that no student studies Spanish, some students study French and Japanese.
Reading 2: There is no student who studies only Spanish, every student (also) studies French or Japanese.

In order to determine the structural height of sentence-final *only*, the truth conditions for the sentence in (41), which is the first reading of (40), are computed in (43). For this example, *only* is hypothesized to be at the edge of the clause, where it takes scope over the whole TP as well as the subject quantifier 'no student', as seen in the tree in (42). The meaning derived from the computations in (43) is congruous with the truth conditions of Reading 1, where there are students who study other languages such as French and Japanese, but no student studies Spanish. Therefore, this shows that the position of sentence-final *only* can be above the TP. This position for *only* is in agreement with what Paul (2009) describes as the position for low-SFPs in Mandarin Chinese, at the edge of the clause, taking scope over the entire TP.

(41) Reading 1: No student study [Spanish]$_F$ *only*.
'It is only the case that no student studies Spanish.'
Asserts: Some students study French and Japanese
Presupposes: No student studies Spanish

(42) *Only* takes scope above *no student* *only > no student*



(43) Truth conditions for (41) *Only > no student*

[[Spanish]]^{o} = Spanish

[[Spanish]]^{f} = {Spanish, French, Japanese}

[[VP]]^{o,g} = 1 iff g(4) studies Spanish

[[VP]]^{f,g} = {1 iff g(4) studies Spanish, 1 iff g(4) studies French, 1 iff g(4) studies Japanese}

[[TP]]^{o} = 1 iff ∀x [x is a student → x doesn't study Spanish]

[[TP]]^{f} = {1 iff ∀x [x is a student → x doesn't study Spanish], 1 iff ∀x [x is a student → x doesn't study French], 1 iff ∀x [x is a student → x doesn't study Japanese]}

[[TP *only*]]^{o} = 1 iff ∀p ∈ [[TP]]^{f} (p ≠ [[TP]]^{o} → p = 0)

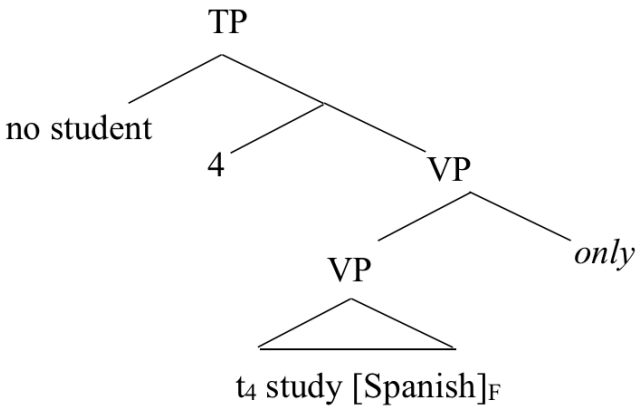
= 1 iff false that ∀x [x is a student → x doesn't study French] and false that ∀x [x is a student → x doesn't study Japanese]

Presupposition: ∀x [x is a student → x doesn't study Spanish]

The second reading is outlined in (44), where *only* takes scope below the subject quantifier. This meaning is computed in (46) using a second possible position for *only* in Singapore English within TP, which is able to account for the ambiguity described earlier. This position for *only* is comparable to the position of Mandarin SFP *eryi*, as argued by Erlewine (to appear), where low-SFPs such as *eryi* are found at a clause-medial position, identified as the vP phase edge.

(44) Reading 2: No student studies [Spanish]$_F$ *only*.
'There is no student who studies only Spanish.'
Asserts: All students study French or Japanese
Presupposes: All students study Spanish

(45) *Only* takes scope below *no student* *No student > only*



(46) Truth conditions for (43) *No student > only*

$[[VP]]^{o,g}$ = 1 iff g(4) studies Spanish

$[[VP]]^{f,g}$ = {1 iff g(4) studies Spanish, 1 iff g(4) studies French, 1 iff g(4) studies Japanese}

$[[VP\ only]]^{o}$ = 1 iff $\forall p \in [[VP]]^{f}$ $(p \neq [[VP]]^{o} \rightarrow p = 0)$

= 1 iff g(4) doesn't study French and g(4) doesn't study Japanese

Presupposition: g(4) studies Spanish

[[TP]] = 1 iff ∀x [x is a student → false that [x doesn't study French and x doesn't study Japanese]]

Presupposition: ∀x [x is a student → x studies Spanish]

This section has argued for both a higher and a lower structural position for sentence-final *only* in Singapore English. However, it is possible to attribute the difference in scopal relations between sentence-final *only* and the subject quantifier to syntactic reconstruction, where the subject quantifier is interpreted in its position at LF. If the subject quantifier undergoes reconstruction, sentence-final *only* does not have to be at the clause-edge to take scope above the subject quantifier, rather, it is possible that *only* remains in a clause-medial position, and the subject quantifier is interpreted within the VP. In this way, *only* can take scope above the subject quantifier without being at the edge of the clause. In other words, it is possible to argue that the cause of these two readings is the interpretation of the subject quantifier at different heights instead of *only* at different heights. The argument for reconstruction, therefore, would make it seem that there is only one clause-medial position for *only*. However, this is not the case for Singapore English, and the next section provides evidence for this analysis, as negative particle *not* is not assumed to reconstruct.

