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The Pertinent Issues of Mandarin Imperative Subjects

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Abstract. This paper advances that in Mandarin Chinese (MC), the imperative (IMP) mood adverb *qiānwàn* 'by all/no means' would trigger subject obligatory topicalization (SJOT) due to its focus prosody (Xu 1999; Flemming 2008) that induces the intervention effect, crapping the binding relationship between D (efiniteness)-operator and MC IMP subjects à la Tsai (2015). Furthermore, the 2nd person features of MC IMPs should be attributed to addressees/vocatives in [Spec, DirectiveP] in the speech act layer entertained by Speas & Tenny (2003), Hill (2007), and Haegeman & Hill (2013), as an instantiation of allocutive agreement (Miyagawa 2012). The analysis further undergirds the unacceptability of MC IMPs with 2nd person features in embedded clauses, since addressees would suffer truncation in subordinate clauses.

Keywords: focus prosody, IMP mood adverb *qiānwàn*, subject obligatoy topicalization, IMP subjects, 2nd person features, speech act, allocutive agreement

1. Introduction

Mandarin Chinese (MC) imperative (IMP) subjects house multifarious intriguing issues. Firstly, MC IMP subjects would be obligatorily topicalized with the existence of IMP mood adverb *qiānwàn* 'by all/no means,' originally regarded as a piece of evidence in support of the position of MC IMP subjects in [Spec, ModalP$_{deonitc}$] (Hsiao 2012) (discussed later in section 3.1), as in (1)-(2), where the subscript numbers 1 and 2 refer to the positions of IMP subjects.

(1) **每個人**$_1$千萬***每個人**$_2$要拿起你的書!

Měigerén$_1$	qiānwàn	***měigerén**$_2$	yào	náqǐ	nǐde	shu
everyone	by all means	everyone	do	take	your	book

'Do everyone by all means take your book!'

(2) **你** $_1$ 千萬***你** $_2$ 要跪下!

Nǐ$_1$	qiānwàn	***nǐ$_2$**	yào	guèi	xià
you	by all means	you	do	kneel	down

'Do you by all means kneel down!'

To address the issue of such a esoteric nature, I advoacte that the adverb *qiānwàn* is endowed with focus prosody (Xu 1999; Flemming 2008) that conduces the intervention effect which further contributes to the compulsory fronting of IMP subjects to [Spec,TopP].

Secondly, in MC, besides 1st person plural, 2nd person plural and singular pronouns, or null subjects, Yang (2010) proposes that IMP subjects in MC could also be quantifiers, bare noun phrases, or proper names (only felicitous in coordinate structures), binding the 2nd person anaphoric elements in (3)-(4).

(3) **每個人**$_i$都要拿起<u>你的</u>$_i$書!

Měigerén$_i$	dou	yào	náqǐ	<u>nǐde</u>$_i$	shu
Everyone	all	do	take	your	book

'Everyone$_i$ take your$_i$ book!'

(4) **男生們**$_i$**/彼得**$_i$ 舉起<u>你的</u>$_i$手; **女生們**$_j$**/瑪莉**$_j$ 舉起<u>你的</u>$_j$筆!

Nánsheng-men$_i$/**Bǐdé**$_i$	jǔqǐ	<u>nǐde</u>$_i$	shǒu	**nǚsheng-men**$_j$/**Mǎlì**$_j$	jǔqǐ	<u>nǐde</u>$_j$	bǐ
Boy-PL/ Peter	raise	your	hand	girl-PL /Mary	raise	your	pencil

'Boys$_i$/Peter$_i$ raise your$_i$ hand; girls$_j$/Mary$_j$ raise your$_j$ pencil!'

To explicate the phenomenon, I argue that addressees/vocatives in [Spec, DirectiveP] in the spirit of Speas & Tenny (2003), Hill (2007), and Haegeman & Hill (2013) would account for the 2nd person features, as an exemplifciation of allocutive agreement (Miyagawa 2012).

Thus, the motivations and research questions are in what follows. Firstly, why is the adverb *qiānwàn* categorized as an IMP mood adverb and how does the nature of focus prosody of *qiānwàn* trigger the obligatory topicalization of MC IMP subjects? Secondly, why are addressees related to the 2nd person features of MC IMP subjects?

The paper unfolds as follows. Section 2 is the literature review. In section 3, the study will explore the obligatory topicalization of IMP subjects in MC. In section 4, I will illustrate why other alternative analyses fail to explain the 2nd person feature of MC IMP subjects. In section 5, I will propose a feasible mechanism for the 2nd person features of MC IMP subjects. Section 6 is the conclusion.

2. Literature Review

In this chapter, the scholarships relevant to the IMP subjects are reviewed. Section 2.1 explores the positons of IMP subjects in the former references. Section 2.2 probes into the characteristics and related analyses of IMP subjects. Section 2.3 is the summary.

2.1. The Position of IMP Subjects in MC

Based on the observation of Jackendoff (1972), Potsdam (1995, 1998, 2007) categorizes an adverb class as E(xtent)-adverbs, describing the extent that a situation is in. Their positions are stated in (5). The representative adverbs include *simply*, *merely*, *hardly*, *scarcely*, and *just*.

(5) *The distribution of E-adverbs* (Potsdam 2007: 266)
- a. left adjunction to I'
- b. left adjunction to AuxP or Aux'
- c. left adjunction to VP or V'

Furthermore, the fact that E-adverb *simply* can NOT precede IMP subjects substantiates that IMP sujbects in English should be in [Spec, IP], as contrasted in (6).

(6) a. *Simply everyone don't move!
a' *[$_{IP}$ simply [$_{IP}$ everyone [$_{I'}$[$_{I}$ don't …[$_{VP}$[$_{V}$ move]]]]]]
b. Everyone simply don't move!
b' [$_{IP}$ everyone [$_{I'}$ simply [$_{I'}$[$_{I}$ don't …[$_{VP}$[$_{V}$ move]]]]]]

In the same vein, Hsiao (2012) assumes that MC adverb *qiānwàn* 'by all/no means' would be referred to as an E-adverb with IMP subjects preceding it. That is, MC IMP subjects should be in [Spec, ModalP$_{deonitc}$]. However, *qiānwàn* would be regarded as an IMP mood adverb in CP-level (discussed later in section 3.1). The obligatory precedence of IMP subjects over *qiānwàn* might be attributed to topicalization, as in (7) and (8).

(7) **每個人$_1$**千萬***每個人$_2$**要舉起手!
Měigerén$_1$ qiānwàn ***měigerén$_2$** yào jǔqǐ shǒu
everyone by all means everyone do raise hand
'Do everyone by all means raise your hand!'

(8) **你$_1$**千萬***你$_2$**要坐下!
Nǐ$_1$ qiānwàn ***nǐ$_2$** yào zuò xià
you by all means you do sit down
'Do you by all means sit down!'

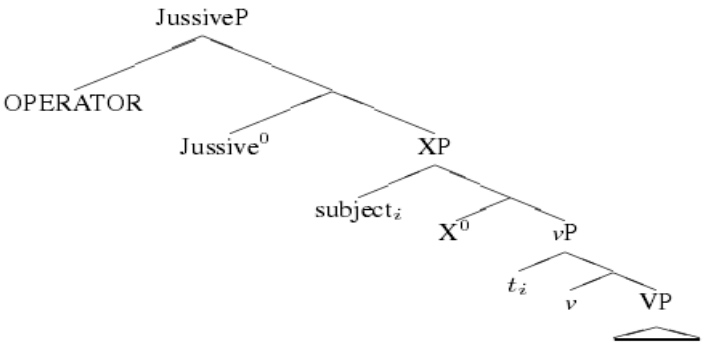
Thus, the subject obligatory topoicalization (SJOT) with the existence of *qiānwàn* merits our severe investigation.

2.2. Characteristics of IMP Subjects and Associated Analyses

Zanuttini (2008) and Zanuttini, et al. (2012) contend that except for 1st person plural inclusive subject *let's*, IMP subjects would bind 2nd person anaphoric elements, as in (9).

(9) a. ***pro***$_i$ Close <u>your</u>$_i$ book!
b. **You**$_i$ go back to <u>your</u>$_i$ home, right now!
c. **Nobody**$_i$ close <u>your</u>$_i$ book until we are off!
d. **Girls**$_i$ raise <u>your</u>$_i$ hand; **boys**$_j$ be on <u>your</u>$_j$ seat!
e. **Tom**$_i$ play with <u>your</u>$_i$ balls; **Mary**$_j$ be on <u>your</u>$_j$ chair!

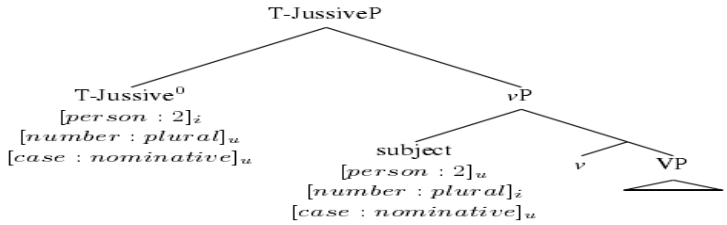
To explicate the interesting phenomenon, Zanuttini (2008) points out that there should be a Jussive Phrase (JussiveP) in CP-level conveying the directive force above the IMP subjects. Additionally, the JussiveP would be endowed with a 2nd person operator (OP) externally merged in [Spec, JussiveP], contributing to the 2nd person features of IMPs, as in Figure 1.



