Commitment and Discourse Particles in Japanese

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List of Abbreviations for Technical Terms

A Addressee

c Context

CCP Context Change Potential

com commitment

CG Common Ground

CI Common Intention

CI-interface Conceptual-Intentional Interface

CoA Call on Addressee

CT Contrastive Topic

CQ Common Question

DP Discourse Participants

DM Distributed Morphology

EF Edge Feature

LF Logical Form

p proposition

PB Public(ised) Belief Set

pcs Public Commitment Set

PI Public(ised) Intention Set

PFP Phrase Final Particles

Q Question

QUD Question Under Discussion

S Speaker

scs Self Commitment Set

SFC Sentence Final Contour

SFP Sentence Final Particle

SM-interface Sensorimotor Interface

SMT Strong Minimalist Thesis

UG Universal Grammar

VI Vocabulary Insertion

Acknowledgements

The present thesis is the result of my research investigation as a PhD student at the Graduate School of Human and Environmental Studies, Kyoto University. In retrospect, this graduate school was one of the (if not the) best research environments for me to pursue the inquiry, the result of which is crystalised as this doctoral dissertation. As its name suggests, the Graduate School of Human and Environmental Studies at Kyoto University integrates various fields of science pertinent to the studies of human beings and the environment surrounding us, including linguistics, neuroscience, psychology, philosophy, physics, chemistry and so many others. The institute is committed to bringing together these research areas and facilitating interdisciplinary studies in order to shed light on what kind of creatures we are and what kind of environment we live in. This cross-disciplinary flavour, along with the liberal, nomadic and dissident school spirit of Kyoto University, provided me with the best ground imaginable to seek to elucidate the nature of our species through the lens of language, with special reference to my own native language (i.e., Japanese). As noted in the body text, language (more precisely, our innate capacity to use a language) is what makes us distinct from all other species in the animal kingdom. In this sense, the language faculty is part and parcel of us (human). And by the use of language, we sometimes try to convince others to take some particular action and other times suggest them not to do it, depending on the context of such language use (environment). And by doing so, we seek to change the state of the context/environment from one to another. This eloquently shows that our language capacity pertains both to "human" and "environment," both of which should be investigated from various angles. By immersing myself in such a desirable research environment, I

learned so many things from so many people. Below, I would like to express my gratitude towards some specific individuals whom I met at this school.

My thesis supervisor Koji Fujita is the person who told me the importance of looking at language from the perspective detailed above. As an evolutionary generative linguist, he always reminded me of the joy and excitement of doing linguistics from an evolutionary point of view. Whenever my research got a bit too descriptive, lacking in evolutionary (and more generally, biological) insights, he gave me various opportunities to revise my ideas and look at the phenomena more broadly, and by doing so he indirectly suggested that I consider them in evolutionary terms. I believe that thanks to Koji's help, the idea laid out in this dissertation has become much more biologically plausible than its previous versions. It should be noted here that having evolutionary/biological desiderata in mind, the importance of which Koji repeatedly emphasised to me, also served its therapeutic purpose: it enabled me to avoid making the analysis unnecessarily complex and hence improved the comprehensibility of my ideas. Also, I should not forget to note this: a number of casual conversations about metal music with him were very relaxing!

Other scholars and colleagues of mine at the graduate school, to whom I would like to have an independent mention here, include Taisei Chujo, Akira Yoshizawa, Vasiltsov Kirill, Taka Morita, Kazumi Taniguchi, Hiromichi Hagihara, Takuo Aoyama, Takahiro Yoshida and Tatsuya Yoshii (of course, this isn't an exhaustive list). Taisei was, is, and will be (I hope) my good friend with whom I can discuss various issues from linguistics and philosophy to politics. All those discussions that we had still have an immense influence on my biolinguistic thinking. Akira has helped me shape the ideas fleshed out in this dissertation especially for the last two years with his erudition and sharp intuitions, for which I am immeasurably grateful. Also, I cannot forget the live performance by Cory Henry (jazz musician) that we went to, as well as our joyful conversations about jazz and fusion (and other genres), comedies and social issues! Speaking of linguistic and musical conversations, I would also like to thank Vasiltsov for sharing not just his insightful ideas, but also great music. Taka also helped me analyse French data (which is not discussed in this dissertation but significantly contributed to the ideas). Kazumi's considerateness and generosity should be

mentioned here as well: she helped me with various issues, especially with job opportunities. Hiromichi is a developmental psychologist with massive interests and knowledge in linguistics and other fields. Casual discussions about topics from language acquisition and evolution to philosophy and anthropology with him were always day-making for me, and he also kindly helped me fill in many documents. Also, prominent philosopher Takuo is one of the people who had the most significant impact on my reasoning. Whenever I talked to him, he was always open to discussions and he never failed to strike me with his philosophical acumen. And again, it was always fun to talk to him about music. Finally, Takahiro and Tatsuya also sharpened my philosophical thinking, from which the present dissertation is greatly benefited. Especially, I would like to thank Tatsuya for scrutinising the idea of *commitment* laid out in this dissertation from a philosophical perspective.

This paragraph seems the best place to send my big thanks to another philosopher Yutaka Morinaga, who had as much impact as Takuo had on me. Since the day we met at the second meeting of Evolinguistics Young Researchers' Association (EYRA), we instantly became friends. Yutaka is probably the person with whom I can discuss most, in terms of both the number of topics and the degree of intensity. The topics we enjoy discussing vary from philosophy of language, formal semantics, generative syntax, pragmatics and other related fields like psychology, to paintings, ordinary life, social issues, politics and (yet again!) music. Yutaka's visceral and critical comments on my ideas played a vital role in shaping this dissertation, especially from a conceptual perspective.

I am also grateful to many of the other EYRA members for their helps in many ways: among them, I would like to especially thank Tomoya Nakai, Genta Toya and Yudai Tokumasu for their constant help in shaping my evolutionary and neuroscientific ideas, both of which could not be explicitly shown in this dissertation yet played a significant role in theorising the analysis.

Outside Kyoto University and EYRA, I have learned immensely from so many linguists and scholars in other fields that I cannot mention them all to my discomfiture. At least they include: Mizuki Sakamoto, Akitaka Yamada, Beste Kamali, Ryoichiro Kobayashi, Elin McCready, Shin-ichi Tanaka, Yuki Hirose, Hisao Tokizaki, Tomoya Tanabe, Naoki Fukui, Yohei Oseki, Manfred Krifka,

Stacey Vu, Chris Davis, Martina Szabo, Lena Borise, Andrea Moro, Virginia Hill, Norvin Richards, Kenyon Branan, Satoshi Tomioka, Nobuko Hasegawa, Shigeru Miyagawa, Cedric Boeckx, Michael Tomasello, the late Michael Corballis, Nayuta Miki, Hyogo Shibahara, Harumi Kobayashi, Takashi Hashimoto and Kazuo Okanoya. In terms of the present dissertation, I am particularly grateful to Chris, Elin, Akitaka, Ryoichiro, Nayuta, Mizuki, Hyogo, Stacey and Beste for their valuable questions, comments, feedback and suggestions.

As the reader of these acknowledgements would immediately notice, I am a quester of musical virtuosos (who likes singing and occasionally plays some instruments). I have been deeply indebted to all my favourite musicians, especially since a wacko of Covid-19 dissociated me from society (and *vice versa*). In the course of writing this dissertation, I have enjoyed countless musical masterpieces from any genres, some having been my favourite for years and others being my new discoveries. From these geniuses came a load of inspiration, and it flourished in the present dissertation. Their artistries literally saved my life by emancipating my entelechy out of the prison of my corpse and letting it stay afloat in the universe of sound. Our language isn't omnipotent: there are countless emotions that go beyond our linguistic enunciation. Music has been a way to go beyond this ineffability in my life, along with other forms of art.

I would also like to express my gratefulness to my family. My mother Tomoko raised me and my younger sister Nozomi all by herself. Despite her financial difficulty, she always allowed me to do what I wanted, and supported my academic career with no hint of feeling otherwise. My grandmother Etsuko followed suit and supported me both mentally and financially. Her (oftentimes excessive) hospitality was not my favourite thing when I was much younger, so I confess. But now, it's something that I always look for whenever I come back to my hometown. And thanks to Nozomi as well, primarily for bringing peace to this chaotic family with her pure personality and also for supporting my academic career with Tomoko and Etsuko. I should mention my adorable family mates Kurumi (cat), the late Chip (dog) and the late Cocoa (rabbit). Come to think of Chip and Cocoa, I am not confident in saying that I could express my love towards them while they were still physically close to me with no use of language that they do not (seem

to) understand; nonetheless, I am more than just confident in my true love for both of you. And the same love goes for my most adorable archenemy Kurumi, who seems to have been annoyed by another lovely cat Kuro, who joined the family recently. Kuro had been a stray cat for so long who constantly came to my family for food until she was involved in a car accident which left her some serious injuries still lingering in her body. I'm glad she was found by my family and finally became an official member. Since Kuro's settlement, Kurumi's clumsy, awkward and violent way of expressing her love got more explicit and unequivocal. And I love it, as much as I love Kuro's unbelievably friendly character for an ex-stray cat. Love you all, and requiescat in pace, Cocoa and Chip.

Finally, I wish to show my deepest gratitude and love towards my partner, Nanami Ono. Words of perspicuity, propriety, prescription and precision cannot present how much power and peace she has brought to me. Maybe that's why I study linguistics after all. For now, until I find a better way of enunciating this unfathomable emotion, I just say I love you, in the hope that in so doing I am successfully committed to you to act in accordance with what I try to mean and I can change our discourse towards the (even) better.

This work is supported by JSPS KAKENHI: Grant Number JP20J20039.

Abstract

This dissertation first presents a formal, semantic and pragmatic theory for *sentence final particles* (SFPs) in Japanese. The SFPs to be analysed include *yo*, *ne* and *sa*. They are argued to express a particular conversation participant's *public commitment*. Particularly, it is shown that they specify the information about who is explicitly committed to whom to act in accordance with the content of the sentence radical. By expressing such information, these particles contribute to restricting further potential conversational moves to those compatible with the utterance. This dissertation shows that these particles, together with sentence final contours associated with the information structure status of a given expression, yield particular discourse effects *via* pragmatic reasoning. In addition, on the basis of such a semantico-pragmatic account, the syntax of the SFPs is fleshed out. The analysis for the SFPs is further expanded to uncover the nature of the same particles used phrase-finally. Calling such particles *phrase final particles* (PFPs), this dissertation provides an account that enables us to treat SFPs and PFPs in a unified fashion. Finally, the theoretical, evolutionary and psychological implications of the account are discussed.

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Chapter 1

Introduction

1.1 The phenomena to be explained in this dissertation

The primary goal of the present dissertation is straightforward: explain the syntax, semantics, pragmatics and prosody of Japanese *discourse particles*, primarily *sentence final particles* (SFPs) but also *phrase final particles* (PFPs) as an extension, by carefully scrutinising their occurrences and the contexts that legitimise the use of them. And in so doing, I seek to propose concrete syntactic and semantic structures for discourse particles in general, which has far-reaching implications for the generative enterprise and its related fields including biolinguistics and psycholinguistics. As a startup, let us briefly overview how SFPs have been treated in the traditional literature.