3.2.2. Negation and *only*

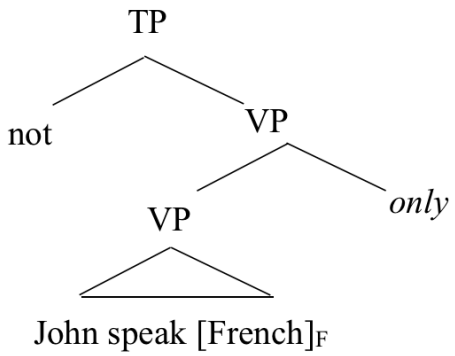
Through evidence presented in the interaction between negation and *only*, *only* is argued to have two positions in Singapore English. The first position of *only* is higher than the TP and the second position is within the TP.

Sentences with sentence-final *only* in Singapore English can be two-way ambiguous, as shown in the previous section. This is also the case for sentences with *only* that are negated with the negative particle *not*, as demonstrated in example (47), where there are two readings for the sentence. The ambiguity can be accounted for by positing two different syntactic positions for sentence-final *only*, shown in the trees in (48) and (49)[9]. In (48), *only* takes scope below sentential negation, while in (21), *only* takes scope above sentential negation.

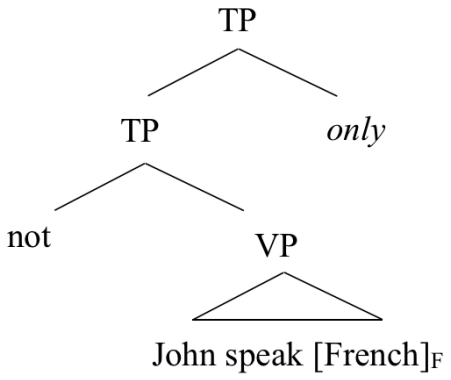
(47) John don't speak [French]$_F$ *only*.
Reading 1: John does not only speak French, he speaks other languages as well
Reading 2: Out of a list of languages, John only does not speak French but he can speak all the other languages on that list

(48) Reading 1: John don't speak [French]$_F$ *only*. *not* > *only*
Asserts: John speaks English or Mandarin
Presupposes: John speaks French

[9] For the trees represented in this section, as with the other sections, nonquantificational subject 'John' is represented in its base position, which does not make a difference for the computations.



(49) Reading 2: John don't speak [French]$_F$ *only*. *only* > *not*
Asserts: John speaks English and Mandarin
Presupposes: John does not speak French



The truth conditions that are computed in (50) and (51) accurately capture the two distinct readings in examples (48) and (49) respectively, and gives weight to the analysis for sentence-final *only* at two different structural heights. The position of *only* above the TP is congurous with Paul's (2009) analysis of low sentence-final particles at the edge of the clause, taking scope above the entire TP. The second, clause-medial position of *only* in Singapore English is similar to what Erlewine (to appear) argues for Mandarin sentence-final *le*, which is positioned above the vP.

(50) Truth conditions for Reading 1, (48) *not* > *only*
[[VP]]^o = 1 iff John speaks French

[[VP]]^{f} = {1 iff John speaks French, 1 iff John speaks English, 1 iff John speaks Mandarin}

[[VP *only*]]^{o} = 1 iff John doesn't speak English and John doesn't speak Mandarin

Presupposition: John speaks French

[[not [VP only]]]^{o} = Not(John doesn't speak English and John doesn't speak Mandarin)

Presupposition: John speaks French

= 1 iff John speaks English or John speaks Mandarin

Presupposition: John speaks French

(51) Truth conditions for Reading 2, (49) *only* > *not*

[[VP]]^{o} = 1 iff John speaks French

[[VP]]^{f} = {1 iff John speaks French, 1 iff John speaks English, 1 iff John speaks Mandarin}

[[TP]]^{o} = 1 iff John doesn't speak French

[[TP]]^{f} = {1 iff John doesn't speak French, 1 iff John doesn't speak English, 1 iff John doesn't speak Mandarin}

[[TP *only*]]^{o} = 1 iff false that John doesn't speak English and false that John doesn't speak Mandarin

Presupposition: John doesn't speak French

3.2.3. Modals and *only*

This section examines the scopal interactions between sentence-final *only* and deontic and epistemic modals. The pattern of ambiguity for sentences with *only* and deontic

modals is similar to the previous sections, where sentences are two-way ambiguous. These two readings can be accounted for by the argument that there are two structural heights for *only*. However, sentences with *only* and epistemic modals do not have the same ambiguity as the other sentences in the previous sections. In fact, these sentences are found to be semantically unambiguous. The possible reason for this unambiguous meaning will be explained in section 3.2.3.2. This lack of ambiguity is reflected also in its syntactic structure as sentences with epistemic modals have only one structure, with *only* taking scope below epistemic modals. This section provides evidence for the two heights of *only*, and argues for a clause-medial position of *only* between the epistemic and deontic modals. For this section, the deontic modal in Singapore English *can* (Hiramoto 2012) and epistemic modal *confirm* (Kang, 2015) will be used to test for the positions of sentence-final *only*.