Zanuttini (2008:197)

Figure 1: The Arboreal Structure of JussiveP and 2nd Person Feature Operator

Zanuttini et al., (2012) incorporate TP into JussiveP as T-JussiveP with T^0 of movement to Jussive^0 in CP-level. Moreover, T-Jussive^0 acts as a probe to search for the IMP subjects (goal) externally merged in [Spec, *v*P]. Via feature valuation, the 2nd person feature is assigned to [D^0, DP] of IMP subjects, as in Figure 2.



Zanuttini et al (2012:1243)

Figure 2: The Configuration of T-JussiveP

Likewise, Yang (2010) advocates that MC IMP subjects can bind 2nd person anaphoric elements, as in (10)-(11).

(10) **每個人$_i$**都要舉起<u>你的$_i$</u>手
Měigerén$_i$ dou yào jǔqǐ <u>nǐde$_i$</u> shǒu
Everyone all do raise your hand
'Do everyone$_i$ raise your$_i$ hand!'

(11) **男生們/彼得** $_i$ 拿起<u>你的 $_i$</u> 書; **女生們/瑪莉** $_j$ 舉起<u>妳的 $_j$</u> 筆
Nánshengmen$_i$/**Bǐdé**$_i$ náqǐ <u>nǐde$_i$</u> shu **nǚshengmen**$_j$/**Mǎlì**$_j$ jǔqǐ <u>nǐde$_j$</u> bǐ
Boy-PL / Peter take your book girl-PL /Mary raise your pencil
'Boys$_i$/Peter$_i$ take your$_i$ book; girls$_j$/Mary$_j$ raise your$_j$ pencil!'

Yang (2010) suggests that there be a covert *nǐ* or *nǐmen* 'you' in [D^0, DP] accounting for the 2nd person features of IMP subjects in MC à la Longobardi (1994, 2000), as in (12).

(12) [DP [D covert *nǐ* / *nǐmen* (you) [NP…]]]

Yet, it seems that Yang (2010) can't fully explain why MC IMP subjects would bear null *nǐ* / *nǐmen* (you) in [D^0, DP]. In this way, T-JussiveP can also account for the 2nd person features of MC IMPs.

2.3. Summary

From the literature review, a good many characteristics and concerning hypotheses relevant to MC IMP subjects are proffered. However, some of analyses can't well accommodate the idiosyncratic nature of MC IMP subjects. Hence, we need more elegant analyses to well inspect the nature of MC IMP subjects.

3. Obligatory Topicalization of MC Imperative Subjects

In this section, I will firstly propose that the MC adverb *qiānwàn* 'by all/mo means' is an IMP mood adverb in the spirit of Li (2006) in CP-level rather than an E-adverb in light of Potsdam (1995, 1998, 2007) in IP-level. Secondly, I would show diagnoses testifying to the association of the adverb *qiānwàn* with topicalization (Ko 2005) and focus prosody (Xu 1999; Flemming 2008). Finally, I will demonstrate how the focus prosody of *qiānwàn* will lead to the compulsory subject fronting to [Spec, TopP] in MC IMPs in terms of the D(efiniteness)-operator, entertained by Tsai (2015).

3.1. Qiānwàn as an Imperative Mood Adverb

Hsiao (2012) indicates that *qiānwàn* is an E-adverb contingent on Potsdam's (1995,1998, 2007) claim of the E-adverb distribution, further confirming that MC IMP subjects are externally merged in [Spec, $ModP_{deontic}$], as in (13) repeated from (8). The distribution of E-adverbs is schematized in Figure 3.

(13) **你$_1$**<u>千萬</u>***你$_2$**要坐下!

Nǐ$_1$	<u>qiānwàn</u>	***nǐ$_2$**	yào	zuò	xià
you	by all means	you	do	sit	down

'Do you by all means sit down!'

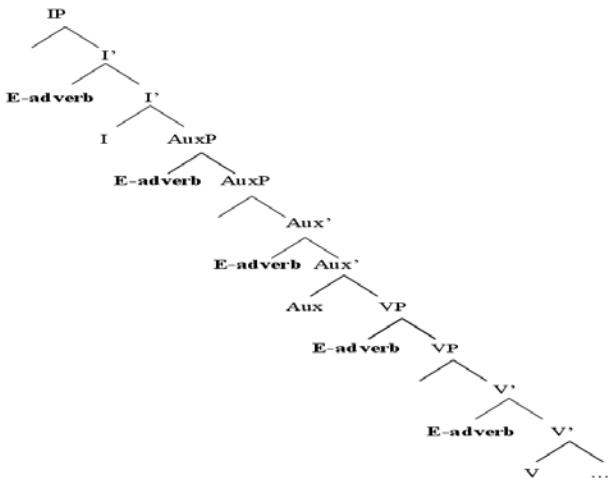


Figure 3: Syntactic Distribution of E-adverbs

Nonetheless, I contend that *qiānwàn* is NOT an E-adverb but an IMP Mood Adverb in CP-level instead. The proposal is undergirded by the adverb hierarchy (Cinque 1999) and the association of Force and Mood entertained by Li (2006). Firstly, Cinque (1999) lists four

kinds of Speaker-oriented Adverbs (SpOAs), Speech act (SA), Evaluative (EA), Evidential (Evi), and Epistemic (Epi), ranked as in (14).

(14) *The Ranking of SpOAs*
Speech act> Evaluative> Evidential > Epistemic

To test the acceptability of sentences, I take the adverbs *lǎoshíshuō* 'honestly speaking' and *yídìng* 'definitely' on behalf of the MC SA and Evi adverbs, respectively. It is very conspicuous that the MC adverb *qiānwàn* is sandwiched between SA and Evi adverbs. The reverse orderings are unacceptable, as in (15).

(15) a. **老實說**，你們千萬**一定**要小心!
Lǎoshíshuō nǐmen qiānwàn **yídìng** yào xiǎoxīn
Honestly speaking you-PL by all means definitely do carefully
'Honestly speaking, do you definitely by all means be careful!

b. ***老實說**，你們**一定**千萬要小心!
***Lǎoshíshuō** nǐmen **yídìng** qiānwàn yào xiǎoxīn
Honestly speaking you-PL definitely by all means do carefully
'Honestly speaking, do you definitely by all means be careful!

c. *千萬**老實說**，你們**一定**要小心!
*Qiānwàn **lǎoshíshuō** Nǐmen **yídìng** yào xiǎoxīn
By all/no means honestly speaking you-PL definitely do carefully
'Honestly speaking, do you definitely by all means be careful!

Judging from the empirical data in (15), we can infer that *qiānwàn* is in CP-level in the spirt of Cinque (1999). If *qiānwàn* is an E-adverb, its topmost position can only be in IP-level rather than in CP-level where SpOAs dwell in (Cinque 1999; Ernst 2009).

Furthermore, at first sight, we might argue that *qiānwàn* is an EA in terms of SpOAs ranking. However, I insist that *qiānwàn* is an atypical SpOA. A canonical IMP is considered to be of no truth value in the sense of Han (1998), as clearly stated in (16). Perspicuously, *qiānwàn* can only be inserted in IMPs, but typical SpOAs can be attached to sentences of truth values compared to *qiānwàn* in (17) (cf. Ernst 2009).

(16) *Truth Condition of IMPs* (Han 1998:169)
Since imperatives denote directive actions, and since a directive action is an instruction to the hearer to update his/her plan set, it does not make sense to predicate truth or falsity of an imperative.

(17) a. 你千萬要來! (IMP with *qiānwàn*)
Nǐ qiānwàn yào lái
you by all means do come
'Do you by all means come!'

b. *你千萬要來了! (Declarative with *qiānwàn*)
*Nǐ qiānwàn yào lái **le**
you by all means do come **PFV**
'Do you by all means come!'

c. 你竟然來了! (Declarative with EA)
Nǐ jìngrán lái **le**
you unexpectedly come **PFV**
'Unexpectedly, you came here!'

d. 你顯然來了! (Declarative with Evi)
Nǐ xiǎnrán lái **le**
you obviously come **PFV**
'Obviously, you came here!'

To this end, I categorize *qiānwàn* as an IMP Mood Adverb externally merged in [Spec, $Mood_{IMP}$] inserted between ForceP and FinP in the sense of Rizzi (1997) and Li (2006) in CP-level. To be more specific, Li (2006) specifies that a full-fledged IMP clause type must be endowed with an IMP mood, since other interrogative clause types might also carry IMP (directive) force, as in (18).

(18) 可以幫我開門嗎?
Kěyǐ bang wǒ kāi mén ma
Can help me open door Q
Can you help me open the door?'

In (18), one can imagine a scenario in which the speaker politely asks the addressees to open the door by using questions with IMP force. Thus, Li (2006) advocates that it is the sentence mood rather than force determining the clause types, as exhibited in (19).

(19)

Force	>	*Mood*	*Clause Types*
Directive/IMP		Y/N	Interrogatives
Directive/IMP		WH	Interrogatives
Directive/IMP		A-not-A	Interrogatives
Directice/IMP		IMP	Imperatives

Since, in (17), it is limpid that *qiānwàn* can only be inserted in IMPs, it is quite reasonable to regard *qiānwàn* as an IMP Mood Adverb externally merged in [Spec, $Mood_{IMP}$] in CP-level in the sense of Li (2006).

3.2. Relevant Tests of Qiānwàn

In this section, I would firstly verify that MC IMP subjects would undergo obligatory topicalization from [Sepc, $ModP_{Deontic}$] to [Spec, TopP] with the existence of *qiānwàn*. The piece of evidence comes from the monotone increasing/decreasing expressions test in the spirit of Ko (2005). Secondly, I would indicate that *qiānwàn* bears the focus prosodic features through acousitcs tests in light of Xu (1999) and Flemming (2008). Therefore, the analyses will help substantiate the case of subject topicalization in MC IMPs.