Japanese is known for its rich inventory of SFPs. These SFPs are known to have some specific discourse functions, especially the ones pertinent to a particular discourse participant's (DP) belief, intention, attitude, epistemic (un)certainty etc. towards the semantic content of an utterance (cf. Uyeno 1971; Hara 2006; McCready and Ogata 2007; Davis 2011; Oshima 2016; McCready and Davis 2020 *et seq.*). In the traditional descriptive grammar of the Japanese language called *Nihongogaku* (Japanese language studies), evidence is provided for the hierarchical structure of such particles, which is summarised in Minami (1993). There it is argued that the Japanese verbal complex can be split into the *objective* and *subjective* regions (Kindaichi 1953). The former

is constituted by Verbal Root, causative, passive, negation and tense/copula markers/morphemes, and the hierarchy is organised in this order (i.e., Verbal Root ≪ causative ≪ passive ≪ negation ≪ tense/copula). The latter consists of the epistemic marker *darou* and SFPs such as *ka*, *wa*, *yo* and *ne*, with the hierarchy of the epistemic morpheme ≪ *ka* ≪ *wa* ≪ *yo* ≪ *ne*. Hayashi (1960) further divides the region into four. In this analysis, the objective region is divided into *description*, which consists of Verbal Root, causative and passive, and *evaluation*, which contains negation and tense/copula. The subjective region is in turn divided into *presentation* and *transmission*. The former contains the epistemic morphemes *ka* and *wa*, and the latter does *yo* and *ne*.

The present dissertation primarily seeks to elucidate the nature of the last category, the one that Hayashi (1960) categorises as *transmission*, consisting of the SFPs *yo* and *ne/na*. But this does not exhaust the SFPs that this dissertation examines: there is another SFP, namely *sa*, which is far less studied in the literature. Thus, the SFPs to be analysed in this dissertation are *yo*, *ne* and *sa*. (1) below exemplifies how these SFPs are used in actual sentences.

(1) a. Herbie-wa hon-o kat-ta *yo*.
Herbie-TOP book-ACC buy-PST *yo*
'Herbie bought a book *yo*.'

b. Herbie-wa hon-o kat-ta *ne*.
Herbie-TOP book-ACC buy-PST *ne*
'Herbie bought a book *ne*.'

c. Herbie-wa hon-o kat-ta *yo ne*.
Herbie-TOP book-ACC buy-PST *yo ne*
'Herbie bought a book *yo ne*.'

d. Herbie-wa hon-o kat-ta *sa*.
Herbie-TOP book-ACC buy-PST *sa*
'Herbie bought a book *sa*.'

Despite the attention that these SFPs (except *sa*) have received, their exact semantics and pragmatics are still poorly understood. But one thing is clear: these SFPs appear above what is called C(omplementiser), which is evidenced by the fact that they cannot be embedded:

(2) *Herbie-wa hon-o kat-ta *yo* to Chick-ga omot-ta.
Herbie-TOP book-ACC buy-PST *yo* COMP Chick-NOM think-PST

'Chick thought that [Herbie bought a book *yo*].'

Given the assumption enjoyed in the literature that C pertains to various discourse effects, the natural assumption here is that these particles pertain to the link between semantics and pragmatics. Taking this picture into consideration, the primary focus of the present dissertation is put on the elucidation of the function of these particles, and in so doing, this dissertation aims to reveal the nature of the link between semantics and pragmatics. It will be shown that these SFPs serve a visible guideline for how the context be updated among discourse participants.

1.1.1 Sentence Final Particles (SFPs) in Japanese

This section overviews the phenomena that the present dissertation seeks to expound. The SFPs that this dissertation puts a particular focus on include *yo*, *ne* and *sa*. We will examine their behaviours in declarative, interrogative and imperative sentences. We will also see that these SFPs interact with particular intonational associates so as to be felicitous in particular contexts.

1.1.1.1 *Yo*

The first SFP I focus on is *yo*, which is to the best of my knowledge the particle most intensively studied in the literature (Uyeno 1971; Endo 2007; McCready 2005, 2006; Davis 2010, 2011; Saito and Haraguchi 2012; Saito 2015 and McCready and Davis 2020). In many dialects, it can be replaced with *ya*. The particle is well known for its widespread occurrence in declarative sentences, as already shown in (1a). When *yo* is used in a declarative sentence, it is oftentimes tied with the assertion speech act, the best translation of which would be "I'm telling you that$\cdots$" (Saito and Haraguchi 2012). However, as Davis (2011) discusses in detail, *yo* is not just about assertion: it interacts with sentence final (intonational) contours (SFCs, hereafter) to express particular discourse effects. Compare (3a), (3b) and (3c) below.

(3) a. Gohan dekit-eru *yo*↑
meal be.ready-PRS *yo*↑
'The dinner is ready *yo*↑'

b. Gohan dekit-eru *yo*→
meal be.ready-PRS *yo*→
'The dinner is ready *yo*→'

c. Gohan dekit-eru *yo*↓
meal be.ready-PRS *yo*↓
'The dinner is ready *yo*↓'

(3a) bears the rising SFC associated with *yo*, and the entire sentence functions to mean that the speaker (S, hereafter) informs the addressee (A, henceforth) that the dinner is ready. Intuitively, the same holds for (3b), where the particle is associated with the flat contour (Davis 2011). Indeed, Davis (2011) assumes that the function of ↑ and → is uniform, the assumption which will be carefully examined later in Chapter 2. In contrast, (3c), where the falling SFC is associated with *yo*, not only conveys the information that the dinner is ready, but also connotes that A should have come much earlier, or A should have known that much earlier, and so forth. For example, in the context where the dinner has been made just at the same time of the utterance of (3), (3a, b) are felicitous while (3c) is not, whereas the reverse holds true when the sentence is uttered after S's several remarks to A that the dinner was (almost) ready and thus A should have come downstairs to have it while it was still hot. Thus, SFCs and SFPs interact to add a certain pragmatic flavour to the sentence (TP+force). *Yo*'s function is not so simple.

In addition, the assumption that *yo* is an assertive particle is not entirely correct. It can attach to forces other than declarative as well: as Saito and Haraguchi (2012) and Davis (2010, 2011) among others observe, the particle can also be used in imperative sentences.

(4) Mongen-made ni kaer-e *yo*↓
curfew-until by go.home-IMP *yo*↓
'Go home before the curfew *yo*↓'

Intuitively and pre-theoretically speaking, this use of *yo* seems to amplify the imperative force of "go home, " as Miyagawa (2022) assumes.[1] It should be noted that *yo* in imperatives can also bear the flat SFC, as in (5).

[1] As I noted above, in some dialects of Japanese, especially the ones spoken in the western and southern areas of Japan, *yo* is oftentimes replaced with *ya* in imperatives. Thus, (4) is realised as *kae-re ya* in these dialects. Henceforth, I will focus our attention on *yo*, and occasionally refer to *ya* when necessary.

(5) Mongen-made ni kaer-e *yo*→
curfew-until by go.home-IMP *yo*→
'Go home before the curfew *yo*→'

Intuitively again, (5) indicates that S is *suggesting* A go home, while (4) should be interpreted as command instead of a suggestion.

Furthermore, the rising contour can be associated with *yo* as well.

(6) Mongen-made ni kaer-e *yo*↑
curfew-until by go.home-IMP *yo*↑
'Go home before the curfew *yo*↑'

In this case, the whole utterance serves as a suggestion just like in the case of *yo*→, pre-theoretically. The distinction between ↑ and → will be discussed in Chapter 2.

Finally, *yo* can embed interrogative sentences as well. First, *yo* can embed a polar interrogative sentence with the Q-particle *ka* (Cable 2007, 2010). Interestingly, *yo* in this type of clause is only compatible with ↓, as in

(7) Polar interrogative:

a. *Ritchie-ga Ronnie-o kaiko-sur-u *ka* *yo*↑/→
Ritchie-NOM Ronnie-ACC fire-do Q *yo*↑/→
Intended. 'Does Ritchie fire Ronnie *yo*↑/→'

b. Ritchie-ga Ronnie-o kaiko-sur-u *ka* *yo*↓
Ritchie-NOM Ronnie-ACC fire-do Q *yo*↓
'Does Ritchie fire Ronnie *yo*↓ (No way!)'

As shown in the translations in (7), the polar interrogative embedded within this SFP always results in a rhetorical question, in which the negation of the sentence radical is asserted to be true.

Similarly, *wh* interrogatives can co-occur with *yo*. *Yo* is only compatible with the falling contour in this type of interrogative as well.

(8) *Wh* interrogative:

a. *Dare-ga Ronnie-o kaiko-sur-u *ka* *yo*↑/→
who-NOM Ronnie-ACC fire-do-PRS Q *yo*↑/→
Intended. 'Who will fire Ronnie *yo*↑/→'

b. Dare-ga Ronnie-o kaiko-sur-u *ka yo*↓
who-NOM Ronnie-ACC fire-do-PRS Q *yo*↓
'Who will fire Ronnie *yo*↓ (No one!)'

In *wh* interrogatives with *yo*, the utterance as a whole denies that "$\exists x$: P(x)" (i.e., it means that "$\neg\exists x$: P(x)," which essentially indicates that the entire expression is again a rhetorical question).

From these observations, it is obvious that polar and *wh* interrogatives with *yo*↓ are rhetorically understood. Again, of note here is that both polar and *wh* interrogatives with this SFP cannot bear the flat or rising SFC, as evidenced by the ungrammaticality of (7a) and (8a).

There is another type of interrogative which can host *yo*. This type can be called the *in-situ* focus or *no da* construction, after Hiraiwa and Ishihara (2002, 2012). In the case of polar interrogative, *da* is replaced with the Q-particle *ka*, and the utterance expresses S's surprise, bewilderment, anger etc. towards what is described in the sentence radical:

(9) *No ka* polar interrogative:

a. *Ritchie-ga Ronnie-o kaiko-sur-u *no ka yo*↑/→
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *yo*↑/→
Intended. 'Will Ritchie fire Ronnie *yo*↑/→ (I'm surprised!)'

b. Ritchie-ga Ronnie-o kaiko-sur-u *no ka yo*↓
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *yo*↓
'Will Ritchie fire Ronnie *yo*↓ (I'm surprised!)'

Again, *no ka* polar interrogative with *yo* is incompatible with the flat and rising SFCs and can only be associated with the falling contour.

The same construction can also be used for *wh* interrogatives, as shown in (10) below.