3.2.3.1. Deontic modal *can* and *only*

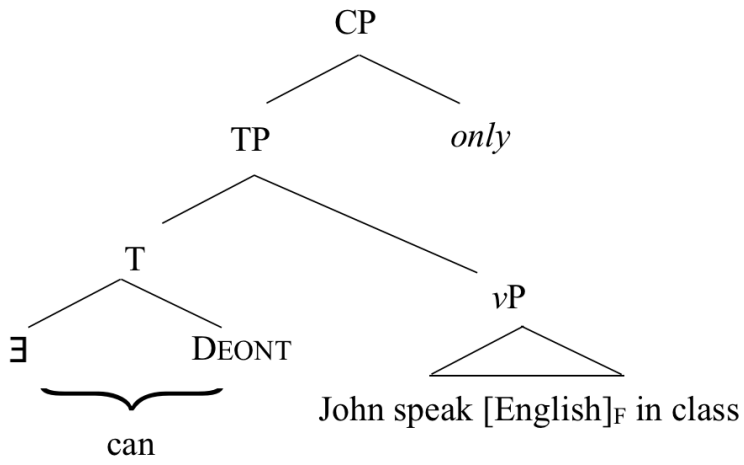
Hiramoto (2012) notes that, among the various uses of *can* in Singapore English, it is also possible for *can* to be used as a deontic modal in a similar manner as in Standard English. For the purposes of this paper, this specific instance of *can* will be analysed as a existential (possibility) deontic modal. In the tree as well as the computations, the existential ∃ and DEONT are taken together to represent the modal *can*. The sentence in (52) is ambiguous, having two possible readings as illustrated below.

(52) John can speak $[\text{English}]_F$ in class *only*.
Reading 1: John is only allowed to speak English in class, and not other languages.
Reading 2: John is allowed to speak only English in class, but he may also speak other languages.

The truth conditions for the sentence in (52) is derived, as shown in (55). In (55), *only* takes scope above *can*, and presents the other alternatives that are not the prejacent as false. Here, the truth conditions assert that there does not exist a world w, where w is compatible with rules and regulations, and John speaks French or Mandarin in class. It is presupposed is that there exists a world w, where w is compatible with rules and regulations and John speaks English in class. In other words, the truth conditions state that it is not possible that John is allowed to speak either French or Mandarin in class. This captures the desired meaning of the first reading in (52), where John is not allowed to speak any other languages but English in presumably an English class, as presented in (53).

(53) Reading 1: John can speak $[\text{English}]_F$ in class *only*.
Asserts: John is not allowed to speak Mandarin or French in class
Presupposes: John is allowed to speak English in class

(54) Tree for (53)[10]: *only* > deontic *can*



(55) Truth conditions for (53), (54): *only* > deontic *can*

$[[\text{VP}]]^o = 1$ iff John speaks English in class

[10] The nonquantificational subject 'John' is represented in its base position inside the vP. Again, this does not make a difference for its computed meaning.

$[[VP]]^{f}$ = {1 iff John speaks English in class, 1 iff John speaks French in class, 1 iff John speaks Mandarin in class }

$[[can]]^{w} = [[\exists]]([[\text{DEONT}]])$

$= \lambda q_{<s,t>} . \exists w$ [w is compatible with rules and regulations and $q(w) = 1$]

$[[TP]]^{o,w} = [[T]]^{w}(\lambda w_{s} . [[VP]]^{o,w,g})$ (Intensional FA)

= 1 iff $\exists w$ [w is compatible with rules and regulations and John speaks English in class]

$[[TP]]^{f,w}$ = {1 iff $\exists w$ [w is compatible with rules and regulations and John speaks English in class], 1 iff $\exists w$ [w is compatible with rules and regulations and John speaks French in class], 1 iff $\exists w$ [w is compatible with rules and regulations and John speaks Mandarin in class]}

$[[TP \textit{ only}]]^{o}$ = 1 iff it is not that $\exists w$ [w is compatible rules and regulations and John speaks French in class] and not that $\exists w$ [w is compatible with rules and regulations and John speaks Mandarin in class]

Presupposition: $\exists w$ [w is compatible with rules and regulations and John speaks English in class]

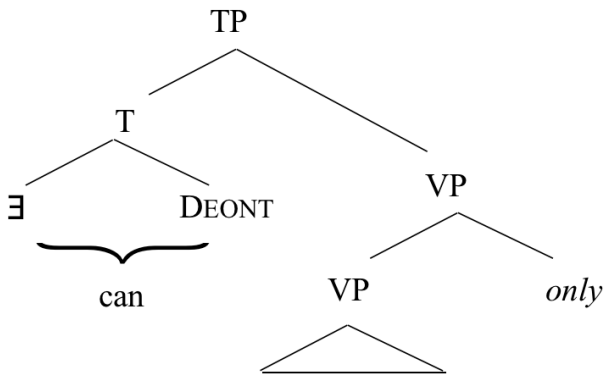
The meaning that is derived by these computations show that, when *only* takes scope above modal *can*, it is similar to the one in (53), providing further evidence that sentence-final *only* can be found above the TP. The second reading for the sentence in (52) is outlined in (56).

(56) Reading 2: John can speak [English]$_F$ in class *only*.
Asserts: John may be allowed to speak Mandarin or French in class
Presupposes: John is allowed to speak English in class

The truth conditions, (59), show the assertion that there exists a world w, where w is compatible with rules and regulations and John is allowed not to speak French or Mandarin in class; (59) also shows the presupposition that there exists a world w, where w is compatible with rules and regulations and John speaks English. This means that it is possible that John is allowed not to speak French or Mandarin in class, and allowed to speak only English in this class. This reading can be understood in a context where John is most comfortable speaking in English, but in this class, John is encouraged to sometimes speak in languages other than English, so as to practice his foreign language skills with other students. A possible continuation to this sentence is as shown in (57), which makes it clear that John can speak Mandarin and French in class in addition to English.