3.2.1. Topicalization Test

Ko (2005) argues that monotone increasing N/DPs such as *měigerén* ‘everyone’ or *suǒyǒurén* ‘all people’ can further undergo topicalization across CP. On the contrary, monotone decreasing N/DPs like *méiyǒurén* ‘nobody’ or *zhǐyǒu* N/DPs ‘only N/DP’ can’t be topicalized over CP, as contrasted in (20).

(20) a. **每個人/所有人$_i$**，彼得認為[$_{CP}$ t$_i$ 都會參加派對]。 (Monotone increasing N/DPs)
Měigerén$_i$/suǒyǒurén$_i$ Bǐdé rènwéi [$_{CP}$ t$_i$ dōu huì cānjiā pàiduì]
everyone$_i$/all people$_i$ Peter think t$_i$ all will participate party
‘Peter thinks that everyone/all of the people participate in the party.’

b. ***沒有人/只有他$_i$**，彼得認為[$_{CP}$ t$_i$ 會參加派對]。 (Monotone decreasing N/DPs)
***Méiyǒurén$_i$/Zhǐyǒuta$_i$** Bǐdé rènwéi [$_{CP}$ t$_i$ huì cānjiā pàiduì]
everyone$_i$/only he$_i$ Peter think t$_i$ will participate party
‘Peter thinks that nobody/only he will participate in the party.’

Here, I adopt the monotone N/DPs test in the spirit of Ko (2005) to demonstrate that MC IMP subjects would undergo topicalization when *qiānwàn* appears. To illustrate, both monotone increasing and decreasing N/DPs can both serve as IMP subjcts in MC by default, as in (21).

(21) a. **每個人/所有人**得留在這裡! (Monotone increasing N/DPs)
Měigerén/suǒyǒurén děi liú zài zhèlǐ
everyone/all people do stay in here
‘Do everyone/all of the people stay here!’

b. **沒有人/只有男人們**得留在這裡! (Monotone decreasing N/DPs)
Méiyǒurén / zhǐyǒu nánrén-men děi liú zài zhèlǐ
nobody/only man-PL do stay in here
'Do nobody/ only men stay here!'

By contrast, when *qiānwàn* is inserted into IMPs, only monotone increasing N/DPs would be topicalized and rendered grammatical in the sentences. Monotone decreasing N/DPs are nonetheless unaccepted in these sentences and can't be topicalized, as contrasted in (22). The phenomenon entails that *qiānwàn* is indeed a trigger of topicalization.

(22) a. **每個人/所有人**千萬得留在這裡! (Monotone increasing N/DPs)
Měigerén/suǒyǒurén qiānwàn děi liú zài zhèlǐ
everyone/all people by all/no means do stay in here
'Do everyone/all of the people by all means stay here!'
b. ***沒有人/只有男人們**千萬得留在這裡! (Monotone decreasing N/DPs)
*Méiyǒurén / zhǐyǒu nánrénmen qiānwàn děi liú zài zhèlǐ
everyone/only man-PL by all/no means do stay in here
'Do nobody/ only men by all means stay here!'

3.2.2. Acoustics Experiments on the Focus Prosody of Qiānwàn

3.2.2.1. The Prosodic Features of Focus

Xu (1999) and Flemming (2008) advocate that constituents of focus prosody would bear greater pitch (Hz) differences between High tone (H) and Low tone (L) than the surrounding words. By contrast, f0 value of the H and L tone in the post-focus words (i.e., words immediately follow focus) will be largely attenuated and lowered compared to its neutral counterparts (i.e., words without focus preceding). The acoustic characteristics of focus in pitch are stated as in (23). The pitch variations of H and L tones with, without, and after focus are represented in Figure 4 where the thin line equals HHHHH tones and the thick line indicates HLHLH tones (Xu 1999).

(23) *The Prosodic Marking of Focus in Pitch/Fundamental Frequency/f0* (Flemming 2008)
a. Focused Words: expanded pitch range between H and L tones
b. Post-focus Words: lowered and compressed pitch (Post-focus Compression/PFC)
c. Pre- focus: neutral pitch range

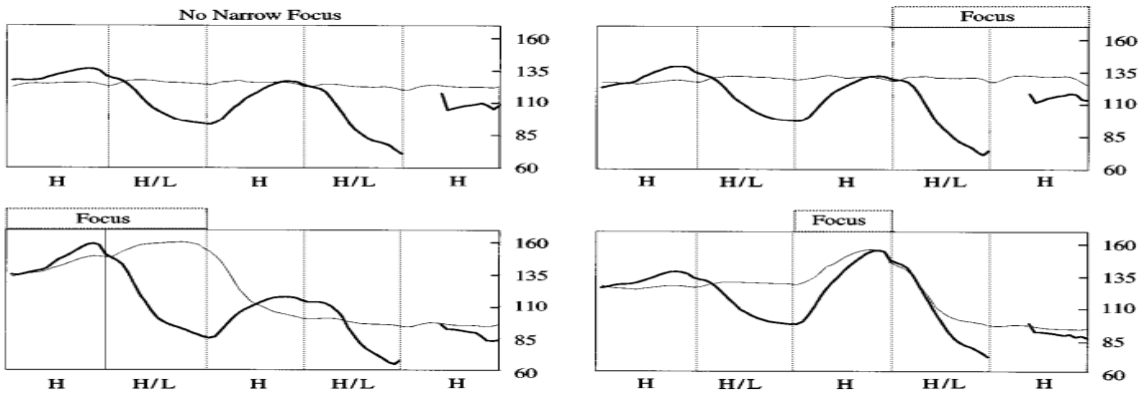


Figure 4: The Pitch Variations of H and L Tones with, without, and after focus (Xu 1999).

Besides, to properly interpret the outcome of the experiment, I adopt Duanmu's (2004) categorization of MC four tones in terms of H and L level tones, as in (24).

(24) *Mandarin Tones* (Duanmu 2004)

High tone	H	
Low tone	L	
Rising tone	LH	(non-reversible)
Falling tone	HL	(non-reversible)

3.2.2.2. Research Methods

The research methods are divided into three parts; the stimuli, participants, and facilities. Firstly, concerning the stimuli, since the space is limited and the research is primarly assocaited with the pilot study, the sentences I will discuss later are in (25). The pairs of sentences to be recorded are 5, each of which is coupled with sentences of neutral and focus reading (i.e., sentences with *qiānwàn*). Each of the speakers recites 10 sentences (5 pairs) X 2 times = 20 sentences.

(25) a. 每個人都要趕快回家! (Neutral)
Měigerén dōu yào gǎnkuài huíjiā
everyone all do quickly go home
'Do everyone go home quickly!'

b. 每個人**千萬** $_{F}$ 都要 $_{PF}$ 趕快回家! (Focus/F and Post-focus/PF)
Měigerén **qiānwàn** $_{F}$ dōu yào $_{PF}$ gǎnkuài huíjiā
everyone by all/no menas all do quickly go home
'Do everyone go home quickly, by all means!'

Secondly, the study would put more emphasis on the post-focus phenomenon. Accordingly, given the fact that Taiwanese Chinese would not realize post focus compression (PFC) in the spirit of Chen, Wang & Xu (2009) and Tsai & Li (2016), the speakers are three Beijing native Chinese speakers around 20-25 years old. Moreover, before the experiment, I would discuss the objectives of the experiments with the participants, and familiarize them with the data, context and force of the utterances. During the experiment, if the speakers do not recite well or miss any information on the sentences, they would repeat the sentences.

As to the recording facilities, the experiment is conducted in the phonetics laboratory of the Linguistics Graduate Institute in National Tsing Hua University, Taiwan. The background noise is between 30-40 dB. Moreover, the stimuli are recorded with an Edirol solid state recorder R09-HR and a Shure unidirectional head-worn dynamic microphone BETA54. Finally, the sentences are directly recorded into an SD card with a sampling rate of 44,100Hz.

3.2.2.3. Analyses and Outcomes

After recording the data, the sound files are labelled manually on the Praat Software. To get the accurate pitch of each constituent with focus vs. neutral prosody, the vowel of each syllable serves as the boundary for labelling. By using the ProsodyPro Script (Xu 2013), the accurate pitch value of each tone is derived. Yet, in accordance with the previous references of Shih & Lu (2015) and Xu.,et al (2003), consonants would influence the pitch accuracy of tones. Therefore, to obtain the precise pitch value, the first and last time intervals out of ten intervals of each vowel are expunged.

Expectedly, *qiānwàn* is endowed with the focus prosodic features. One pair of the examples is repeated in (26) from (25) where the 2-syllable post-focus words *dōu* ‘all’ and *yào* ‘do’ consist of H and HL tones. The relevant pitch vaules are in Figure 5 where the numbers 1-3 in the charts represent the three indivdual speaker and the capital letter A and B in Praat labelling diagram refer to the neutral vs. post-focus word *dōu yào* in (26). The blue lines on the Praat sound spectrum shows the pitch curve. That the pitch diffrences between the H and L tones attenuated in the post-focus words compared to the neutral counterparts not only exhibits the PFC effect but also affirms that the MC adverb *qiānwàn* is carried with the focus prosody.

(26) a. 每個人都要趕快回家! (Neutral)
Měigerén dōu yào gǎnkuài huíjiā
everyone all do quickly go home
‘Do everyone go home quickly!’

b. 每個人**千萬** $_{F}$ 都要 $_{PF}$ 趕快回家! (Focus/F and Post-focus/PF)

Měigerén	**qiānwàn** $_{F}$	dōu	yào $_{PF}$	gǎnkuài	huíjiā
everyone	by all/no menas	all	do	quickly	go home

'Do everyone by all means go home quickly!'