(10) *No da wh* interrogative:

a. *Dare-ga Ronnie-o kaiko-sur-u *no da yo*↑/→
who-NOM Ronnie-ACC fire-do-PRS *no da yo*↑/→
'Who will fire Ronnie *no da yo*↑/→'

b. Dare-ga Ronnie-o kaiko-sur-u *no da yo*↓
who-NOM Ronnie-ACC fire-do-PRS *no da yo*↓
'Who will fire Ronnie *no da yo*↓'

(10) shows that the *no da wh* interrogative sentence yields a regular *wh*-question, which roughly gets the same rhetorical interpretation as the *wh* interrogative exemplified in (8b). The crucial difference between these two *wh* sentences lies in the fact that (8b) only allows the rhetorical reading, while (10b) can be interpreted either regularly or rhetorically. As for the SFC, this *no da wh* interrogative behaves in the same way as the rest of the examples in that it only allows the falling SFC to be associated with *yo*.

Summing up, we have the following paradigm of the distribution of *yo*.[2]

Table 1.1: The distribution of *yo* (initial version)

Type of force	Availability of *yo*	SFC
DECL	available	↑&→&↓
IMP	available	↑&→&↓
INTER	available	↓

The aim of the present dissertation is to explain why *yo* exhibits this paradigm. Particularly, this dissertation seeks to show that the interaction between the SFP and the specific SFCs straightforwardly follows from the formal semantico-pragmatic effect of the particle, which will be fleshed out in the next chapter.

1.1.1.2 *Ne*

The next particle I examine is *ne*, which is oftentimes altered by *na* in various occasions.[3] *Ne* is another particle that has received relatively wide attention in the literature (Uyeno 1971; Suzuki Kose 1997; Saito and Haraguchi 2012; Saito 2015; Oshima 2016; Endo and Maeda 2020; McCready and Davis 2020; Miyagawa 2022). But it has received much less (actually, close to zero) formal analysis than *yo* has, as McCready and Davis (2020) point out. Here I overview the distribution of the SFP across the force types, together with the specific SFCs it can be associated with.

First, *ne* is usable in a declarative sentence:

(11) Brian Eno-no tenzikai saikoodat-ta *ne*↑/→/↓
Brian Eno-GEN exhibition superb-PST *ne*↑/→/↓

[2] **decl!**, **imp!** and **inter!** correspond to declarative, imperative and interrogative, respectively.

[3] Although we will focus our attention on the *ne* variant in this dissertation, *na* will be discussed in some detail especially when we examine the SFP's interaction with IMP and INTER, which is the topic of the next subsection. See Chapter 3 for details.

'Brian Eno's exhibition was superb *ne*↑/→/↓'

Pre-theoretically speaking, (11) can be understood to be an utterance which asks A's confirmation that the proposition is true: i.e., *ne* seems to serve the purpose of a (reversed) tag question (Saito and Haraguchi 2012; Saito 2015 and Miyagawa 2022). However, we will see in Chapter 3 that it is inaccurate to consider this SFP to be an equivalent to a tag question, with specific empirical evidence.

Let us next turn to IMP. It is possible for *na* to be attached to an imperative sentence, this time the verbal ending *-i* being different from the one observed in an imperative sentence with *yo* (i.e., *-e*) [4]:

(12) Mongen-made ni kaer-i *na*↑/→/↓
curfew-until by go.home-IMP *na*↑/→/↓
'Go home before the curfew *na*↑/→/↓'

The intuition shared across native Japanese speakers regarding the function of *na*↑/→ in IMP like the one observed in (12) is that it suggests A make the propositional content of IMP true (i.e., it suggests A act upon the sentence radical). Thus, it fundamentally functions as *suggestion/invitation*, just as its *yo* counterpart (5) does. *Na*↓ in (12) connotes that A should have come back home already, just like its counterparts with no particle+↓ or with *yo*↓ do.

As for interrogatives, the distribution of *ne* above this force basically echoes that of *yo*. An interrogative with *ne* can be realised with both ↑ and ↓. The reason for this absence of → will be clear in Chapter 3.

(13) Polar interrogative:

a. Ritchie-ga Ronnie-o kaiko-sur-u *ka* *ne*↑
Ritchie-NOM Ronnie-ACC fire-do Q *ne*↑
'Does Ritchie fire Ronnie *ne*↑'

b. Ritchie-ga Ronnie-o kaiko-sur-u *ka* *ne*↓
Ritchie-NOM Ronnie-ACC fire-do Q *ne*↓
'Does Ritchie fire Ronnie *ne*↓'

[4] Although *na* is preferred in imperatives in many of the dialects in Japanese, *ne* is also usable in imperatives in some dialects including the ones spoken in Kanazawa, Fukui, Okayama and Hiroshima.

As shown in (13a), *ne* in a polar interrogative cannot bear the rising SFC. The grammatical (13b) can be interpreted as a pure interrogative sentence, but it can optionally be interpreted as a rhetorical question (i.e., "Ritchie won't fire Ronnie") as well.

Wh interrogatives exhibit the same behaviour as *ne*: the SFP in *wh* interrogatives cannot bear the rising SFC as well, while the utterance can be (but not necessarily) understood rhetorically when the falling intonation is legitimately associated with the sentence.

(14) *Wh* interrogative:

a. Dare-ga Ronnie-o kaiko-sur-u *ka ne*↑
who-NOM Ronnie-ACC fire-do-PRS Q *ne*↑
'Who will fire Ronnie *ne*↑'

b. Dare-ga Ronnie-o kaiko-sur-u *ka ne*↓
who-NOM Ronnie-ACC fire-do-PRS Q *ne*↓
'Who will fire Ronnie *ne*↓'

No ka polar interrogative follows suit. The particle can be associated only with ↑ or ↓.

(15) *No ka* polar interrogative:

a. Ritchie-ga Ronnie-o kaiko-sur-u *no ka ne*↑
who-NOM Ronnie-ACC fire-do-PRS *no* Q *ne*↑
'Will Ritchie fire Ronnie *ne*↑'

b. Ritchie-ga Ronnie-o kaiko-sur-u *no ka ne*↓
who-NOM Ronnie-ACC fire-do-PRS *no* Q *ne*↓
'Will Ritchie fire Ronnie *ne*↓'

Finally, *no da wh* interrogative behaves similarly, in that it allows the rising intonation to be associated with the SFP, as shown in (16a). And (16b), where the falling intonation is associated with *ne*, does not necessarily get a rhetorical interpretation: i.e., it can receive a purely interrogative interpretation, along with a rhetorical interpretation. In short, it behaves in a similar manner as (10b).

(16) *No da wh* interrogative:

a. Dare-ga Ronnie-o kaiko-sur-u *no da ne*↑
who-NOM Ronnie-ACC fire-do-PRS *no da ne*↑
Intended. 'Who will fire Ronnie *no da ne*↑'

b. Dare-ga Ronnie-o kaiko-sur-u *no da ne*↓
who-NOM Ronnie-ACC fire-do-PRS *no da ne*↓
'Who will fire Ronnie *noda ne*↓'

It should be noted here that the flat tone → is awkward in interrogatives with *ne*, as shown below.[5]

(17) a. *Ritchie-ga Ronnie-o kaiko-sur-u *ka ne*→

b. *Dare-ga Ronnie-o kaiko-sur-u *ka ne*→

c. *Ritchie-ga Ronnie-o kaiko-sur-u *no ka ne*→

d. *Dare-ga Ronnie-o kaiko-sur-u no *da ne*→

Summing up the distribution of *ne*, we get the following table. Chapter 3 of this dissertation is devoted to the explanation for this paradigm of *ne*.

Table 1.2: The distribution of *ne* (initial version)

Type of force	Availability of *ne*	SFC
DECL	available	↑ & → & ↓
IMP	available	↑ & → & ↓
INTER	available	↑ & ↓

1.1.1.3 *Yo ne*

Thus far, we have overviewed the distribution of *yo* and *ne* in isolation. However, these two particles can, and in actuality do oftentimes co-occur. This subsection briefly overviews such cases.

First, these two SFPs can co-occur in declaratives sentences only in the order of *yo ne*, as shown in (18).

(18) a. King Crimson-ga kyonen rainiti-si-ta *yo ne*↑/↓
King Crimson-NOM last.year visit.Japan-do-PST *yo ne*↑/↓
'King Crimson visited Japan last year *yo ne*↑/↓'

[5] As Ryoichiro Kobayashi (p.c.) points out, *ka ne* actually sounds like (a strange type of) → at an intuitive level. The fall of the contour at *ka* is cancelled at the beginning of *ne*, and the pitch is *flattened* till the end of the particle. This is not the flat SFC → that the present dissertation focuses on, and hence I assume that this cancellation effect of the falling contour in the relevant grammatical context by *ne* is idiosyncratic to the particle, and keep the flattened contour separate from the →-contour discussed throughout the dissertation.

b. *King Crimson-ga kyonen rainiti-si-ta *ne yo*→

Indeed, from this fact, Miyagawa (2022) concludes that the syntactic head that realises *yo* is embedded within the head that encodes *ne*, as we will see in detail in Chapter 6.

However, once we turn our attention to imperatives, we find that there are some instances of *ne/na yo/ya*.

(19) Kaer-i *na yo*↑/→/↓
go.home *na yo*↑/→/↓
'Go home *na yo*↑/→/↓'

In (19), *na* precedes *yo*, and the entire sentence suggests A to go home. We also find an analogous example from Kanazawa, Fukui, Okayama and Hiroshima dialects of Japanese, in which *na* and *yo* are altered with *ne* and *ya*:

(20) Kaer-i *ne ya*↑/→/↓
go.home *ne ya*↑/→/↓
'Go home *ne ya*↑/→/↓'

(20) means essentially the same as (19).

It should be noted here that there are also instances of *yo na* in imperatives, as in

(21) Kaer-e *yo na*↓
go.home *yo na*↓
'Go home *yo na*↓'

To many of the native speakers of Japanese, these two instances of imperatives with these two types of SFPs sound semantically equivalent. However, there is one striking semantico-pragmatic difference between them. That is, the suggestion or command can be, but is not necessarily directed towards different types of DPs in (19, 20) and (21). In the former, the utterance is obligatorily directed to A with whom S converses. In contrast, the utterance of (21) is made towards A, but the imperative mood can be directed to someone other than A. This point becomes evident from the following example.

(22) Context: Paul and George are dissing Yoko, who they think always interferes with their music activity. Today, Yoko has come to the studio without their permission and is sitting

on the chair to listen to their new song. Being sick of Yoko's behaviour, Paul says to George with no intent of making the utterance heard by Yoko:

a. Kaer-e *yo na*↓

b#Kaer-i *na yo*↓

As shown in this contrast, when the command/suggestion is directed towards someone other than the direct addressee, the *na yo* sequence is infelicitous while *yo na* is perfectly grammatical. Interestingly still, if the utterance is instead directed towards Yoko in the same context, then both are grammatical:

(23) Context: Today, Yoko, whom Paul and George hate, has come to the studio without their permission and is sitting on the chair to listen to their new song. Being sick of such a behaviour of Yoko, Paul says to her

a. Kaer-e *yo na*↓

b. Kaer-i *na yo*↓

Regardless of George's presence, both (22a) and (23a) are fine, while (22b) sounds infelicitous whereas (23b) is licit. The infelicity of (22b) indicates that *na yo* in imperatives should presuppose the presence of A as the DP to whom the utterance and the imperative mood is directed. In contrast, in *yo na*, the person to whom the imperative mood is directed can be different from A. This contrast indicates that *na yo* imperative is a pure imperative sentence, the command/suggestion of which is directed towards A, while A of *yo na* imperative does not have to be the DP to whom the imperative is directed. This contrast is one of the primary objects of inquiry in Chapter 4 of the dissertation.