(57) John can speak English in class *only*. But teacher encourage him to speak Mandarin or French sometimes.
'John is allowed to speak only English in class. But the teacher also encourages him to sometimes speak Mandarin or French.'

(58) Tree for (56): deontic *can* > *only*



(59) Truth conditions for (56), (58): deontic *can* > *only*

$[[VP]]^{o}$ = 1 iff John speaks English in class

$[[VP]]^{f}$ = {1 iff John speaks English in class, 1 iff John speaks French in class, 1 iff John speaks Mandarin in class}

$[[VP\ only]]^{o}$ = 1 iff John does not speak French in class and John does not speak Mandarin in class

Presupposition: John speaks English in class

$[[TP]]^{w} = [[T]]^{w}(\lambda w_s\ .\ [[VP]]^{o,w,g})$ (Intensional FA)

= 1 iff ∃w [w is compatible with rules and regulations, John does not speak French in class and John does not speak Mandarin in class]

Presupposition: John speaks English in class

The computations in (59) capture the meaning of the second reading in (56), where sentence-final *only* takes scope below deontic modal *can*, which is evidence for the clause-medial position of *only*. The results in this section lead to the aforementioned

conclusion that there are two possible positions for sentence-final *only* in Singapore English.

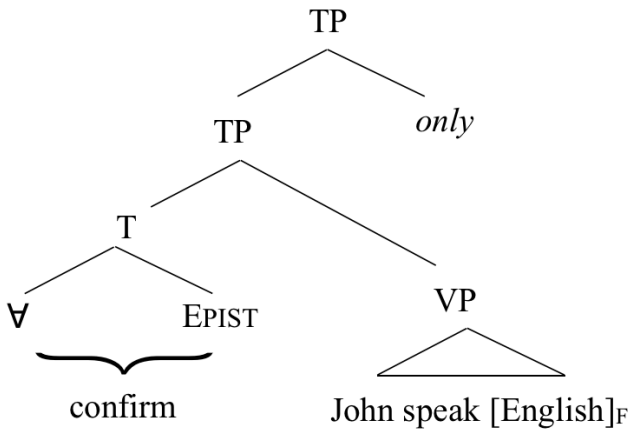
3.2.3.2. Epistemic modal *confirm* and *only*

Kang (2015) notes that the semantics of epistemic modal *confirm* is largely similar to epistemic *must*, and expresses a higher degree of certainty on the part of the speaker. For current purposes, *confirm* is taken to be a universal (necessity) epistemic modal, and will be represented as necessity ∀ and EPIST in the trees and computation of truth conditions.

(60) John confirm speak [English]$_F$ *only*.
'John definitely speaks only English.'
Asserts: John definitely does not speak Mandarin or French
Presupposes: John speaks English

The truth conditions in (62) assert that it is not true that for all worlds w, such that w is compatible with the speaker's knowledge, John speaks French and Mandarin, and presuppose that for all worlds w, such that w is compatible with the speaker's knowledge, John speaks English. In other words, the assertion when *only* takes scope above modal *confirm* is that it is not necessarily definite that John speaks French and Mandarin, which means that it is uncertain whether John does or does not speak these languages. However, this does not accurately capture the meaning of the sentence in (60), where it is asserted that John definitely does not speak French and Mandarin. This rules out the position of sentence-final *only* taking scope above epistemic modal *confirm*.

(61) Tree for (60): **only > confirm*



(62) Truth conditions for (60), (61): **only > confirm*

$[[VP]]^{o}$ = 1 iff John speaks English

$[[VP]]^{f}$ = {1 iff John speaks English, 1 iff John speaks French, 1 iff John speaks Mandarin}

$[[T]]^{w} = [[\forall]]([[Epistemic]])$

$= (\lambda p_{<s,t>} . \lambda q_{<s,t>} . \forall w [p(w) = 1 \text{ and } q(w) = 1])[(\lambda w_s . w \text{ is compatible with speaker's knowledge})]$

$= \lambda q<s,t> . \forall w [w \text{ is compatible with speaker's knowledge and } q(w) = 1]$

$[[TP]]^{o,w} = [[T]]^{w}(\lambda w_s . [[VP]]^{o,w,g})$ (Intensional FA)

= 1 iff ∀w [w is compatible with speaker's knowledge and John speaks English]

$[[TP]]^{f,w}$ = {1 iff ∀w [w is compatible with speaker's knowledge and

John speaks English], 1 iff ∀w [w is compatible with speaker's knowledge and John speaks French], 1 iff ∀w [w is compatible with speaker's knowledge and John speaks Mandarin]}

[[TP *only*]]^{o} = 1 iff it is not that ∀w [w is compatible with speaker's knowledge and John speaks French] and it is not that ∀w [w is compatible with speaker's knowledge and John speaks Mandarin]

Presupposition: ∀w [w is compatible with speaker's knowledge and John speaks English]

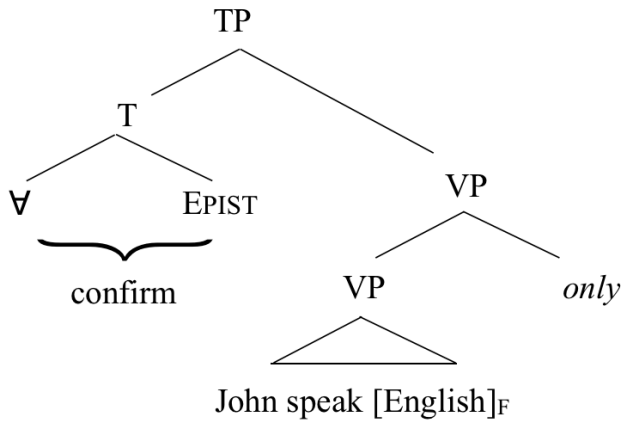
Unlike sentences with the deontic modal *can*, *only* seems to have only one specific position in sentences with the epistemic modal *confirm*, as shown in (63). This result is surprising, as it is expected that similar ambiguity would exist for both sentences with deontic modals and sentences with epistemic modals.