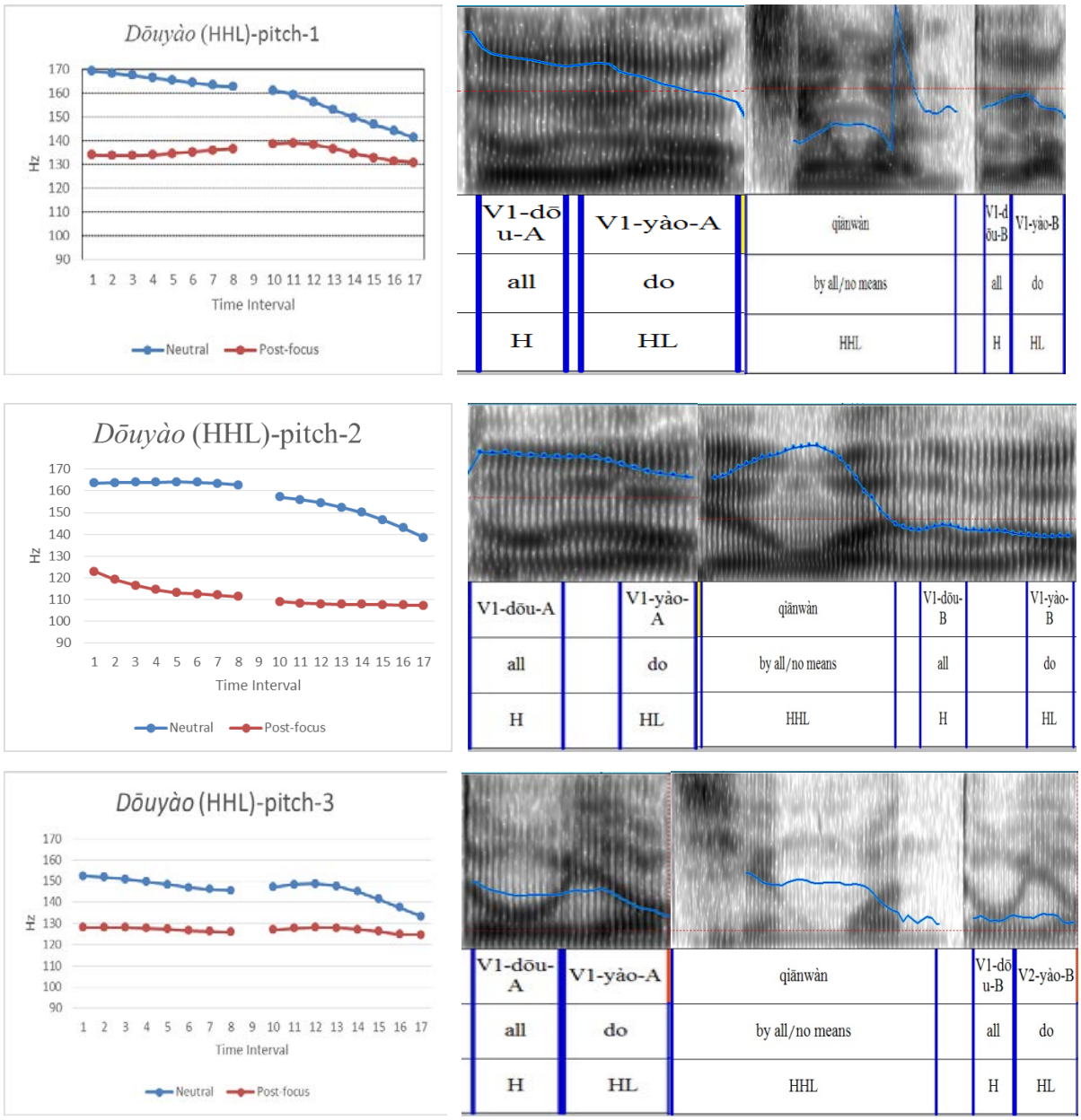


Figure 5: Neutral vs. Post-focus Pitch

3.2.3. The Appartus for IMP Subject Obligatory Topicalization

On the basis of the previous tests, it can be observed that the MC IMP mood adverb *qiānwàn* would induce the topicalization via the test with monotone increasing/decreasing expressions. Meanwhile, *qiānwàn* is endowed with the focus prosody, thereby leading to the PFC effect on the post-focus words via the acoustics test. In what follows, I would shed light

on what kind of syntactic appartus accomodates both the compulsory topicalization and focus prosodic features related to *qiānwàn*.

To begin with, it is widely recognized that MC is a topic-prominent language[1] (cf. Tsao 1979). Following Huang (1984), Tsai (2015) further points out that null topics can be realized as a D(efiniteness)-operator externally merged in [Top^0, TopP] to check the peripheral topic feature on Top^0. D-operator is also regarded as a quantifier part of definite expressions[2], as in (27). The MC IMP subjects are bound by the D-operator, as in Figure 6.

(27) [D$_{(x)}$-Top] **貓$_{(x)}$**在叫
[D$_{(x)}$-Top] **Māo$_{(x)}$** zài jiào
cat be meow
'The cat is meowing.'

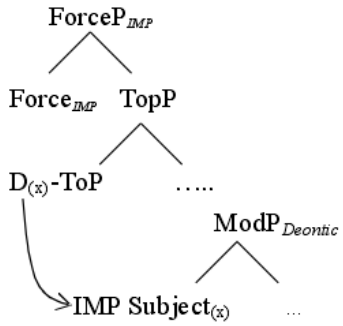


Figure 6: D-operator Binding with MC IMP Subjects

Now, let's turn back to the examples with SJOT in MC IMPs, as in (28).

[1] The view that MC is a topic-prominent language can be verified through the sharp contrast with English in different syntactic constructions, as in (i) where MC covert topics can refer to empty subject *e* in simple declaratives and overt topics can prevent island construction in MC relatives. By contrast, as in the gloss of (i), the necessity of subjects in the two kinds of syntactic structures proves that MC is a topic-prominent language par excellence. Thanks for the suggestion from the anonymous reviewer.

(i) a. (彼得啊 *i*)，*ei* 來了!
(Bǐdé*i* a) *ei* lái le
Peter top *e* come pfv
'Peter has come!'
b. *(瑪莉啊 *i*)，e*i* 寫的文章很棒!
*(Mǎlì a) [$_{DP}$[$_{CP}$ *ei* xiě] de wénzhāng] hěn bang
(Mary top) *e* write of article very good
'Mary*i*, the articles she*i* writes are very good.'

[2] The proposal by Tsai (2015) would differ from that by Huang (1984) in that the D-operator entertained by Tsai (2015) can denote the definiteness of overt subjects and *pro*-drop in simple declaratives. The null topics by Huang (1984) are mainly manipulated to identify the referents of empty subjects. For the argumentation here, I adopt Tsai (2015)'s proposal to clearly elucidate the case of obligatory topicalization in MC IMPs.

(28) a. **每個人$_1$**千萬***每個人$_2$**要坐下!

Měigerén$_1$ qiānwàn ***měigerén$_2$** yào zuò xià
everyone by all menas everyone do sit down
'Do everyone by all means sit down!'

b. **你$_1$**千萬***你$_2$**不要過來!

Nǐ$_1$ qiānwàn ***nǐ$_2$** búyào guòlái
you by no means you don't come here
'Do you by no means come here!'

As in (28), *qiānwàn* has been attested to conduce the focus reading in MC IMPs by means of focus prosody, substantiated by the acoustics test. Moreover, D-operator represents the quantifier part of definite expressions. In the sense of the revised version of Relativized Minimality (RM) à la Rizzi (2004) excluding A, A' and Head dependencies entertained by Rizzi (1990), both *qiānwàn* and D-operator would be counted as Quantificational, as in (29).

(29) a. Argumental: person, number, gender, case
b. Quantificational: Wh, Neg, measure, **focus**..
c. Modifier: evaluative, epistemic, Neg, frequentative, measure, manner, ...
d. Topic

Under the circumstance, the focus prosodic nature of *qiānwàn* triggers the intervention effect due to the clash of two same features, hampering the binding relationship between D-operator and IMP subjects, as in Figure 7.

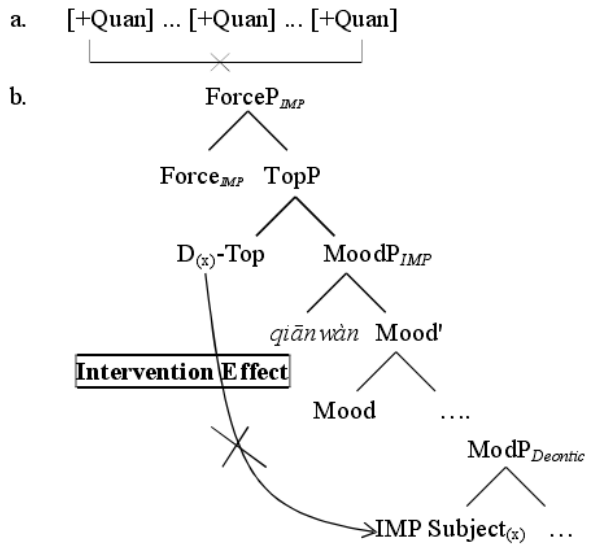


Figure 7: Intervention Effect by *qiānwàn*

To overcome the intervention effect, D-operator is firstly merged with the IMP subjects as a chunk and they are further tropicalized to [Spec, TopP] to check the peripheral feature on [Top^0, TopP] as the last resort[3]. Note that the full-fledged IMP clause type of sentences containing *qiānwàn* is established via Agree between [Force^0, ForceP_{IMP}] and [Mood^0, MoodP_{IMP}], as seen in Figure 8.