Finally, let us briefly look at interrogatives with *yo* and *ne*. As in (24) and (25), the *yo ne* sequence are compatible only with the falling contour, and *na yo*/*ne yo* is infelicitous across the board, regardless of the contour associated with it.

(24) a. Ritchie-ga Ronnie-o kaiko-sur-u *ka yo ne*/**na yo*↓

b. Dare-ga Ronnie-o kaiko-sur-u *ka yo ne*/**na yo*↓

c. Ritchie-ga Ronnie-o kaiko-sur-u *no ka yo ne*/**na yo*↓

d. Dare-ga Ronnie-o kaiko-sur-u *no da yo ne*/**na yo*↓

Thus, we arrive at the following summary of *yo* and *ne*. We will see that the present dissertation

Table 1.3: The distribution of *yo ne* (initial version)

Type of force	Availability of the sequence	SFC
DECL	*yo ne*	↑&↓
IMP	*na yo*	↑&↓
IMP	*yo na*	↑&↓
INTER	*yo ne*	↓

provides a straightforward account for the behaviour of the sequences of *yo* and *ne* in these three force types.

1.1.1.4 *Sa*

The last particle we overview is *sa*. Compared to the other two particles, *sa* has received little attention (if any) in the literature.

First of all, this particle is readily available in declarative sentences, as we have seen in (1d). However, there is one crucial property of *sa* that distinguishes it from the other SFPs: the particle can only be attached to a sentence that expresses S's state of knowledge, and sentences that express S's intention are incompatible with it.

(25) Boku-ga sara-o ara-u *sa*↓
I-NOM dish-ACC wash-PRS *sa*↓
'I'll do the dishes *sa*↓'

The propositional content of (25) is natural as the one in which S's intention is made explicit; however, once *sa* is attached to this sentence, the entire utterance necessarily means that S believes that S will do the dishes, which shows no hint of S's intention of doing the dishes. The utterance essentially gives the impression that S is talking about their intention from a *third party's perspective*, and hence under some circumstances (25) would sound even rude or untrustworthy (imagine a situation where S promised A to do the dishes to compensate their some minor blunder and

then A points out that the dishes aren't done, to which S reacts with (25)). Note also that *sa* is only compatible with ↓: the particle cannot be associated with ↑ or →. This is shown in (26).

(26) a. *Herbie-wa hon-o kat-ta *sa*↑

b. *Herbie-wa hon-o kat-ta *sa*→

Another interesting aspect of this particle pertains to its incompatibility with imperatives, as exemplified in

(27) *Kaer-e/i *sa*.
go.home-IMP *sa*
Intended. 'Go home *sa*.'

Regardless of the morpheme or the SFC, *a* does not cooccur with the imperative force type.

The same holds true for interrogatives: *sa* seems not to appear in interrogatives of any type, at first glance.

(28) a. *Ritchie-ga Ronnie-o kaiko-sur-u *ka sa*.

b. *Dare-ga Ronnie-o kaiko-sur-u *ka sa*.

c. *Ritchie-ga Ronnie-o kaiko-sur-u *no ka sa*.

d. *Dare-ga Ronnie-o kaiko-sur-u *no da sa*.

Interestingly, however, *wh* interrogative with *no* allows *sa* to be used, where *da* is deleted. In this case, *sa* has to be associated with the falling contour:

(29) Dare-ga Ronnie-o kaiko-sur-u *no sa*↓/*→/*↑

Thus, the resulting picture is what is shown as Table 1.4 below. Chapter 5 of the dissertation

Table 1.4: The distribution of *sa* (initial version)

Type of force	Availability of *sa*	SFC
DECL	available (only for state of knowledge)	↓
IMP	unavailable	Ø
INTER	available	only in a *wh no sa*↓

is devoted to the elucidation of the nature of this particle, in which why it exhibits this behaviour is explained.

1.1.2 Phrase Final Particles (PFPs)

Up to now, we have overviewed the distribution of *yo*, *ne* and *sa* as SFPs. However, the same particles can also be used phrase-finally, as in

(30) Stevie-wa *yo/ne/sa*, hon-o *yo/ne/sa*, kat-ta *yo/ne/sa*.
Stevie-TOP *yo/ne/sa* book-ACC *yo/ne/sa* buy-PST *yo/ne/sa*
'Stevie *yo/ne/sa* bought *yo/ne/sa* a book *yo/ne/sa*.'

Following Yamada (To appear), I call such particles *phrase final particles* (PFPs). Despite their wide distribution in colloquial speeches and the attention that they have caught in the literature, little about syntax, semantics and pragmatics of PFPs has been revealed (see McCready and Davis 2020, for instance). Saito and Haraguchi (2012) briefly note that they have basically the same semantic functions as their sentence-final counterparts, to which native Japanese speakers would concur in general, but they fail to provide substantial evidence for this assumption.

Chapter 7 of the present dissertation seeks to extend the analysis for the syntax, semantics and pragmatics (and prosody) of SFPs to be proposed in the chapters that follow to PFPs, and in so doing it aims to provide a substantial rationale for the intuitions expressed by Saito and Haraguchi. Furthermore, the analysis to be proposed updates the first ever serious investigation of PFPs conducted by Yamada (To appear), by answering the implicit questions left by the work. Until we get to Chapter 7, however, let us stick to the SFPs overviewed above, as most of the basic proposal will be made on the basis of the use of the particles at sentence final positions.

1.1.3 Summary

Summing up this subsection, we have seen that the SFPs *yo*, *ne* and *sa* exhibit some syntactic, semantic, pragmatic, and prosodic behaviours peculiar to them. The goal of the dissertation is to show that these particles pertain to the *semanticisation* of a certain DP's *commitment* or the lack thereof to the other DPs to act upon what the semantic component describes/means. And by doing so, I claim, these particles facilitate the discourse/context to be updated in a certain direction which is compatible with the *commitment*, or the lack of it, expressed by them. Before

moving on to the next chapter, let us briefly introduce two important notions which will be of great significance in the theory: *Context Change Potential* (i.e., discourse/context update) and *Commitment*.

1.2 The framework: Context Change Potential and Commitment

This section introduces two important theoretical notions that will play a central role in the model to be proposed. Obviously, the particles are discoursal –this is why they are also known as *discourse* particles. Particularly, they contribute to the update of (the status of) a context. But what specifically do they do in a given discourse? What does it mean that "they contribute to the update of (the status of) a context?" To address this issue in this dissertation, I first dissect this proposition and extract one crucial notion– the update of (the status of) a context. Calling this notion *Context Change*, we will see how we can model it based upon the proposals made in the previous literature.

1.2.1 Context Change Potential

Given that the SFPs we examine in this dissertation play a role as a link between the semantics and pragmatics, and given also that they are about the *transmission* of information according to the traditional descriptive studies of the Japanese language as we have seen above, the theory that I propose should capture this transmissive nature of the SFPs at the level of the semantics-pragmatics interface.

Dynamic theories of meaning advocated by many scholars (e.g. Stalnaker 1973; Karttunen 1974; Kamp 1981; Heim 1982; Groenendijk and Stokhof 1991a,b) provide us with a way to model such an effect of the SFPs. The model is fundamentally based upon the notion of the *Common Ground* (CG). The CG is defined as a set of propositions that the DPs mutually believe to be

true (Stalnaker 1978, 2002)[6], and the linguistic communication is modeled as the update of the (content of the) CG. Roughly speaking, a declarative sentence, which is conventionally associated with the *assertion* speech act, has the effect that S *introduces* the semantic content of the sentence radical to the context and *suggests* it be a member of the CG. Dynamic theories of semantics are the formal theories that seek to model these conversational moves and formally capture what it means to suggest or request that a proposition p be a member of the CG.

The particular dynamic theory of meaning that the present dissertation adopts is proposed by Davis (2010, 2011), which is based on Gungloson's (2003) theory (see also Ginzburg 1996; Han 1999; Portner 2004; Roberts 2012 among many others). In the context of analysing the differences among English declarative sentences with a falling tone, the ones with a rising tone, and interrogative sentences, Gungloson (2003) proposes a model of context changes (the update of the CG) in which each DP has an associated set of *public belief* (PB). PBs serve as the basis of the CG. A DP a's belief about a proposition p is a's PB iff "a believes p" is a mutual belief of a and their conversation partner b. Likewise, p is a PB of b iff "b believes p " is a mutual belief of a and b. According to this definition, the CG is an intersection of the PBs of all of the DPs. This is formally depicted in (31) in which the DPs in a particular context C are assumed to be just a and b.

(31) $\mathrm{CG}^{\mathrm{C}}_{a,b} = \mathrm{PB}^{\mathrm{C}}_{a} \cap \mathrm{PB}^{\mathrm{C}}_{b}$

Davis (2011, 44) assigns a compositional account of the dynamicity of context change based upon this idea by Gunlogson. Davis first decomposes a declarative sentence into the sentence radical p and the DECL operator. The DECL operator is defined to take p and returns a function of type $\langle e, \langle c, \langle c, t\rangle\rangle\rangle$. The type c and $\langle c, \langle c, t\rangle\rangle$ are defined as the types of discourse contexts and a function from contexts and a set of contexts, respectively. Thus, $[\![\textsc{decl}\ p]\!]$ is defined as (32), where $\mathbb{A}$ represents the set of DPs.

(32) $[\![\textsc{decl}\, p]\!] = \lambda\mathbb{A}\lambda\mathrm{C}.\ \{\mathrm{C'} \mid [\![p]\!] \in \mathrm{PB}^{C'}_{\mathbb{A}}\} = \lambda\mathbb{A}.\ \{\langle \mathrm{C}, \mathrm{C'}\rangle \mid [\![p]\!] \in \mathrm{PB}^{C'}_{\mathbb{A}}\}$

[6] Or it can be defined as a set of *possible worlds*. In this dissertation, I assume for the sake of brevity that the CG is a set of propositions.

C is defined as the discourse context where the utterance is made, which is of type *c*. *C'* is a set of contexts of type $\langle c, t\rangle$. $\langle$C, C'$\rangle$ is thus an ordered pair of these two, and this pair denotes the transition from C to C'. In other words, $\langle$C, C'$\rangle$ is defined as a potential context change from C to another context C' compatible with the content of the sentence-radical+force. Davis (and Gunlogson) takes this to mean that each utterance pragmatically expresses a *suggestion* or *request* for the update of the context from C to the one(s) in which the semantic content of the utterance satisfies a particular condition. Davis (2011) calls this meaning of each utterance, depicted as $\langle$C, C'$\rangle$ or $\langle c, \langle c, t\rangle\rangle$, *Context Change Potential* (CCP) and assumes that the meaning of an utterance is a CCP which takes an input context c and requires that the output context C' satisfies a certain condition specified.