Von Fintel and Iatridou (2006:174) argue for a constraint on quantifiers and epistemic modals that they term the Epistemic Containment Principle (ECP), which states that a quantifier cannot take scope above an epistemic modal. The ECP can be interpreted as saying that parallel facts are not compatible with epistemic modals (von Fintel and Iatridou 2006:175). What von Fintel and Iatridou note about epistemic modals is reflected in the inaccurate meaning that is computed in (62), where the fact that John speaks English is not compatible with John possibly speaking French and Mandarin as well. The ECP can be applied to *only*, which has been described as an operator with "some quantificational force" (Partee 1991:174). Focus-sensitive adverbs can be understood as quantifying over sets that are in contrast with the focussed element (Partee 1991), which is, in other words, the set of alternatives.

Therefore, inability of epistemic modal *confirm* to scope over sentence-final *only* can be accounted for by the ECP.

Computing the truth conditions for the sentence in (60) with only taking scope below confirm, the meaning it yields is that, for all worlds w, such that w is compatible with the speaker's knowledge and John does not speak French and Mandarin, with the presupposition that John speaks English. In other words, it means that it is necessary that John does not speak French or Mandarin. This derivation yields the desired meaning of the sentence in (60), showing that sentence-final *only* does take scope below the epistemic modal.

(63) Tree for (60): *confirm > only*



(64) Truth conditions for (60), (63) *confirm > only*

$[[VP]]^{o,g}$ = 1 iff John speaks English

$[[VP]]^{f,g}$ = {1 iff John speaks English, 1 iff John speaks French, 1 iff John speaks Mandarin}

$[[VP\ only]]^{o,g}$ = 1 iff John does not speak French and John does not speak Mandarin

Presupposition: John speaks English

$[[TP]]^{w} = [[T]]^{w}(\lambda w_s . [[VP]]^{o,w,g})$ (Intensional FA)

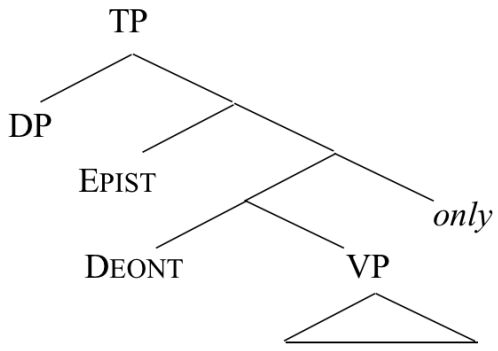
= 1 iff ∀w [w is compatible with speaker's knowledge and

John does not speak French and John does not speak Mandarin]

Presupposition: John speaks English

It has been noted crosslinguistically that epistemic modals are found structurally higher than deontic modals, which are higher than ability modals (Cinque 1999). As clause-medial sentence-final *only* is able to take scope above deontic modals but only below epistemic modals, owing to the ECP, the structural height of clause-medial *only* seems to be somewhere between epistemic modals and deontic modals, as shown in the tree in (65). Erlewine's (to appear) analysis of the scopal relations between Mandarin sentence-final *eryi* ('only') and modals yield a similar result. Sentence-final *eryi* is shown to take scope above ability modal *neng* ('able') and below epistemic modal *keneng* ('may').

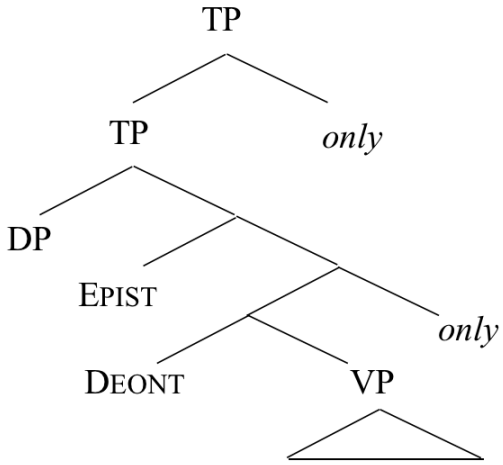
(65) Possible position of clause-medial *only*: EPIST > *only* > DEONT



This section on the interaction between modals and sentence-final *only* has provided evidence for the assertion that there are two heights for sentence-final *only* in

Singapore English. This section has also determined the position for clause-medial only, providing evidence for its position between epistemic and deontic modals in Singapore English. A possible structure is presented in (66), where the first position of *only* is above the TP, and the second position of *only* is above the vP, between the epistemic and deontic modals.

(66) Two positions of *only* in Singapore English



Previous studies on sentence-final *only* in Mandarin and Cantonese are divided on the positions in which *only* is base-generated at. Law (2002) notes that, because Cantonese sentence-final focus particle *zaa3* can associate with the subject of a sentence, its scope is not limited only to the VP, and therefore, should take scope over the entire TP. This analysis is in agreement with Sybesma and Li (2007), who also argue for a structure that places *zaa3* below the Force head but above the TP. Differing from these analyses, Erlewine (to appear) argues for a lower position of Mandarin sentence-final focus particle *eryi*, which is said to be in a clause-medial position.