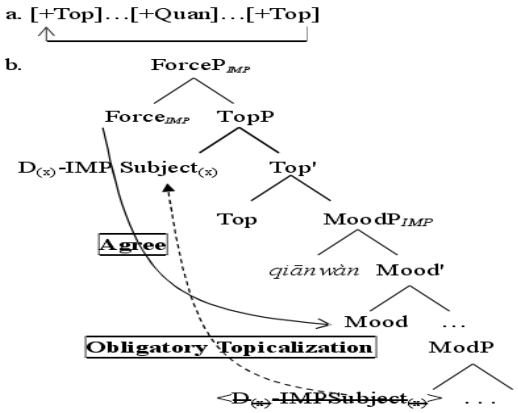


Figure 8: Force$^0_{IMP}$ Agree and SJOT with D-operator

[3]An anonymous reviewer points out that some MC IMP subjects conspicuously don't undergo obligatory topicalization. Meanwhile, these IMP subjects do not display definiteness, as in (ii) where somebody incurs the robbery on the street and ask for help.

(ii) a. 來人啊!
Lái rén a
Come somebody SFP
'Somebody!'
b. 救命啊!
Jiùmìng a
Help SFP
'Help!'

Nevertheless, the IMPs in (ii) are somewhat different from what is discussed in this paper. Firstly, what concerns in this paper is the relationship between IMP mood adverb *qiānwàn* and IMP subjetcs. The topicaliztion of IMP subjetcs would concur with *qiānwàn*. Under normal situation, IMP subjetcs would stay in-situ. Secondly, the sentences in (ii) are incompatible with *qiānwàn*, as in (iii).

(iii) a. *千萬要來人啊!
*Qiānwàn yào lái rén a
By all means do come somebody SFP
'By all means do somebody come here!'
b. *千萬要救命啊!
*Qiānwàn yào jiùmìng a
By all means do help SFP
'Help!'

The revelation of the incompatibility of *qiānwàn* with IMPs in (iii) should exclude the discussion of IMPs in (ii) in this paper. Thirdly, when it comes to topics, the rule of thumb would be 'old information' (Tsao 1979). In other words, the referent of topics are mostly existent in the pragmatic context. Along this line, the definiteness of IMP subjects inspected in this paper could also be attributed to the feature of 'old information' of topics. Yet, as in (ii), no 'old information' concept of the IMP subject is detected. Thus, the subjects could not own definiteness and could not be topics.

4. Problems of Alternative Analyses for IMP 2nd Person Features

This section will mainly focus on the problems of the previous analyses of the 2nd person features of IMPs in more detail. By addressing the flaws of the previous scholarships, I would further provide a more elegant analysis in section 5.

4.1. Topics

In light of Beukema and Coopmans's (1989) study of English IMPs, they propose a null topic in [Spec, TopP] in the left periphery (LP) to bind the null IMP subjects *pro*. However, such an analysis leads to the inconsistency of person features. In the sense of Huang (1984), to identify the referents, the null subject might either be bound by a null discourse topic in simple *pro-drop* sentences or an overt topic to prevent island effects, as in (30).

(30) a. **(彼得啊$_i$)**，***e*$_i$** 來了!
(Bǐdé$_i$ a) ***e*$_i$** lái le
Peter TOP *e* come PFV
'Peter has come!'

b. ***(瑪莉啊$_i$)**，e_i 寫的文章很棒!
***(Mǎlì a)** [$_{DP}$[$_{CP}$ *ei* xiě] de wénzhāng] hěn bang
(Mary TOP) *e* write of article very good
'Mary$_i$, the articles she$_i$ writes are very good.'

Once the IMP subjects are bound by the overt or covert topics, such an assumption would stipulate that the person features of IMP subjects should agree with topics. Nonetheless, we have seen that IMP subjects are normally tied with 2nd person features. By contrast, the topics in MC would be of any person features, again as in (30). Therefore, it is quite infeasible for IMP subjects to be bound by topics.

4.2. Sentence Final Particle Assumption

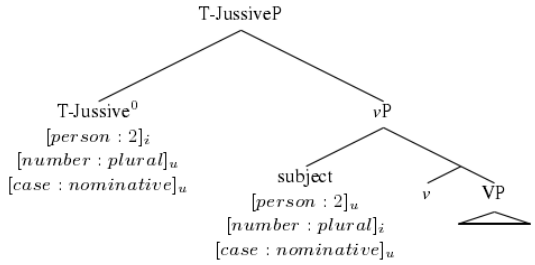
Zanuttini, et al., (2012) detect that certain sentence final particles (SFPs) in Korean can determine the person feature of the subjects, as in (31). Furthermore, they categorize sentences with these SFPs into three types: imperatives, promissives, and exhortatives.

(31) a. Cemsim-ul sa-**la** (IMPERATIVE:2nd)
Lunch-ACC buy-IMP/SFP
'Buy lunch!'

b. Cemsim-ul sa-**ma** (PROMISSIVE:1st)
Lunch-ACC buy-PRM/SFP
'I'll buy lunch!'

c. Cemsim-ul sa-**ca** (EXHORTATIVE:1st +2nd)
lunch- ACC buy-EXH/SFP
'Let's buy lunch!'

To this end, they advocate a Jussive Phrase (JussiveP) (i.e., command) (cf. Zanuttini 2008) with Korean SFPs in Jussive^0 in CP level with T^0 of movement to Jussive^0, forming T-JussiveP. Via feature valuation, the 2nd person feature of IMPs in T-Jussive^0 is assigned to D^0 of IMP subjects in [*v*P, Spec], as in Figure 2 repeated in Figure 9.



Zanuttini, et al. (2012:1243)

Figure 9: Configuration of T-JussiveP

More intriguingly, Jussive clause types can be embedded as well, in that Korean have embedded imperatives, promissives, and exhortatives with the same SFPs, as in (32).

(32) a. Emma-ka Inho-eykey kongpuha-**la**-ko hasiess-ta. [Imperative]
mother-NOM Inho-DAT study-IMP/SFP-COMP said(honorific)-DEC
'Mother told Inho to study.'
b. Kyoswunim-kkeyse Inho-eykey nayil liphothu-lul [Promissive]
professor-NOM Inho-DAT tomorrow report-ACC
cwu-**ma**-ko hasiess-ta.
give-PRM/SFP-COMP said(honorific)-DEC
'The professor promised Inho that he will give back the report tomorrow.'
c. Emma-ka Inho-eykey kongpuha-**ca**-ko hasiess-ta. [Exhortative]
mother-NOM Inho-DAT study-EXH/SFP-COMP said(honorific)-DEC
'Mother exhorted Inho to study together.'

Yet, the JussiveP hypothesis can't be applied to MC. One might suggest that the MC IMP SFP *ba* can be used to illuminate the 2nd person features of IMP subjects. However, the MC IMP SFP *ba* can NOT determine the person feature of IMP subjects, as in (33) where the 1st and 2nd person features would be compatible with IMPs containing the SFP *ba*.

(33) a. **每個人$_i$**都做你自己的$_i$功課吧!
Měigerén$_i$ dou zuò nǐzìjǐde$_i$ gōngkè ba
Everyone all do your own homework SFP
'Everyone do your own homework!'

b. **我們$_i$**做我們自己的$_i$功課吧!
Wǒmen$_i$ zuò wǒmenzìjǐde$_i$ gōngkè ba
We do our own homework SFP
'Let's do our own homework!'

Additionally, Zanuttini, et al., (2012) are in favor of Chen-Main (2005) that MC IMPs can be embedded like the Korean, as in (34). Hence, MC IMPs belong to the JussiveP clause types.

(34) 我建議[$_{CP/IMP}$每個人都要舉起筆]
Wǒ jiànyì [$_{CP/IMP}$ měigerén dou yào jǔqǐ pǐ]
I suggest everyone all do raise pen
'I suggest that everyone do all raise pens.'

However, the assumption is spurious. The embedded IMP subjects in (34) would be expected to have the 2nd person features in accordance with the JussiveP hypothesis. Nonetheless, the truth is that the 2nd person features can NOT be in the context, as in (35). Moreover, following T-JussiveP hypothesis (Zanuttini, et al., 2012), the MC IMP SFP *ba* can be embedded. Yet, there is no empricial data in support of *ba* to be in the subordiate clause. MC IMP SFP *ba* can only be acceptable in matrix clauses, again as in (35) (Li 2006).

(35) 我建議[$_{CP}$每個人$_i$都要舉起他$_i$/*你$_i$的筆*吧$_1$!]吧$_2$!
Wǒ jiànyì [$_{CP}$ měigerén$_i$ dou yào jǔqǐ tade$_i$/*nǐde$_i$ pǐ *ba$_1$] ba$_2$
I suggest everyone all should raise his/your pen SFP SFP
'I suggest that everyone should all raise his$_i$/*your$_i$ pen.'

Besides, from the cross-linguistic view, IMPs are resistant to being embedded, as in (36)-(38). The embedded IMPs are subjunctives in disguise (Han 1998). In Han (1998), an IMP carries both [directive] and [irrealis] features while a subjunctive carries only [irrealis] feature.

(36) *Spanish*
a. *Pido que dad-me el libro
Ask that give-2SG.**IMP** the book
'I ask that you give me the book'

b. Pido que deis el libro
Ask that give-2SG.**SUBJ** the book
'I ask that you give me the book'

(37) *Italian*
a. *Ti ordino che fallo subito
You order that do-2SG.**IMP** immediately
'I order you to give me the book.'
b. Ti ordino che faccia subito
You order that do-2SG.**SUBJ** immediately
'I order you to give me the book.'