In the case at hand, $[\![\textsc{decl}\ \ p]\!]$ gives us a function from e (an individual x) to a CCP from C to C' in which p is a member of a certain DP x's PB. The variable x takes a certain discourse agent (i.e. DP). Then, what determines the value of x? Gunlogson argues that in the case of English, it is a particular sentence-final intonational morpheme that determines the value. She argues that the falling tone ↓ is conventionally associated with S while the rising tone ↑ is associated with A. Thus, we get the following semantics for these two tonal morphemes:

(33) a. $[\![\downarrow]\!] = \lambda S_{\langle e,\langle c,t\rangle\rangle}.\ \{\langle$C, C'$\rangle \in S(\text{S})\}$

b. $[\![\uparrow]\!] = \lambda S_{\langle e,\langle c,t\rangle\rangle}.\ \{\langle$C, C'$\rangle \in S(\text{A})\}$

From (32) and (33), we get the following:

(34) a. $[\![\textsc{decl}\ p\ \downarrow]\!] = \{\langle$C, C'$\rangle \mid [\![p]\!] \in \text{PB}_S^{C'}\}$

b. $[\![\textsc{decl}\ p\ \uparrow]\!] = \{\langle$C, C'$\rangle \mid [\![p]\!] \in \text{PB}_A^{C'}\}$

Thus, in the case of English, a falling declarative sentence is semantically defined as a CCP which takes C and requires that in all output contexts C' in which p be a public belief of S, whereas a rising declarative is a function from C to the set of contexts C' where p is publicly believed by A. According to Gunlogson (2003) (and Davis 2011), this is precisely what the following two declarative sentences mean:

(35) a. Quincy wrote a new song↓

b. Quincy wrote a new song↑

According to Gunlogson and Davis, the utterance of (35a) updates the context from C to the one in which "Quincy wrote a new song" is a public belief of S, while that of (35b) updates the same context to the one in which the same proposition is publicly believed by A.

This is the basic idea of CCP. Under this model of dynamic semantics, the meaning of an utterance is formally defined as a CCP that takes the discourse context C and returns another context C', which should be compatible with the conditions defined by the sentence radical+force and (in the case of English,) sentence final intonational morphemes. The semantics of CCP is essentially *relational*: it denotes a relation between C and C', and the former is updated to the latter. Pragmatically, this means that an utterance serves as a *suggestion* or a *request* to update the context in accordance with what is expressed, as we have seen. Thus, even though (35b) specifies that the output/updated context be the one in which p is a member of $\mathrm{PB}_A^{C'}$, this does not mean that A *must* publicly believe that p is true: (35b) just *suggests* (or *requests*) that A publicly believe that p is true. As we will see in Chapter 3, Davis (2011) argues that this model can be expanded to the other force types that the present dissertation concerns: i.e., the imperative and interrogative clause types.

Before moving on to the next subsection, let us briefly note one conceptual virtue of this CCP-based account. This CCP account does not directly specify what kind of speech act each utterance is at the level of syntax/semantics. This is compatible with the definition of speech act in the literature on the philosophy of language: each speech act is an act that we as a language user do by the very means of uttering a linguistic expression (see Austin 1962; Searle 1969, 1975 among others). Thus, it sounds fairly implausible at best to assume that each speech act, such as assertion and question to mention just two, has a direct projection within the syntactic tree, as assumed in Heim et al. (2016) and much other work. Furthermore, one linguistic expression oftentimes has several options for its speech act function: as we will see in greater details later in Chapter 8, a declarative sentence can be assertive under some circumstances or directive in others.

This ambiguity cannot be captured if a certain speech act is syntactically encoded as a force or projected above it.

In contrast, the CCP-based account advocated here and adopted throughout this dissertation is immune to such problems. The account essentially under-specifies the output context in relation to the input context. Hence, each utterance is always subject to pragmatic reasoning based upon the status of the input context C so that the actual speech act is determined or successfully accomplished. For instance, for the utterance of "Thundercat released a new album" to serve its purpose as a directive speech act, at least the following conditions must be satisfied in C (and C') (among many others, of course): (i) S has the authority to order A to do something and (ii) A is willing to do a favour for S, or at least A has to obey S. These conditions/customs can be considered another instance of PB, which is defined socially. Given the factual assumption that one of the necessary conditions for a speech act to be accomplished is (roughly speaking) social customs (cf. Searle and Vanderveken 1985; Vanderveken 1994, 1999), the CCP-based model introduced in this subsection fares better with the speech act theories in the literature than the alternatives in which each speech act is directly encoded in the syntax. Speech act is an *act*, and syntax is not– neither is a functional head.

The next subsection introduces another concept –namely, *commitment*– that will be of great importance in the analysis that this dissertation provides for the SFPs.

1.2.2 Commitment

Gungloson (2003) and Davis (2011) assume that a's PB is equivalent to the set of commitments of a to each belief: i.e., it is a pool of a's commitments to each p. Thus, from (34a), an English declarative sentence with a falling intonation essentially means that the context update is suggested/requested from C to another in which S is committed to (the truth of) p. According to this conception, commitment is a bipartite relation between an agent a, and p–a is committed to p–, and this is equivalent to $p \in \mathrm{PB}_a^{\mathrm{C}}$, treating commitment and a DP's (public) belief as indistinct. Therefore, an utterance of a falling declarative sentence commits S to the truth of p, which

essentially means that S believes p's truth.

The same conception of commitment is endorsed by other scholars. Krifka (2016, 2019, 2021b,a), for instance, argues for what he calls the *Commitment Space Semantics*, in which commitment is directly associated with the assertoric force. Thus, a's commitment to p, which he represents as $a \vdash p$ following Frege (1918), is essentially a bipartite relation between a and p. In the context of discussing how the CG is updated in a discourse context, Farkas and Bruce (2010) take the same view of commitment (see also Roelofsen and Farkas 2015 and Farkas and Roelofsen 2017). Miyagawa (2022) seems to adopt the same conception of commitment in his analysis of the SFP *yo*, though he does not discuss the formal semantics and pragmatics of the particle and its relation with commitment in detail.

However, this definition of commitment can be refined a bit more. Based upon the inferentialistic approach to natural language semantics by Brandom (1994, 1997) (see also Brandom 1987, 2000, 2008, 2009), Geurts (2019) defines commitment as a tripartite relation among a person a, a person b, and p (see also Harris 2019, who endorses the same formal definition of commitment while differing in a crucial conceptual respect from Geurts).[7] Let us represent the three-place relation as $a \vdash^{\text{C}}_{b} p$, which means "$a$ is committed to b to act in accordance with p in C". The difference between this conception of commitment from the one endorsed by the works introduced in the last paragraph lies in that the former takes commitment as a tripartite relation which involves not just a and p, but also b, who is defined as an agent to whom a is committed to act in accordance with p, while this specification of b is absent in the latter. Is there any reason to prefer this definition of commitment over the other?

Notice already that commitment is essentially a restriction that an agent imposes upon themselves in C. For instance, by uttering a declarative sentence "Quincy wrote a new song," S is thus committed to A to act in C in accordance with the propositional content of this sentence (i.e., p

[7] Of course, inferentialism advocated by Brandom does not take the view of truth conditional semantics. Quite contrary, one of the primary aims of the normative inferentialism that Brandom builds speaks strongly against it, and is meant to provide an alternative framework to it without losing its empirical virtues. While I personally endorse the semantic project that Brandom embarks on, in this dissertation I adopt the traditional truth conditional semantics championed by Lewis (1970), as it fares much better, at least intuitively, with the compositional approach to sentential meanings which lies at the heart of the generative enterprise advocated here. See Pereplyotchik (2020) for a potential ecumenism between Brandomian inferentialism and Chomskyan compositional semantics without truth value promoted by Pietroski (2018).

= "Quincy wrote a new song"). This means that S takes liability to the truth of p against A in a particular context C. If p turns out false, then a will be punished, forced to present a persuasive explanation for why p is false despite their assertion of p's truth, and so forth. It is thus reasonable to assume that $a \vdash^{\mathrm{C}}_{b} p$ presupposes that $p \in \mathrm{PB}^{\mathrm{C}}_{a}$, since it should be irrational, or fairly odd to say the least, to take liability upon (the truth of) p, which they do not think is true. Thus, there is a conceptual reason to believe that $p \in \mathrm{PB}^{\mathrm{C}}_{a}$ is a prerequisite for a's commitment to (act upon the truth of) p.

Interestingly, Geurts (2019) argues quite convincingly that there are two types of commitments.[8] One is what Geurts (2019) calls *social commitment*, in which $a \neq b$ in $a \vdash^{\mathrm{C}}_{b} p$. Let us call this commitment *public commitment* instead, so as to make clear that the publicity of such a commitment is important for the theory to be proposed later. The other one is *private commitment*, in which $a = b$ in $a \vdash^{\mathrm{C}}_{b} p$. Let us call it *self commitment* instead, so that its character as a's commitment to a-self becomes more explicit. The former corresponds to what we have been discussing thus far: a type of commitment in which a takes public liability for p's truth. The latter, Geurts argues, is precisely a's belief. Belief is the commitment of a to a-self to act upon p. Hence, the belief that p is true is equivalent to $a \vdash^{\mathrm{C}}_{a} p$. This shows that by introducing another argument which specifies a particular agent to whom a person is committed to act upon p, the nature of belief is explained in a deeper fashion, along with its unification with public commitment. Thus, by assuming that commitment is a tripartite relation amongst a person, a person, and p, we can model the notion of belief and public commitment under a single heading.

A remark of caveat is in order, however.[9] As Yutaka Morinaga (p.c.) points out, PB is strictly speaking not equivalent to self commitment, as the former does, but the latter does not, encode that *all of the participants mutually believe* that a particular agent who is self committed to act upon p. But suppose that the "publicity" of an agent a's belief arises from publicisation of the belief by a and the social norm that if a declares p, then that a believes p should be normatively believed by all of the other DPs. Then, we can derive that the publicity in question derives from

[8] We will see more on this topic in Chapter 2.

[9] I deeply thank Yutaka Morinaga for a series of discussions and comments on the issue.

the joint process of externalisation of the declarative sentence and the social convention.