In this chapter, I have shown that the semantics for exclusive *only*, as outlined by others (Horn 1969; Rooth 1985), can be applied to sentence-final only in Singapore English. I have also shown, through its scopal interactions with subject quantifiers, negation, and modals, that sentence-final *only* occurs at the edge of the clause and in a clause-medial position, between epistemic and deontic modals. These two positions of *only* is also evidenced by the fact that sentences with sentence-final *only* have two different syntactic structures and are semantically ambiguous.

CHAPTER FOUR

THE RELATIVE HEIGHT OF *ALREADY* AND *ONLY*

4.1. Scopal relations between *already* and *only*

In order to determine the relative height of *already* and *only*, sentences where sentence-final *already* and *only* occur together will be used to examine the scopal relations between these two elements. The sentence in (67a) can be taken to mean that there was a certain time in the past, before the reference time, that students used to just attend school for their education; but now, after the reference time, all students take part in other activities to supplement their learning such as tuition and remedial classes. Based on the previous sections, *already* has only one position, which is above the TP. However, since sentence-final *only* has two possible positions, there are, therefore, two ways that sentence-final adverbs can be structured when there are two in a sentence. The first is illustrated in (69), where *already* occurs at the clause edge, and *only* occurs in the middle of the clause. The second structure is shown in (70), where the position in TP iterates when there are two sentence-final adverbs within the same phrase. Note that (67b), in which the order of adverbs *only* and *already* have been reversed, is considered ungrammatical. Further evidence of this rigid ordering can be seen in example (68), where the inclusion of *already* before *only* is considered unacceptable.

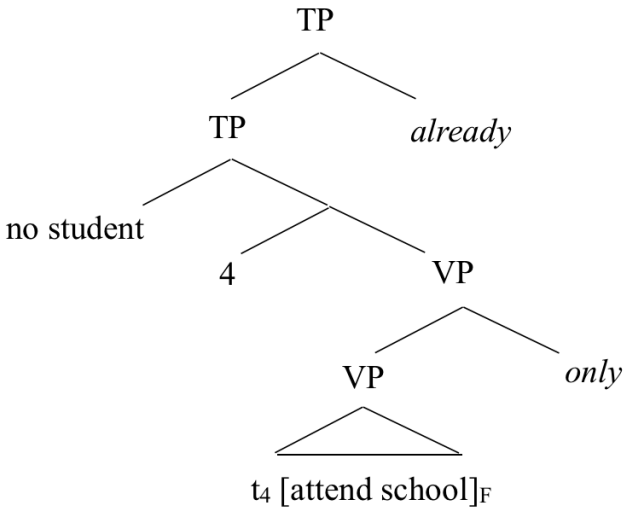
(67) a. No student [attend school]$_F$ *only already*[11]
'Nowadays, no student only attends school.'

b.* No student [attend school]$_F$ *already only*

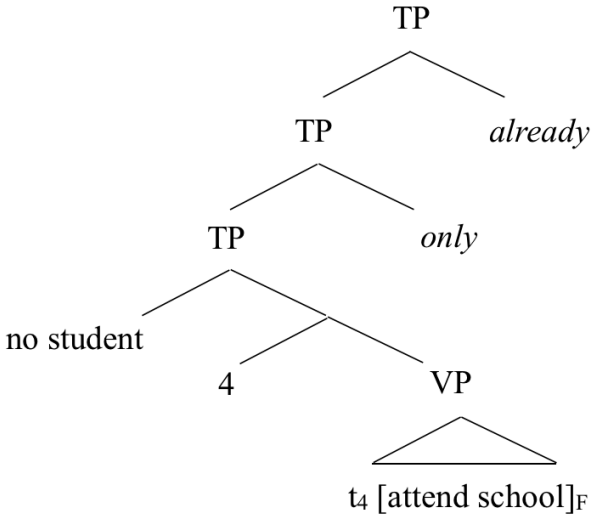
[11] The acceptability of this sentence is not universally agreed upon. Some prefer the form *only liau/liao* instead of *only already.*

(68) John move to Ang Mo Kio (**already*) *only*, not like he move to America sia.
'John only moved to Ang Mo Kio, he didn't move to America.'

(69) *Already* at clause-edge, *only* at clause-medial position



(70) Both *already* and *only* at edge of clause



The truth conditions in (71) show the assertion that all students go for tuition and remedial classes at the reference time, and the presupposition that before the reference time, not all students went for tuition or remedial classes, and that each student also

attends school on top of all these activities. These truth condition accurately capture the desired meaning of this sentence, and therefore, the structure in (69) is an accurate representation of the structure of sentence-final adverbs in Singapore English.

(71) Truth conditions for (69): *already* > no student > *only*:

[[VP]]^{o,g} = 1 iff g(4) attends school

[[VP]]^{f,g} = {1 iff g(4) attends school, 1 iff g(4) goes for tuition, 1 iff g(4) has remedial classes}

[[VP *only*]]^{o,g} = 1 iff g(4) doesn't go for tuition and g(4) doesn't have remedial classes

Presupposition: g(4) attends school

[[TP]] = 1 iff ∀x (x is a student → x goes for tuition or x has remedial classes)

Presupposition: ∀x (x is a student → x attends school).

[[TP *already*]] = 1 iff ∀x (x is a student → x goes for tuition or x has remedial classes) at R.