(38) *French*
a. *J'exige que tu finis
I.require that you finish-2SG.**IMP**
'I require that you finish'
b. J'exige que tu finisess
I.require that you finish-2SG.**SUBJ**
'I require that you finish'

4.3. DP Hypothesis

As mentioned in section 2.2, Yang (2010) argue that the 2nd person feature of MC IMPs would be attributed to a covert *nǐ* or *nǐmen* 'you' in [D^0, DP] in MC IMP subjects à la Longobardi (1994, 2000), repeated as in (39).

(39) [DP [D covert *nǐ* / *nǐmen* (you) [NP…]]]

Nonetheless, the assumption is far more problematic. Firstly, what licenses the null *nǐ* or *nǐmen* 'you' in [D^0, DP] of IMP subjects rather than subjects of other clause types? Secondly, based on the hypothesis, we should predict that the IMP subjects can have the 2nd person anaphoric elements in embedded clause. Yet, it is perspicuous that IMP subjects can't be endowed with 2nd person features in subordinate clauses, again as in (35).

4.4. Performative Analysis

Another more promising approach is proposed by Alcázar and Saltarelli (2014). They argue that speakers, addressees/vocatives, time of utterance would play the most salient role in IMPs. Meanwhile, addressees/vocatives would be the indexical to IMP subjects, as in (40). Along this line, the 2nd person features of IMPs can be well explained away.

(40) Boys$_i$, *pro*$_i$ do your$_i$ homework!

To accommodate the elements of speakers, addressees/vocatives in IMPs, Alcázar & Saltarelli (2014) ameliorate Ross's (1970) version of performative VP proposal. Therefore, instead of lexical VP, *v*P shell would hold addressees/vocatives as the performers, in other words, the subjects, to be external argument of *v*P shell in the lower layer. Meanwhile, the lower *v*P would be immediately dominated by *v*P $_{prescribe}$ where speakers dwell in as the external argument. The syntactic structure is in (41).

(41) [$_{CP}$[$_{C\ IMP\ FORCE}$…[$_{vP\ prescribe}$ [$_{v'}$ Speaker [$_{v}$[$_{vP}$ [$_{v'}$ Addressees/Performers/Subjects[$_{v}$[$_{VP}$…]

However, designating addressees as the IMP subjects and situating both speakers and addressees in *v*P shell would induce some inevitable problems. Firstly, addressees are not fully the indexical of IMP subjects, as in (42) where the IMP subjects belong to the subset of the addressees in both MC and English (in the gloss).

(42) **學生們**$_k$，**男生們/彼得**$_i$ 拿起<u>你的</u>$_i$ 書；**女生們/瑪莉**$_j$ 舉起<u>妳的</u>$_j$ 筆!

Xuéshēngmen$_k$	**Nánshengmen$_i$/Bǐdé$_i$**	náqǐ	<u>nǐde$_i$</u>	shu
Students	Boy-PL / Peter	take	your	book
Nǔshengmen$_j$/Mǎlì$_j$	jǔqǐ	<u>nǐde$_j$</u>	bǐ	
Girl-PL /Mary	raise	your	pencil	

'Students$_k$, Boys$_i$/Peter$_i$ take your$_i$ book; girls$_j$/Mary$_j$ raise your$_j$ pencil!'

Secondly, situating addressees in [Spec, *v*P] as the IMP subjects in (42) would violate the well-known theta criterion, stipulating the one-to-one relationship between arguments and theta roles. To be more specific, one argument would only receive one theta role. Meanwhile, one theta role would be assigned to only one argument. In (42), theta criterion would be violated since besides the original IMP agent subjects, addressees are deemed as the IMP subjects, thereby also receiving the agent theta-role[4].

Thirdly, we might expect that the addressees/IMP subjects and IMP 2nd person features would not be subject to Main Clause Phenomenon (MCP) (cf. Danckaert and Haegeman 2012 and Haegeman 2012) since *v*P shell can dwell in subordinate clauses. Yet, the truth is that IMP subjects and their 2nd person features would not exist in subordinate clauses, as in (43) and (44)-(46) repeated from (36)-(38), cross-linguistically speaking.

[4]In light of Speas & Tenny (2003), speakers and addressees would receive Pragmatic-role (P-role) as speaker and hearer, respectively, in speech act phrase (SAP). Such a hypothesis would pinpoint the differences between addressees and subjects. To this end, I would follow the SAP hypothesis to undergird my argumentation.

(43) 我建議[$_{CP}$每個人$_i$都要舉起他$_i$/*你$_i$的筆]

Wǒ jiànyì [$_{CP}$ měigerén$_i$ dou yào jǔqǐ tade$_i$/*nǐde$_i$ pǐ]

I suggest everyone all should raise his/your pen

'I suggest that everyone should all raise his$_i$/*your$_i$ pen.'

(44) *Spanish*

a. *Pido que dad-me el libro

Ask that give-2SG.**IMP** the book

'I ask that you give me the book'

b. Pido que deis el libro

Ask that give-2SG.**SUBJ** the book

'I ask that you give me the book'

(45) *Italian*

a. *Ti ordino che fallo subito

You order that do-2SG.**IMP** immediately

'I order you to give me the book.'

b. Ti ordino che faccia subito

You order that do-2SG.**SUBJ** immediately

'I order you to give me the book.'

(46) *French*

a. *J'exige que tu finis

I.require that you finish-2SG.**IMP**

'I require that you finish'

b. J'exige que tu finisess

I.require that you finish-2SG.**SUBJ**

'I require that you finish'

5. A Plausible Analysis

In this section, I will point out that the 2nd person features of MC IMP Subjects originate from the addressees/vocatives externally merged in [Spec, DirectiveP] à la Speas & Tenny (2003), Hill (2007), and Haegeman & Hill (2013) in the speech act layer. Hence, I will firstly point out the characteristics of addressees/vocatives in Section 5.1. Afterwards, I will argue that the licensing of 2nd person features of IMP subjects is via Agree with addressees/vocatives following the definition of Agree in Haegeman & Lohndal (2010).

5.1. The Characteristics of Addressees/Vocatives

Jensen (2003) lists the criteria of addressees/vocatives, as in (47). These characteristics are found in a cross-linguistics perspective.

(47) *Vocative Criteria*

a. **Phonological**: special pronunciation of vocative DP
b. **Prosodic**: special intonation contour, usually including a prosodic boundary between the vocative DP and the VP
c. **Morphological**: special vocative case or other morphological marking
d. **Syntactic**: can not trigger 3rd person agreement, even when the vocative DP is 3rd person
e. **Phrase structure**: occupy a clause-external position
f. **Semantic**: reference only to the addressee

For (47b), in MC, vocatives (VOC) would produce the prosodic boundary apart from remaining sentences while IMP subjects would not leave any prosodic boundary. The test sentences and relevant sound spectrum are shown, as in (48) and Figure 10.

(48) **各位同學** voc，男生們拖地;女生們擦黑板!

Gèwèitóngxué voc	nánshēng-men	tuōdì	nǚshēng-men	cā	hēibǎn
every classmate	boy-PL	mop	girl- PL	clean	blackboard

'Every classmate, boys mop the floor; girls clean the blackboard!'

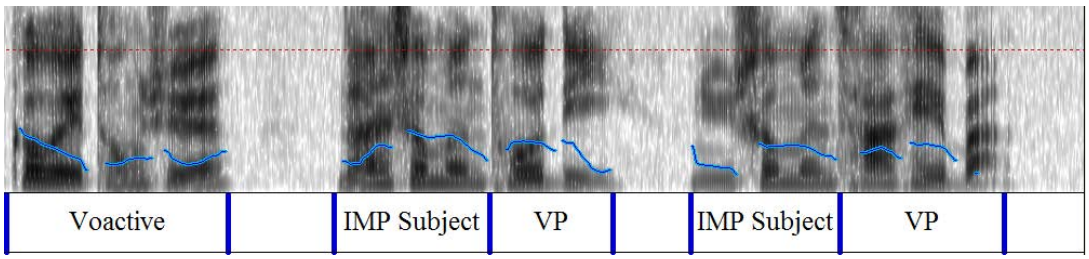


Figure 10: Prosody Boundary of Vocatives

For (47c), in Romanian (Hill 2007), the particle ***măi*** and ***bre*** would be used to indicate the vocatives, as in (49).

(49) Romanian

a. **Măi** VOC oameni buni când plecăm
you fellows-DEF good when leav-1PL
'Good fellows, when do we leave?'

b. **Bre** VOC mamaie vin şi eu
you gran'ma-VOC come and I
'Gran'ma, I am coming, too.'

For (47d), an addressee/VOC carries with 2nd person features. Hence, an addressee/VOC would NOT refer to DPs of other person feature, as in (50).

(50) **瑪莉** $_i$，**你** $_i$ 告訴我 $_j$ 她 $_k$ 在哪裡!
Mălì$_i$ VOC **nǐ**$_i$ gàosù wǒ$_j$ tā$_k$ zài nălǐ
Mary you tell me she at where
'Mary$_i$, you$_i$ tell me$_j$ where she$_k$ is!'

Finally, for (47e), VOCs can be argued to be in the clausal-external position across languages. In Romanian, Bulgarian, Umbundu, VOCs are attested to be in the clausal-external positions. If VOCs are inserted clausal-internally, the sentences are rendered ungrammatical, as in (51) in the sense of Hill (2007). The subscript number 1 and 2 refer to the positions of VOCs.