Once PB is re-defined in terms of publicisation of a belief and the social covenant, then the semantics of DECL should be changed accordingly. Under the present definition, a's PB is a set of ps that a publicly, or ostensively, believes. Crucially, a's PB does not have to be a set of ps that all of the DPs mutually believe that a believes p, although under most circumstances all of the DPs will come to believe that a believes p if a publicises the belief. I consider a's PB to further contain those default beliefs that are not explicitly verbalised *via* linguistic means such as "humans are mortal". Thus, what DECL does is to suggest a context update in such a way that p is a member of a particular agent's *belief set*, and that by virtue of uttering the sentence, the agent believes p is publicised, which will be later believed by the DPs under normal circumstances. From now on, PB refers to a set of *publicised beliefs*, not *public beliefs* in the sense of Gunlogson. Thus, $[\![\text{DECL } p]\!]$ has the following semantics:[10][11]

(36) $[\![p \text{ DECL}]\!] = \lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid p \in \text{PB}^{\text{C'}}_{\mathbb{A}}\}$

Notice already that under this definition, PB is nothing but a subset of a self commitment set SCS.[12] An agent a's self commitment set in C, which I write as SCS^{C}_a, contains beliefs that are both publicly stated and publicly unstated in C. Hence it contains a's beliefs which other DPs may not know that a actually believes. In contrast, it cannot be the case that PB^{C}_a contains elements not in SCS^{C}_a, since it is precisely the set of those beliefs in SCS^{C}_a that are made public. Therefore, the following is derived.

(37) $\text{PB}^{\text{C}}_a \subseteq \text{SCS}^{\text{C}}_a$

[10] As Yutaka Morinaga (p.c.) points out, the definition of PB by Gunlogson fares better with the semantics of DECL as a *speech act* operator. Declarative as a speech act type presupposes that an agent a believes the propositional content of the utterance and the other DPs believe that a believes it. Here I use the term "declarative" not as a parlance for a particular speech act type but as a traditional word for describing a particular sentence type. (Recall that one of the primary benefits of adopting the CCP-based approach to the meaning of an utterance is that we no longer need to encode each speech act type directly in the realm of syntax.) The nature of such sentence-type operators has been mysterious and not been revealed, but we will later see in Chapter 2 that the present proposal further gets rid of the distinction among DECL, IMP and INTER.

[11] It is plausible to assume that publicity of a PB derives from the very utterance (i.e., externalisation of the (private) beliefs in the set). Thus, a PB is a set of *publicised/externalised* self commitment. This condition of *externalisation* should be construed as a corollary of uttering (*viz.* externalising) a declarative sentence, as we have seen. Below, the publicisation effect of an utterance is directly encoded in the semantics of force operators, but bear in mind that this is an oversimplification adopted in this dissertation for the sake of convenience.

[12] In most cases, PB is a *proper* subset of a self commitment set, as it is almost impossible to share all of the beliefs one holds. However, since this practical impossibility is still a logical possibility, I assume that PB is a subset of a self commitment set.

Since (37) holds, the entailment in (38) holds as well.

(38) $p \in \text{PB}_a^{\text{C}} \rightarrow p \in \text{SCS}_a^{\text{C}}$

SCS is different from the same agent's public commitment set PCS, which represents that a is committed to some other person (or people) b than a-self to act upon p.

(39) $\text{PCS}_a^{\text{C}} := \{p \mid a\vdash_b^{\text{C}} p\}$

(40) a's public commitment in C to act upon $p := a\vdash_b^{\text{C}} p$

Compare (40) with (41), which represents the same agent's self commitment to act upon p in C.

(41) a's self commitment in C to act upon $p := a\vdash_a^{\text{C}} p$

If C contains more than two DPs, then a's PCS is defined as follows:

(42) $\text{PCS}_a^{\text{C}} := \{p \mid \forall x \in \mathbb{A}-\{\text{a}\} : a\vdash_x^{\text{C}} p\}$

Notice at this stage of discussion that just like in the case of PB_a^{C} and SCS_a^{C}, PCS_a^{C} is a subset of PB_a^{C}. This is because it is incoherent, if not impossible, for a to be committed to b to act in accordance with p without publicly believing in p's truth (assuming that a is a rational agent). Therefore, we have the following relation between these two:

(43) $\text{PCS}_a^{\text{C}} \subseteq \text{PB}_a^{\text{C}}$

From (37) and (43), we obtain:

(44) $\text{PCS}_a^{\text{C}} \subseteq \text{PB}_a^{\text{C}} \subseteq \text{SCS}_a^{\text{C}}$

Hence, (45) is also derived.

(45) a. $p \in \text{PCS}_a^{\text{C}} \rightarrow p \in \text{PB}_a^{\text{C}}$, and

b. $p \in \text{PCS}_a^{\text{C}} \rightarrow p \in \text{SCS}_a^{\text{C}}$

Furthermore, by virtue of the fact that both (public) beliefs and public commitments are commitments, we can define a *generalised commitment set* of a DP a in C (GCS_a^{C}) as follows, generalising over the agents to whom the commitment is made, as in

(46) $\textsc{gcs}^{\mathrm{C}}_a := \{p \mid \exists x \in \mathbb{A}\colon\ p \in a\vdash^{\mathrm{C}}_x p\}$

GCS is trivially satisfied when a declarative sentence is uttered, as it always encodes at least some agent's (typically S's) PB. In what follows, this GCS plays little role, as expected from its triviality.

These constitute the basics of the notion of commitment that will play a critical role in the explanation to be proposed in the present dissertation. Next, I will introduce a novel proposal which will explain the behaviour of the SFPs *yo*, *ne* and *sa*, based upon the notions of CCP and commitment.

1.3 Proposal: commitment as a guide to CCP

Notice from the previous section that the idea of commitment gives a substantial rationale for the definition of the $\mathrm{CG}^{\mathrm{C}}_{a,b}$ in (31). Recall that the $\mathrm{CG}^{\mathrm{C}}_{a,b}$ is defined as $\mathrm{PB}^{\mathrm{C}}_a \cap \mathrm{PB}^{\mathrm{C}}_b$. However, one thing is not clear in this definition: that is, it is not clear in (31) how this *sharing* of beliefs is accomplished. Just publicising your belief that "Quincy wrote a new song" does not do this job, because it is possible for your conversation partner(s) to doubt that Quincy wrote a new song based on various factors that they believe (e.g., Quincy's age, (lack of) passion for producing new songs, etc.). Thus, in order for *a*'s belief to be shared by *b*, *b* must *concur with* *a*'s belief in question.

How is this concurrence accomplished? Notice that *b*'s concurring with a belief about *p* essentially means that *b* also comes to believe *p*. This is equivalent to $b\vdash^{\mathrm{C}}_b p$. After *b*'s publicisation of this belief, *p* becomes a member of the $\mathrm{PB}^{\mathrm{C}}_{a,b}$. This is immediately followed by the addition of *p* to the $\mathrm{CG}^{\mathrm{C}}_{a,b}$.

From this, we can say that the process of the CG enrichment proceeds as follows:

(47) The process of the CG enrichment:

a. *a* publicises their belief about *p* (i.e., *a* publicises $a\vdash^{\mathrm{C}}_a p$),

b. *b* concurs with (accepts) it and thus adds *p* to their self commitment set (i.e., $p\in\textsc{scs}^{C''}_b$),

c. *b* publicises this belief, and by doing so *p* is added to the $\mathrm{CG}^{\mathrm{C}}_{a,b}$.

In this way, we can model the process of the CG update based on commitment. Notice that for the CG update, SCSs and PBs play a crucial role. Recall at this stage that publicisation of an agent's self commitment is precisely what the DECL operator and the externalisation of it do. Therefore, the processes in (47a, c) result from an utterance of a declarative sentence (with a falling tone, in English: cf. Gungloson 2003). So, within the framework of CCP advocated in this dissertation, (47) can be interpreted as follows based on what we have seen in Section 1.2.1:

(48) The process of the CG enrichment under the CCP model (in the case of English):[13]

a. *a* publicises $a\vdash^{\mathrm{C}}_{a} p$ *via* the utterance of $[\![\textsc{decl}\, p\ \downarrow]\!] = \{\langle \mathrm{C}, \mathrm{C}'\rangle \mid p \in \mathrm{PB}^{C'}_{a}\}$,

b. *b* concurs with (accepts) it $(b\vdash^{\mathrm{C}}_{b} p) = \{\langle \mathrm{C}', \mathrm{C}''\rangle \mid p \in \mathrm{SCS}^{C''}_{b}\}$,

c. *b* publicises $b\vdash^{\mathrm{C}}_{b} p = \{\langle \mathrm{C}'', \mathrm{C}'''\rangle \mid p \in \mathrm{PB}^{C'''}_{b}\}$,

d. As p is in both $\mathrm{PB}^{\mathrm{C}}_{a}$ and $\mathrm{PB}^{\mathrm{C}}_{b}$, it is added to the $\mathrm{CG}^{\mathrm{C}}_{a,b}$.

Thus, commitment serves as a *guide* to a CCP. Notice also, however, that an agent's PCS has no role to play in the update of the CG up to this point. Then, do we actually need it in the present model? Is the extension of commitment advocated here necessary?

Throughout this dissertation, I argue that we do need PCS to neatly explain the behaviour of the SFPs *yo*, *ne* and *sa*. Indeed, it will be shown that it is PCS that expounds the semantics and pragmatics of these particles.

In sum, the context update, one of the instances of which is the CG enrichment, proceeds on the basis of the notion of commitment.

1.4 Outline of the dissertation

The rest of the dissertation is organised as follows. In Chapter 2, the semantics and pragmatics of *yo* are explained in terms of the model advocated in this chapter. There it is argued that the particle encodes S's public commitment to act in accordance with the sentence radical, and the

[13]Regarding (48c), I assume in part with Krifka (2016) that a way of publicisation of a belief is not limited to the one *via* the DECL operator: it is possible to publicise one's belief by simply acknowledging a conversation participant's belief with the utterance of *yes* and so forth.

various discourse effects of it follow from this, once combined with a proper treatment of the SFCs and pragmatic reasoning.

In Chapter 3, we turn our attention to *ne*. The chapter is devoted to the demonstration that *ne*'s semantico-pragmatic behaviour is a result from its formal semantic property as the realisation of A's public commitment to act in accordance with the sentence radical, again tied with a particular SFC associated with it and pragmatic inference.

Chapter 4 combines the results of Chapter 2 and Chapter 3, and proposes that *yo ne* encodes both S's and A's public commitments to act in accordance with the sentence radical. This chapter also shows that the reversed *na yo* sequence has a different semantic profile than *yo ne*, and this will be explained from the syntactic character of the relevant construction.

Chapter 5 examines *sa*. This chapter gives a straightforward explanation for the behaviour of this particle that has hitherto escaped any serious theoretical attention. Particularly, it is shown there that this SFP nullifies S's public commitment to act upon p. Also, it is observed that the particle is only compatible with what will be later called *atelic* commitment. I will show that from this restriction the fact follows that *sa* is unavailable in imperatives.

Based upon the careful examinations of semantics and pragmatics of the SFPs in the preceding chapters, Chapter 6 proposes a concrete syntactic structure of the Japanese SFPs examined in this dissertation. The same chapter compares the proposed structure with some other potential alternatives in the previous literature, and concludes that the proposal laid out in this dissertation is both empirically and conceptually more desirable than them.