Presupposition: false that ∀x (x is a student → x goes for tuition or x has remedial classes) before R

Presupposition: ∀x (x is a student → x attends school).

The truth conditions of (70) have also been computed to determine if there is another possible structure for sentence-final adverbs. The results in (72), however, do not accurately capture the desired meaning for the sentence in (67a) as both the presuppositions do not reflect the meaning of the sentence. This structure yields the presupposition that all students did not have remedial classes or go for tuition before

the reference time. However, this is inaccurate as, in example (67a), it is possible that some students had remedial classes and went for tuition before the reference time, but not all students did so. The presupposition here states does not capture this meaning in the original sentence and therefore, points to an inaccurate structure in (70). The second presupposition in (72) is also inaccurate as it states that all students do not attend school, which is not the desired meaning of the original sentence in (67a). Therefore, we can rule out the structure in (70), where the position in TP is iterative and where both *already* and *only* can occupy different positions in TP.

(72) Truth conditions for (70), *already* > *only* > no student:

$[[VP]]^{o,g}$ = 1 iff g(4) attends school

$[[VP]]^{f,g}$ = {1 iff g(4) attends school, 1 iff g(4) goes for tuition, 1 iff g(4) has remedial classes}

$[[TP]]^{o}$ = 1 iff ∀x (x is a student → x doesn't attend school)

$[[TP]]^{f}$ = {1 iff ∀x (x is a student → x doesn't attend school), 1 iff ∀x (x is a student → x doesn't go for tuition), 1 iff ∀x (x is a student → x doesn't have remedial classes)}

$[[TP\ \textit{only}]]^{o}$ = 1 iff false that ∀x (x is a student → x doesn't go for tuition) and false that ∀x (x is a student → x doesn't have remedial classes)

Presupposition: ∀x (x is a student → x doesn't attend school)

[[[TP *only*] *already*]] = 1 iff false that ∀x (x is a student → x doesn't go for tuition) at R and false that ∀x (x is a student → x doesn't have remedial classes) at R

Presupposition: ∀x (x is a student → x doesn't go for tuition) before R or ∀x (x is a student → x doesn't have remedial classes) before R

Presupposition: ∀x (x is a student → x doesn't attend school)

The truth conditions in this section provide evidence for the structure in (69), where, when there are two sentence-final adverbs in a single clause, *already* occupies the higher position above TP and *only* occupies the clause-medial position at as a sister to VP.

This is also the case with subject quantifier *every*, as in example (73). The computations in (74), where *already* takes scope above the subject quantifier and *only* takes scope below it, show the assertion that everyone does not use CDs or casettes. There are also presuppositions that, firstly, before R, it is not true that everyone did not use CDs or casettes, and secondly, everyone uses Spotify. The derivations in (74), therefore, yield the desired meaning of the sentence.

(73) Everybody use $[\text{Spotify}]_F$ *only already*

'Now, everyone only uses Spotify.'

Asserts: no one uses CDs and cassettes now

Presupposes: some people used CDs and cassettes before and everyone uses Spotify.

(74) Truth conditions for (73): *already* > every > *only*

$[[\text{vP}]]^{o,g}$ = 1 iff g(6) uses Spotify

[[vP]]^{f,g} = {1 iff g(6) uses Spotify, 1 iff g(6) uses CDs, 1 iff g(6) uses cassettes

[[vP *only*]]^{o,g} = 1 iff g(6) doesn't use CDs and g(6) doesn't use cassettes

Presupposition: g(6) uses Spotify

[[TP]]^{g} = 1 iff ∀x (x is animate → x doesn't use CDs and x doesn't use cassettes)

Presupposition: ∀x (x is animate → x uses Spotify)

[[TP *already*]] = 1 iff ∀x (x is animate → x doesn't use CDs and x doesn't use cassettes) at R

Presupposition: not true that ∀x (x is animate → x doesn't use CDs and x doesn't use cassettes) before R

Presupposition: ∀x (x is animate → x uses Spotify)

However, when both *already* and *only* take scope above the subject quantifier, the meaning that is derived in the truth conditions in (75) do not accurately capture the desired meaning of the sentence. Here, the truth conditions show the assertion that not everyone uses CDs and cassettes at R, meaning that there could be some people who do use CDs and cassettes, but not everyone. However, the meaning of the sentence should have the assertion that no one uses CDs and cassettes at R. This shows that *only* should not be able to take scope above subject quantifiers, and should remain at a medial position in the clause.

(75) Truth conditions for (73): **already* > *only* > every

[[vP]]^{o,g} = 1 iff g(6) uses Spotify

$[[vP]]^{f,g}$ = {1 iff g(6) uses Spotify, 1 iff g(6) uses CDs, 1 iff g(6) uses cassettes

$[[TP]]^{o,g}$ = 1 iff ∀x (x is animate → x uses Spotify)

$[[TP]]^{f,g}$ = {1 iff ∀x (x is animate → x uses Spotify), 1 iff ∀x (x is animate → x uses CDs), 1 iff ∀x (x is animate → x uses cassettes)}

$[[TP\ \textit{only}]]^{o}$ = 1 iff false that ∀x (x is animate → x uses CDs) and false that ∀x (x is animate → x uses cassettes)

Presupposition: ∀x (x is animate → x uses Spotify)

[[[TP *only*] *already*]] = 1 iff false that ∀x (x is animate → x uses CDs) and false that ∀x (x is animate → x uses cassettes)] at R

Presupposition: [∀x (x is animate → x uses CDs) or ∀x (x is animate → x uses cassettes)] before R

Presupposition: ∀x (x is animate → x uses Spotify)

This chapter has shown that, when *already* and *only* occur together in the same sentence, the only configuration that yields the desired meaning involves *already* taking scope above the subject quantifier and *only* taking scope below it. In other words, despite *only* usually having the option of scoping either higher or lower, when the higher position is occupied by another element, *already*, the position of *only* becomes restricted. This points to the fact that firstly, the higher position for sentence-final adverbs above TP does not. Secondly, when above TP, *only* and *already* are in

complementary distribution, which serves as evidence that they occupy the exact same position above TP.