(51) a. *Romanian*
Măi$_1$ VOC zice că ***măi**$_2$ VOC ar vrea să cumpere casa
You says that **you** would want SUBJ buy house-the
'Hey man, he said he would like to buy the house.'

b. *Bulgarian*
Bre$_1$ VOC kaza če ***bre**$_2$ VOC toj iska da kupi kâštata
You said that **you** he wants to buy house-the
Hey man, s/he said that he wants to buy a house.'

c. *Umbundu*
Epa$_1$ VOC hati eye ka tēlēle ***epa**$_2$ VOC oku tu kuatisa mulo
You said s/he not could **you** to us help in this
'Hey man, did s/he say that s/she could not help us in this?'

Likewise, MC VOCs can also be found to be in leftmost postions of sentences, as in (52).

(52) **彼得** VOC，老實說，那條魚，你不應該買!

Bǐdé VOC	lǎoshíshuō	nà	tiáo	yú	nǐ	bù	yīnggāi	mǎi
Peter	honestly speaking	that	CL	fish	you	NEG	should	buy

'Peter, honestly speaking, that fish, you shouldn't buy.'

Hence, from the sentences above, we can get a better understanding of addressees/VOCs, and the dissimilarities between addressees/VOCs and IMP subjects.

Regarding the syntactic structure containing addressees/VOCs and IMPs, I advocate a double layer of Directive Phrase (DirectiveP) on behalf of directive speech act (Potsdam 1998; Han 1998) of IMPs in the pragmatics domain following Speas & Tenny (2003), Hill (2007), and Haegeman & Hill (2013). Inside the structure, **speakers** are externally merged in [Spec, DirectiveP*] **c-commanding addressees/VOCs** in [Spec, DirectiveP], conveying a scenario that speakers enact directive commands on the addressees/VOCs in IMPs entertained by Han (1998). Moreover, the IMP propositions are realized as the utterance (CP/ForceP) (Rizzi 1997) immediately dominated by DirectiveP, creating the context that addressees bring about the event (i.e., utterance) ordered from the speakers (Potsdam 1998). The syntactic structure is in (53)[5].

(53) [$_{\text{DirectiveP*}}$**Speaker**[$_{\text{Directive'*}}$[$_{\text{Directive*}}$[$_{\text{DirectiveP}}$ **Addressees/VOCs** [$_{\text{Directive'}}$[$_{\text{Directive}}$ [**$_{\text{ForceP}}$**…[$_{\text{ModP}}$*Deontic* **IMP subjects** [$_{\text{Mod'}}$…]]]]]] ➡ Utterance

5.2. The 2nd Person Features of IMP Subjects

Having probed into the characteristics and syntactic structure of addressees/VOCs in MC IMPs, I hereby contend that addressees/vocatives plays the key role in assigning 2nd person features to MC IMP subjects.

In Miyagawa (2012), there is a kind of allocutive agreement found in Basque where the 2nd person features target the addressees NOT the subjects in the sentences, as in (54) cited from Miyagawa (2012:82).

(54) a. *To a male friend*

				Allocutive AGR	**Subject AGR**
Pettek	lan	egin	di**k**.	⬆	⬆
Peter.ERG	work.ABS	DO.PRF	aux-3.S.ABS-	**2.S.C.MSC.ALLOC**	-3.S.ERG

'Peter worked.'

[5] Here, I adopt the revised version of speech act phrase (SAP) in Hill (2007) and Haegeman & Hill (2013) with addressees directly c-commanding the utterance. The original blueprint of SAP in Speas & Tenny (2003) would stipulate that the addressees should move higher from CP so as to c-command the utterance. Yet, there is no empirical data denoting that addressees move from a lower position in CP-level. Thus, I accept the revised version à la Hill (2007) and Haegeman & Hill (2013) with the cross-linguistic data in (51-52). Besides, SAP is not IMP-specific but exists in different clause types. See Speas &Tenny (2003)'s SAP among other clause types.

b. *To a female friend*
Pettek lan egin di**n**.
Peter.ERG work.ABS DO.PRF aux-3.S.ABS-**2.S.C.FM.ALLOC**-3.S.ERG
'Peter worked.'

c. *To someone higher in status*
Pettek lan egin di**zü.**
Peter.ERG work.ABS DO.PRF aux-3.S.ABS-**2.S.F.ALLOC**-3.S.ERG
'Peter worked.'

Moreover, allocutive agreement is an instantiation of Main Clause Phenomenon (MCP) (cf. Danckaert and Haegeman 2012 and Haegeman 2012), as in (55) cited from Miyagawa (2012:82). It is lucid that the main clauses are specified with allocutive agreement, while the counterparts in the relative clauses would lack allocutive agreements.

(55) a. [$_{RC}$ Lo egiten duen] gizona Manex dun
sleeping AUX.3E.COMP man.the John COP.3A.**ALLO.FEM**
'The man [who is sleeping] is John.'

b. *[$_{RC}$ Lo egiten **dinan**] gizona Manex dun
sleeping AUX.3E.**ALLOFEM**.COMP man.the John COP.3A.**ALLO.FEM**
'The man [who is sleeping] is John.'

To this end, I claim that the 2nd person features of MC IMPs are the implementation of allocutive agreement subject to Strong Uniformity illuminated by Miyagawa (2010), as an instantiation of Uniformity Principle in Chomsky (2001) in (56) and (57).

(56) *Strong Uniformity* (Miyagawa 2010)
Every language shares the same set of grammatical features, and every language overtly manifests these features in some fashion.

(57) *Uniformity Principle* (Chomsky 2001)
In the absence of compelling evidence to the contrary, assume languages to be uniform, with variety restricted to easily detectable properties of utterances.

Firstly, the 2nd person features of MC IMP subjects would refer to addressees, as in (58).

(58) **各位同學**$_{i\ VOC}$，**每個人**$_i$都要舉起**你的**$_i$手
[Gèwèitóngxué$_{i\ VOC}$**]** **měigerén**$_i$ dou yào jǔqǐ **nǐde**$_i$ shǒu
Every classmate everyone all do raise your hand
'Every classmate, do everyone raise your hand!'

Secondly, the 2nd person features of IMP subjects are subject to Main Clause Phenomenon (MCP) entertained by Danckaert & Haegeman (2012), and Haegeman (2012), as in (59).

(59) a. 我以為[$_{CP}$ **每個人$_i$**都要舉起<u>他$_i$/*你$_i$</u>的手]
Wǒ yǐwéi [$_{CP}$ **měigerén$_i$** dou yào jǔqǐ <u>tade$_i$/*nǐde$_i$</u> shǒu]
I think everyone all do raise his/your hand
'I think that everyone do all raise his$_i$/*your$_i$ hand.'

b. 我知道[$_{CP}$ **每個人$_i$**都要舉起<u>他$_i$/*你$_i$</u>的手]
Wǒ zhīdào [$_{CP}$ **měigerén$_i$** dou yào jǔqǐ <u>tade$_i$/*nǐde$_i$</u> shǒu]
I know everyone all do raise his/your hand
'I know that everyone do all raise his$_i$/*your$_i$ hand.'

c. 我建議[$_{CP}$ **每個人$_i$**都要舉起<u>他$_i$/*你$_i$</u>的手]
Wǒ jiànyì [$_{CP}$ **měigerén$_i$** dou yào jǔqǐ <u>tade$_i$/*nǐde$_i$</u> shǒu]
I suggest everyone all should raise his/your hand
'I suggest that everyone should all raise his$_i$/*your$_i$ hand.'

Based on the characteristics of 2nd person features of MC IMPs in (58)-(59), it is lucid that the MC IMP 2nd person features behave on a par with Basque allocutive agreements that target addressees and resist to being embedded, again as in (54)-(55).

To this end, I suggest that the 2nd person features of MC IMPs are assigned via Agree between covert or overt addressees and IMP subjects (cf. Miyagawa 2010). The definition of Agree is entertained by Haegeman & Lohndal (2010: 196) in (53), allowing multiple agreements and head/specifier-specifier agreements (cf. Pesetsky & Torrego 2007) so long as there is no uninterpretable feature at Logical Form and Phonological Form (Chomsky 2004).

(60) <u>*Agree*</u> (Haegeman and Lohndal 2010: 196)
α **Agrees** with β if α c-commands β, α and β both have a feature F and there is no γ with the feature F such that α c-commands γ and γ c-commands β.

In accordance with the above definition of Agree in (60), I firstly assume that the covert or overt addressees/vocatives externally merged in [Spec, DirectiveP] would inherently carry an interpretable [Person: 2nd] feature. By contrast, the [D^0, DP] of MC IMP subjects would contain an uninterpretable [Person: 2nd] feature. At the end, by feature checking, the 2nd person features of MC IMP subjects can be well explained away.

Let's see the example in (61). The IMP subject *dàjiā* 'everyone' carries an uninterpretable [Person: 2nd] in [D^0, DP]. To license the IMP subject 2nd person features in (61), the person features of MC IMP subjects are checked by covert/overt

addressees/vocatives in [Spec, DirectiveP]. Accordingly, the 2nd person features of IMP subjects are properly licensed, as schematized in (62).

(61) **大家**$_i$都要舉起<u>你的$_i$</u>手

Dàjiā$_i$ dou yào jǔqǐ <u>nǐde$_i$</u> shǒu
Everyone all do raise your hand
'Do everyone$_i$ raise your$_i$ hand!'