Chapter 7 extends the theory laid out in the preceding chapters to another instance of discourse particles, that is, the particles that are used phrase finally. I will show that the behaviour of such *phrase final particles* (PFPs) follows from the semantics of *yo*, *ne* and *sa* discussed in the preceding chapters, together with a neo-Davidsonian semantics. The syntactic structure of PFPs are also discussed, and it will be shown that there is a significant structural parallelism over various syntactic categories, which is organised on the basis of what will be later termed COM(mitment)P.

Finally, Chapter 8 summarises the overall result of this dissertation and discusses its conceptual

and empirical implications from various perspectives. In the same chapter, it will be shown that the proposal defended throughout the dissertation yields some far-reaching consequences for the general theories of the generative enterprise. The notion of commitment provides the rationale for the *strong minimalist thesis*, which dictates that syntax provides the optimal solutions for interface conditions. Furthermore, it will be demonstrated that the proposal also has important implications for biolinguistic and psycholinguistic investigations.

Chapter 2

Commitment and *Yo*

This chapter closely looks at *yo* and expounds its semantics and pragmatics. In the course of doing so, the basics of the proposal will be fleshed out. The proposal to be made in this chapter is primarily built upon Davis's (2011) pioneering analysis, but with some crucial modifications so that it can explain the data that Davis's analysis fails to capture.

2.1 The distribution of *yo*

This section overviews the distribution of *yo* in more detail than we did in Section 1.1.1.1. Particularly, this section examines the correlation among *yo*, SFCs and the force types with the intonational transcription data. The following subsections are sorted on the basis of the force types embedded within the SFP.

Before getting into the body of this section, let me note that all of the phonetic transcriptions are made *via* Praat. All of the data are produced by the author, with the naturalness checked by several Japanese linguists. The pitch range in the examples are all from 100 to 280 (Hz). The same applies to the data examined in later chapters as well.

2.1.1 Declarative

It is fair to say that much of the work on *yo* in the previous literature has been based on its behaviour in declarative sentences. Indeed, Saito and Haraguchi (2012) and Saito (2015) claim that *yo* is an assertion particle (which is conventionally associated with the force), the English translation of which would be "I'm telling you that$\cdots$". McCready (2005, 2009) also argues that the particle is associated with what the researcher calls *s(trong)-assertion*. McCready argues for this idea based on the examples of the sort in (49).

(49) a. Hikaru:

Mateus-ga Kyoto-ni ki-ta.
Mateus-NOM Kyoto-to come-PST
'Mateus came to Kyoto.'

b. Haruomi:

Uso!
lie
'No way!'

c. Hikaru:

Ki-ta (*yo*).
come-PST *yo*
Lit. 'Came (*yo*).'

With (49b), Haruomi expresses his disbelief about p = "Mateus came to Kyoto," asserted by Hikaru. Hikaru can re-assert to him that Mateus did indeed come to Kyoto either by saying *Ki-ta* or *Ki-ta-yo*, as shown in (49c). McCready observes that when *yo* is absent, (49c) is totally neutral with regard to Hikaru's desire to make Haruomi believe that Mateus came to Kyoto. In other words, Hikaru does not care about whether Haruomi comes to believe it or not. In contrast, according to McCready, when *yo* is used in the same example, Hikaru's intention of persuading Haruomi to come to believe it is brought to the fore. From this example, we can intuitively say that *yo* is pertinent to S's intention to make A believe p.

2.1.1.1 Rising intonation

Davis (2011), based on the initial observation by Koyama (1997), further refines this analysis by taking SFCs associated with *yo* into consideration, and argues that the specific pragmatic effects of the particle should be studied by examining the effect of the SFC assigned to it.

The first SFC that Davis examines is the rising intonation, which according to the approach advocated in Pierrehumbert and Beckman (1988) is to be transcribed as L%H%. For the sake of brevity, I annotate this rising contour as ↑. See (50b) adapted from Davis (2011) below.

(50) a. Ryuichi:

Yorugohan-o tabete-kara eiga-o mi ni ik-u?
dinner-ACC eat-after movie-ACC see to go-PRS
'Shall we go to the movie after having dinner?'

b. Yukihiro:

Mou shichiji sugi deshou? Eiga-wa hachiji kara hajimar-u #(*yo*↑)
already 7-o'clock past right movie-TOP 8-o'clock from start-PRS #(*yo*↑)
'It's already past 7, right? The movie starts at 8 *yo*↑'

As Davis observes, Yukihiro's utterance in (50b) sounds awkward without *yo*. Interestingly, in this case, *yo* bears the rising SFC, annotated here as ↑. The pitch contour of this utterance is shown in Figure 2.1. Following Koyama (1997), Davis assumes that this rising contour is the most basic SFC *yo* bears.

Intuitively speaking, (50b) has a discourse function of persuading Ryuichi to believe that the movie starts at 8. And by doing so, Yukihiro guides Ryuichi not to eat before the movie. Ryuichi's utterance in (50a) makes Yukihiro think of the possibility that Ryuichi forgot when the movie starts, considering the fact that he had suggested that they have dinner at 7. Given that a person going to a movie at least has access to the time the movie starts, it is natural to assume that Yukihiro's utterance of the second sentence in (50b) serves as a way of making sure that (Ryuichi knows that) the movie starts at 8.

Another example of the rising *yo* as a guide to action is observed in the following utterance from (Davis, 2011, 83):

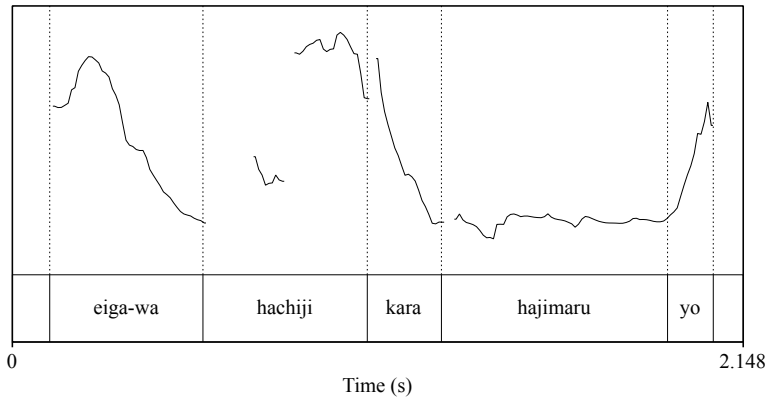


Figure 2.1: The pitch track of (50b)

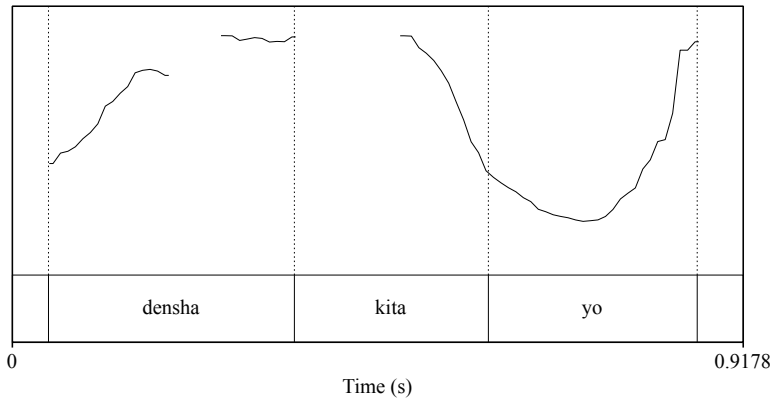


Figure 2.2: The pitch track of (51)

(51) Context: A is waiting for a train, and wants to get on, but doesn't notice that it has arrived. S knows this, and says

Densha ki-ta #(*yo*↑)
train come-PST #(*yo*↑)

'The train is here *yo*↑'

The context is specified in such a way that the information that the train has arrived invites A to get on that train. S's utterance (51) precisely does this, and in this case *yo* bears ↑. The pitch track of (51) is illustrated in Figure 2.2.

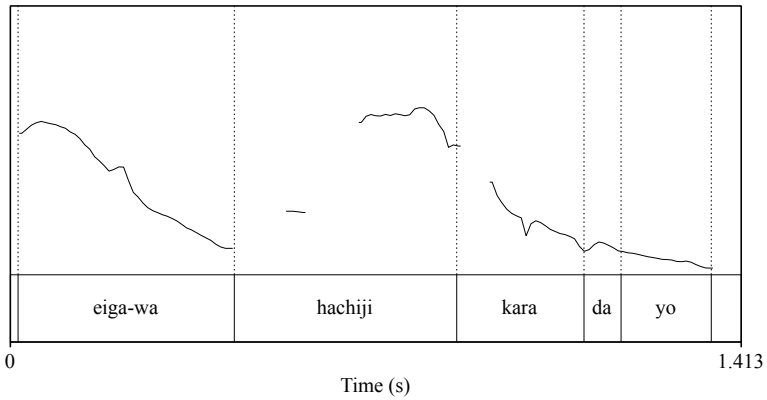


Figure 2.3: The pitch track of (52)

2.1.1.2 Falling intonation

Declarative sentences with *yo* oftentimes bear a falling SFC as well, which I annotate with ↓. An example of this pattern is again adapted from (Davis, 2011, 78):

(52) a. Ryuichi:

Eiga-wa kuji kara dakara gohan-o taber-u jikan-wa juubunni ar-u *ne*.
movie-TOP 9o'clock from because food-ACC eat-PRS time-TOP sufficiently be-PRS *ne*

'Since the movie starts at 9, there's plenty of time to eat.'

b. Yukihiro:

Chigau *yo*↓, eiga-wa hachiji kara da *yo*↓
wrong *yo*↓ movie-TOP 8-o'clock from be.PRS *yo*↓

'That's wrong *yo*↓ The movie starts at 8 *yo*↓'

The example is quite similar to (50) but it is crucially different from (50) in that Yukihiro's utterance is meant to *correct* Ryuichi's assumption that the movie starts at 9. In such a case, *yo* bears the falling contour ↓ in lieu of ↑, as shown in Figure 2.3.

2.1.1.3 Flat intonation

These two patterns briefly overviewed in the last two subsections are relatively well-acknowledged in the literature. However, there is another SFC which can be associated with *yo* in a declarative

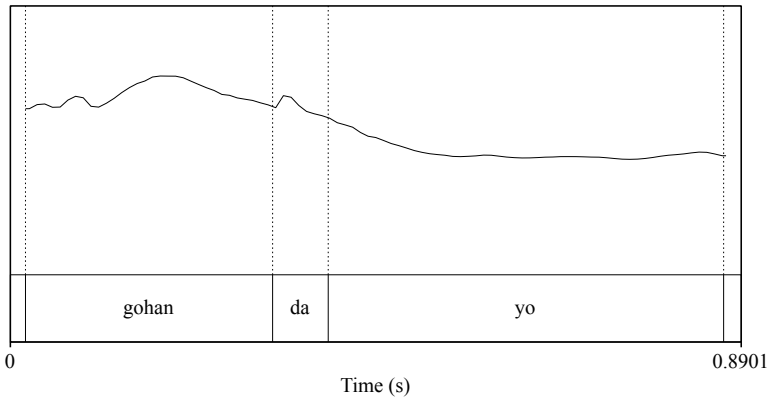


Figure 2.4: The pitch track of (53)

sentence. The SFC has a *flat* → profile, which is exemplified in the following example along with its pitch track in Figure 2.4.