4.2. Discussion on sentence-final adverbs

In section 1.3, three analyses that provided possible accounts for the status of sentence-final adverbs in Singapore English were suggested: sentence-final adverbs as adjuncts, sentence-final adverbs as specifiers, and sentence-final adverbs as heads above TP. This discussion attempts to consider these three possible analyses against the evidence presented in this work.

The analysis of sentence-final adverbs as adjuncts that are adjoined on the right predicts that these adverbs are able to iterate and have a flexible order when stacked. However, the fact that the sentence-final adverbs in this section are in complementary distribution and do not seem to iterate may serve as evidence that these adverbs are not adjuncts, which are generally accepted as iterative (Carnie 2013). In addition, the rigid ordering of sentence-final adverbs *already* and *only* in Singapore English, where *already* occurs after *only*, also serves as further evidence that sentence-final adverbs are not right-adjoined.

Therefore, this leaves sentence-final adverbs in Singapore English with two possibilities. The first of which is that these adverbs are merged as specifiers, as Larson (1988) and Cinque (1999) have analysed. However, a problem with this analysis is that these sentence-final adverbs in Singapore English are found to the right of the phrase, whereas specifiers are usually found on the left. Both Larson and Cinque posit a movement of the VP that strands the adverb in the case of post-verbal adverbs. However, the reason for the move across the adverb is not apparent, which makes it difficult to extend this analysis to sentence-final adverbs in Singapore

English. Nonetheless, this analysis proves useful as analysing sentence-final adverbs as specifiers predicts a rigid order of adverbs (Cinque 1999), which is congruous with the evidence presented in this paper for *already* and *only*.

The last option analyses sentence-final adverbs as head-final heads. As heads, a rigid hierarchy is predicted, as seen in other studies on the CP domain in Sinitic languages. This analysis is counterintuitive as it classifies sentence-final *only* and *already* as heads instead of adverbs, which continues to be controversial. However, this analysis may not be entirely surprising as others such as Gupta (1992) and Bao (1995) have hinted at the possible status of *already* as akin to sentence-final particles, which are generally accepted as functional heads. In particular, Bao (1995:182) points out that there may be regular words in Standard English that, in Singapore English, perform functions similar to particles found in other languages of Singapore.

There are both positives and negatives to analysing *already* and *only* as specifiers or as heads, and this work does not attempt to argue for the correctness of one over the other. However, I have shown with evidence that sentence-final adverbs in Singapore English are clearly not right-adjoined.

CHAPTER FIVE

CONCLUSION

5.1. Summary

In this paper, I have formalised the semantics of sentence-final *already* and *only*, and have shown that these proposed definitions apply to a range of examples and accurately derive their meanings. Following Soh and Gao's (2006) work on sentence final *le* in Mandarin Chinese, I have also proposed a unified account of sentence-final *already* in Singapore English. Chapters 2 and 3 provided novel evidence for the structural heights of sentence-final *already* and *only*. Evidence shows that *already* is above the TP and takes scope over the entire sentence, while *only* has two possible positions, one above the TP and one in a clause-medial position between epistemic and deontic modals. In chapter 4, I examined the scopal interactions between *already* and *only*. I showed that, when these two sentence-final adverbs occur in a single clause, *already* always scopes above *only*, in its position above the TP, while *only* takes scope below, in its clause-medial position. I argued that, in view of the fact that *already* and *only* are in complementary distribution above the TP, these sentence-final adverbs must not be right-adjoined adjuncts.

5.2. Future research

Previous studies on the sentence-final particles of Singapore English have been influential in the study of contact languages. However, there remain a number of interesting aspects of sentence-final particles that have not been discussed as extensively. Gupta (2006) notes that studies into Singapore English sentence-final particles have largely examined them as individual elements instead of as a larger

system. Notable exceptions include her earlier work (Gupta 1992), which classifies Singapore English particles into three main groups according to degree of assertiveness, and her more recent study (Gupta 2006) that situates discourse particles within a "framework of epistemic modality". This highlights the need for further research into the system of sentence-final particles as a whole.

If the analysis that sentence-final adverbs as head-final heads is accurate, it might then be possible to extend analyses of the CP domain in Sinitic languages to elements that occur sentence-finally in Singapore English. Law (2002) and Paul (2015) observes that certain sentence-final particles can occur in both embedded and root contexts while others can occur only in root contexts, which provides a clue that there are other positions in the CP domain where root sentence-final particles are base-generated. In addition to this, there seems to be a rigid order in which sentence-final particles can be stacked, as seen in example (76).

(76) a. We got to go *already lah huh*?
'We have to go, right?'

b.* We got to go *already huh lah*
'We have to go, right?'

Especially given the Sinitic substrate influence in Singapore English, it is possible that sentence-final particles in Singapore English can be modelled after SFPs in Sinitic languages.

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