(62) [$_{\text{DirectiveP}*}$**…**[$_{\text{DirectiveP}}$ **Addressee** [Person: 2nd]$_i$…[$_{\text{ModP}}$*Deontic* [$_{\text{DP}}$ [$_{\text{D}}$ *dàjiā* [Person: 2nd]$_u$] [$_{\text{Mod'}}$…]]]]

Agree

Moreover, concerning the sentence (56) of two proper names IMP subjects in a coordinate structures (cf. Zanuttini 2008; Zanuttini., et al 2012; Yang 2010; Li 2013), the Agree operation would follow a bottom-up fashion to avoid the intervention effect. Namely, the two uninterpretable [Person: 2nd] features agree first. This operation would leave only one uninterpretable [Person: 2nd] feature. Later, the interpretable [Person: 2nd] feature of addressees agrees with the left uninterpretable [Person: 2nd], as in (64). Thus, no uninterpretable feature is left at LF. The IMP subjects are licensed 2nd person features.

(63) **彼得** $_i$ voc 拿起<u>你的 $_i$</u> 書;**瑪莉** $_j$ 舉起<u>妳的 $_j$</u> 筆

Bǐdé $_i$ voc náqǐ <u>nǐde$_i$</u> shu **Mǎlì**$_j$ jǔqǐ <u>nǐde$_j$</u> bǐ
boys/ Peter take your book Mary raise your pencil
'Peter$_i$ take your$_i$ book; Mary$_j$ raise your$_j$ pencil!'

(64) [...[$_{\text{DirectiveP}}$ **Addressee** [Person: 2nd]$_i$…[$_{\text{ConjP}}$[$_{\text{ModP}}$ [$_{\text{DP}}$[$_{\text{D}}$ *Bǐdé* [Person: 2nd]$_u$] …[$_{\text{ModP}}$ [$_{\text{DP}}$[$_{\text{D}}$ *Mǎlì* [Person: 2nd]$_u$]…]]]]

Agree

Agree

In addition, adopting the Agree hypothesis via Addressees/VOCs can well elucidate why the 2nd person features of IMP subjects would be subject to Main Clause Phenomenon. To be more accurate, Addressees/VOCs would normally be in main clauses and their appearances in subordinate clauses are disallowed, as empirically supported in (65).

(65) a. **彼得** voc，你趕快念書!

Bǐdé voc nǐ gǎnkuài niànshū
Peter you hurry study
'Peter, you hurry to study!'

b. *我建議，[$_{CP}$ **彼得** $_{voc}$，你趕快念書!]
Wǒ jiànyì [$_{CP}$ **Bǐdé** $_{voc}$ nǐ gǎnkuài niànshū]
I suggest Peter you hurry study
'I suggest that, Peter, you hurry to study.'

Given the fact that addressees/VOCs are absent in subordinate clauses, the lack of 2nd person features of IMP subjects in subordinate clauses is well explicated away. Furthermore, I have argued the embedded IMPs are subjunctives in disguise in Section 4.

Finally, one might be concerned about whether there will be any intervention effect. However, when topics are inserted in the sentences, no intervention effect will be detected since IMP addressee subjects carry uninterpretable 2nd person features, only be well evaluated via Agree with addressees/VOCs, as in (66).

(66) **各位同學** $_{i\ voc}$，水，**每個人** $_{i}$都放到**你自己的** $_{i}$桌上!
Gèwèi tóngxué$_{i\ voc}$ shuǐ **měigerén**$_{i}$ dōu fang zài **nǐzìjǐde**$_{i}$ zhuō shàng
Every classmate water everyone all put at your own table on
'Every classmate, do everyone put water on your table!'

At the end, I summarize the differences between the approaches in charge of the 2nd person features of IMP subjects, as in Table 1.

Table 1: Approaches to 2nd Person Features of MC IMPs

Hypothesis / Issue	TopP	T-JussiveP	DP	Performative Analysis	Addressees/VOCs Agree
MC IMP 2nd Person Features	N	N	N	N	Y
Multiple IMP Subjects	?	?	?	?	Y
MCP	?	N	N	N	Y
Intervention effect	?	?	?	?	N
Theta criterion	Y	Y	Y	N	Y
Indexing	?	?	?	Y	?

5.3. Overall Structure

So far, the 2nd person features of MC IMPs have been well explicated via Agree (Haegeman and Lohndal 2010: 196). Here, I present an overall structure involving SJOT,

IMP Clause Types Agree and the 2nd person features IMP subjects assignment, following the cartography approach Rizzi (1997), and Cinque (1999) in Figure 11.

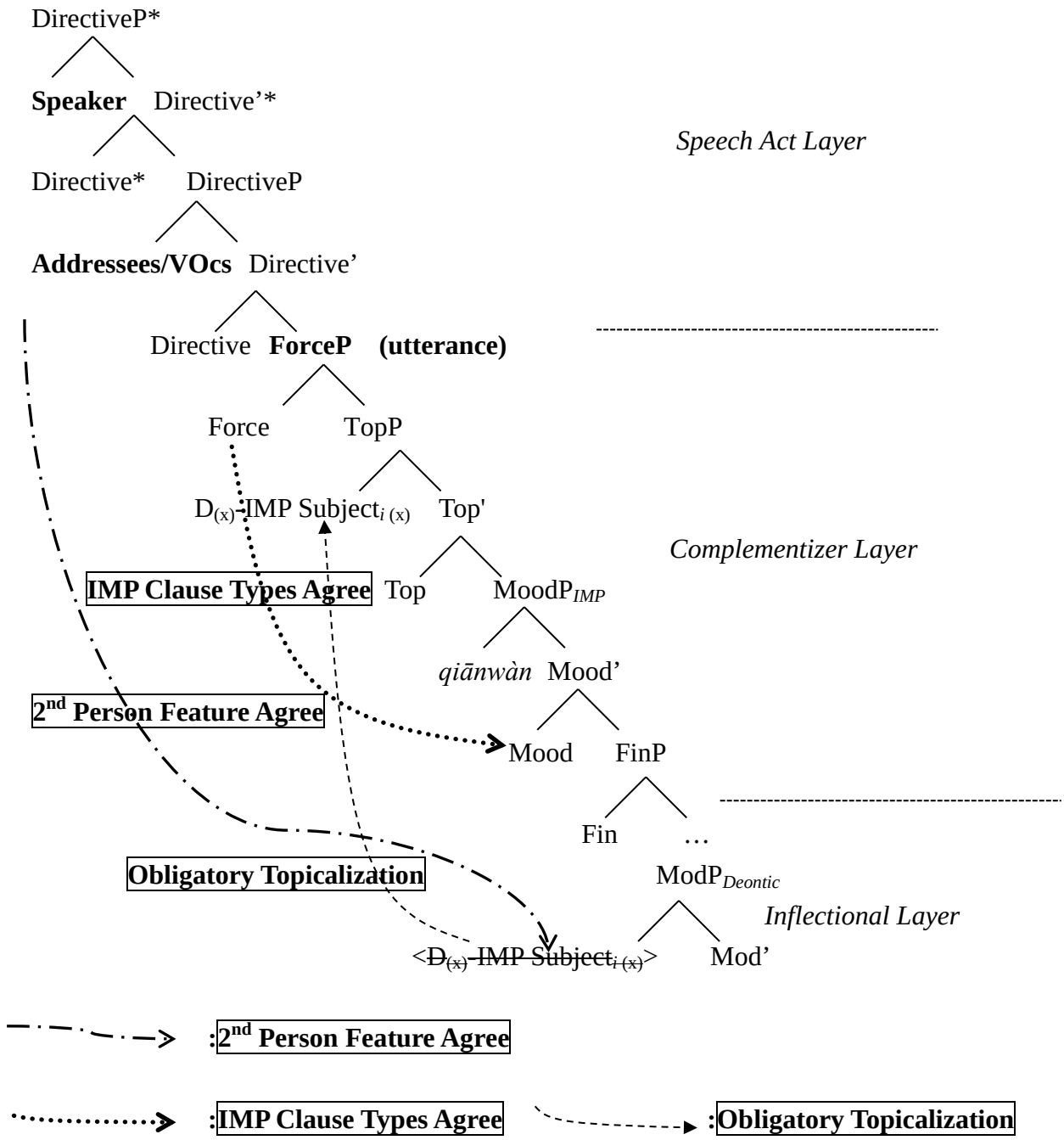


Figure 11: The Overall Tree Structure

6. Conclusion

In this paper, several relevant issues regarding MC IMP Subjects have been made lucid. **Firstly**, in section 3, MC IMP Subjects would undergo SJOT with the existence of IMP Mood Adverb adverb *qiānwàn*. To be more accurate, the binding relationship between

D(efiniteness)-operator (Tsai 2015) and the MC IMP subjects is hampered due to the focus prosody (Xu 1999; Flemming 2008) of *qiānwàn*. Hence, SJOT is the last resort.

Secondly, in section 4, TopP (Beukema and Coopmans 1989), T-JussiveP (Zanuttini, et al., 2012), DP (Yang 2010) and Performative *v*P (Alcázar and Saltarelli 2014) fail to well deal with the 2nd person features of IMP subjects since the hypotheses will lead to person number inconsistency, wrong prediction of IMP subjects with 2nd person features, and MC IMP SFP *ba* in MC embedded clauses, the problem of indexing as well as the violation of theta criterion.

Finally, in Section 5, I attribute the 2nd person features of IMPs to addressees/vocatives. The 2nd person features of MC IMP subjects are assigned via Agree (Haegeman & Lohndal 2010: 196) with addressees merged in [Spec, DirectiveP] in the pragmatics domain à la Speas & Tenny (2003), Hill (2007) and Haegeman and Hill (2013). Such a proposal well aligns with the allocutive agreement (Miyagawa 2012) whose 2nd person features target the addressees and are incompatible in the subordinate clauses.

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