(53) Context: Kate is a mother of two children. While she is cooking, these children are playing in the park together. Once the dinner gets ready, Kate goes to the park and says to the children

Gohan da *yo*→
food be *yo*→

'Dinner is ready *yo*→'

The pragmatic effect of this utterance is very much similar to that of the utterances in which *yo*↑ is used, at least pre-theoretically: (53) is directed to the children as a guide to stop playing and get ready to have dinner. Davis (2011) reports that native speakers' intuition is that *yo*→ has the same function as *yo*↑.

However, upon closer scrutiny, it becomes clear that *yo*→ is not interchangeable with *yo*↑ in declarative sentences. (53) already illustrates this point: actually, *yo*↑ is fairly awkward, if not impossible, in this context. Conversely, *yo*→ is infelicitous in (50). What is the cause of this difference? Recall that *yo*↑ in (50b) has a function of persuasion, while no such discourse effect is observed in *yo*→ in (53). From this contrast, we can at least say that *yo*→ does not have such a persuading function.

Then, what is the unique function of *yo* with the flat SFC? Notice here that (53) is uttered *out of the blue*: i.e., there is no immediate context that makes it an answer to a *Question under Discussion* (QUD) such as "When will dinner be ready?," "When should the children go home?" and so forth (cf. Roberts 2012; Büring 2003; Farkas and Bruce 2010; Constant 2014 among many others). What accommodates the sentence in the context is rather a common sense that "one should go home once dinner is ready". Based upon this common sense, Kate suggests her children come back home by uttering the *all-new sentence* (53). The effect of suggestion is ancillary here: the primary function of the sentence is to just inform the children of the fact that dinner is ready, and the effect of suggestion results from pragmatic reasoning (cf. Grice 1975).

In contrast, (50a) provides an immediate QUD that accommodates (50b): the second sentence in (50b) is meant to persuade A to believe that the movie starts at 8, and by doing so Yukihiro intends to resolve the QUD with the answer that they should not have dinner before the movie. This resolution of the QUD is essentially pragmatic: Yukihiro's utterance in question *per se* has a persuading function, and this function invites Ryuichi to a series of rational inferences that lead him to the conclusion that they should not have dinner before going to the movie. Thus, from these examples, we can summarise that the flat *yo* has an intuitive function of *providing new information*, while its rising counterpart serves to *persuade* A to believe that p.

These considerations yield the following table that summarises the intuitive function of *yo* in declaratives when associated with a particular SFC.

Table 2.1: The distribution of *yo* in declaratives (to be revised)

SFC	Discourse Function
↑	Persuasion regarding the truth of p
↓	Correction of A's belief about p
→	Provision of new information p

2.1.2 Imperative

The next force type we discuss is *imperative*. We will see that the three SFCs we have seen in the last subsection are all readily available in imperative sentences.

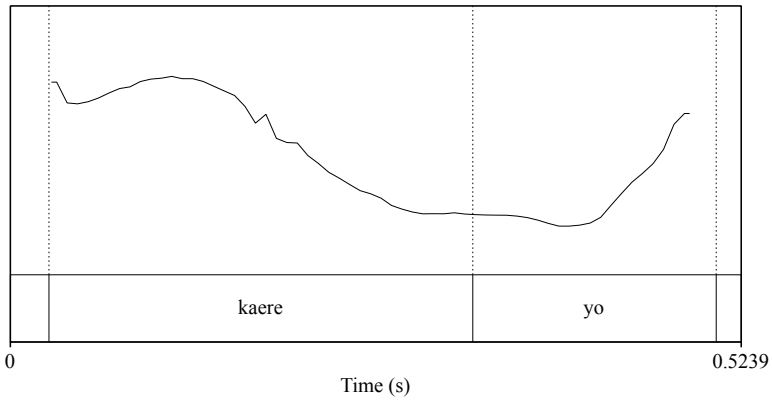


Figure 2.5: The pitch track of (54)

2.1.2.1 Rising intonation

The rising SFC can be associated with *yo* in imperatives. This is shown in (54) and Figure 2.5.

(54) Context: A teacher finds some students playing at the playground at 6:50 pm and the curfew is 7. After telling the students that the curfew is 7, he says

Mongen-made ni kaer-e *yo*↑
curfew-until by go.home-IMP *yo*↑

'Go home before the curfew *yo*↑'

Here is another example of *yo* with ↑ in an imperative sentence:

(55) Ayamar-e *yo*↑
apologise-IMP *yo*↑
'Apologise *yo*↑'

The imperative sentences with *yo*↑ illustrated above have a function of persuading A to do what is expressed in the imperative sentence. Thus, with (54), S intends to make sure that A has the intention of going home; similarly, with (55), S seeks to make sure that A intends to apologise to someone who S thinks deserves A's apology.

2.1.2.2 Falling intonation

↓ is also able to be associated with *yo* in imperatives:

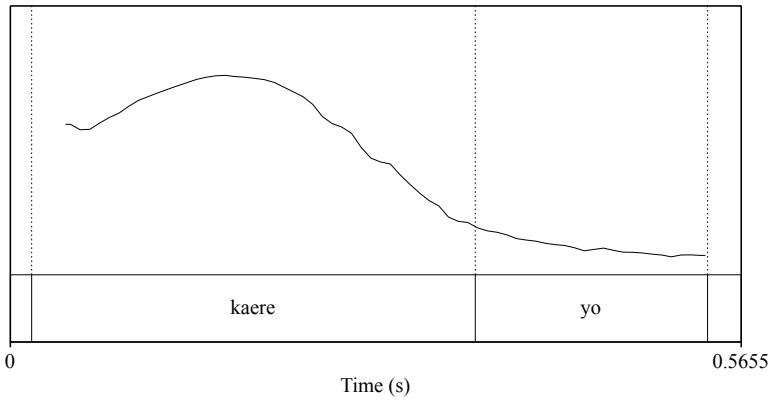


Figure 2.6: The pitch track of (56)

(56) Context: A teacher finds some students playing at the playground at 8 pm despite the curfew being 7. The teacher tells the students

Mongen-made ni kaer-e *yo*↓
curfew-until by go.home-IMP *yo*↓

'Go home before the curfew *yo*↓'

Intuitively speaking, (56) connotes that S as a teacher is angry at the students, or at least does not feel comfortable seeing them break the curfew. Thus, the imperative with *yo*↓ in (56) has much stronger *preaching* flavour than (54), in which the rising SFC is used instead of ↓. Interestingly, it is awkward to associate the falling intonation with *yo* in (54), where there is no rational reason to preach the students as no curfew is broken at the moment. Conversely, no offensive or preachy effect arises when ↑ is associated with *yo* in (56). Therefore, the contrast between these two patterns illustrate that they are not mutually interchangeable: ↑ is associated with persuasion, while ↓ is oftentimes tied with preachment. Notice already that preachment presupposes the intention of *correction*: one does not preach someone for something that does not have to be corrected. One might be able to alternatively say that correction is a category in which preachment is included as its sub-type. Therefore, the intuitive function of the falling *yo* in imperatives can be called *correction*, just as in declaratives.

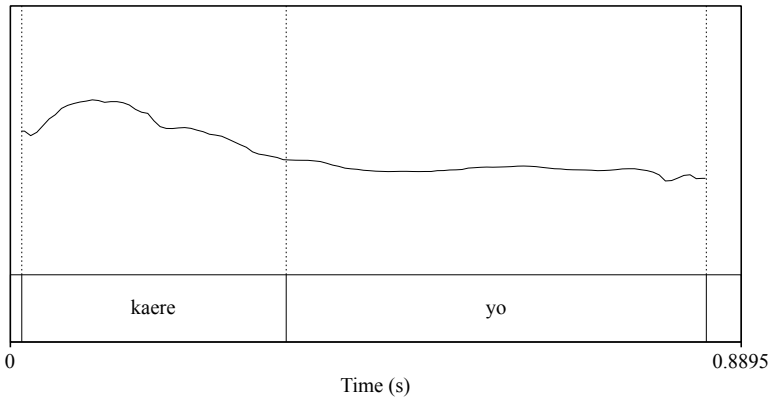


Figure 2.7: The pitch track of (57)

2.1.2.3 Flat intonation

Lastly, *yo*→ is also available in imperatives, as shown in (57) and Figure 2.7.

(57) Context: A teacher finds some students playing at the playground at 5:30 pm. Knowing that the curfew is 7, the teacher tells the students

Mongen-made ni kaer-e *yo*→
curfew-until by go.home-IMP *yo*→

'Go home before the curfew *yo*→'

The discourse function of this imperative sentence with the flat SFC assigned to *yo* is clear: the sentence as a whole *suggests* A to go home. (57) has no connotation of preachment or offence: in that sense, *yo*→ is clearly different from *yo*↓. Likewise, it is different from *yo*↑ as it does not have the effect of persuading A's relevant intention. Indeed, neither *yo*↑ nor *yo*↓ is available in (57); conversely, *yo*→ is unavailable in the contexts where one of the other two is felicitous. Notice here that what is suggested by (57) is a *new intention* for the students: it is still 5:30 pm, and hence it is natural for the teacher to assume that the students do not have the intention of going home at the moment. Thus, the suggested intention is a new one to the students, and from this we can presume that *yo*→ functions as a provision of a new intention to A.

Summing up this subsection, the interaction between *yo* and SFCs in imperative sentences can

be summarised as follows:[1]

Table 2.2: The distribution of *yo* in imperatives (to be revised)

SFC	DISCOURSE FUNCTION
↑	Persuasion of A's intention of doing *P*
↓	Correction of A's intention to do *P*
→	Provision of a new intention for A to do *P*

2.1.3 Interrogative

Yo in interrogatives exhibits a strikingly different prosodic behaviour: it can be associated only with ↓. See (58), (59), (60) and (61) below, repeated from (7), (8), (9) and (10), respectively.

(58) Polar interrogative:

Ritchie-ga Ronnie-o kaiko-sur-u *ka yo*↓
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *yo*↓

'Will Ritchie fire Ronnie *yo*↓ (No way!)'

(59) *Wh* interrogative:

Dare-ga Ronnie-o kaiko-sur-u *ka yo*↓
who-NOM Ronnie-ACC fire-do-PRS Q *yo*↓

'Who will fire Ronnie *yo*↓ (No one!)'

(60) *No ka* polar interrogative:

Ritchie-ga Ronnie-o kaiko-sur-u *no ka yo*↓
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *yo*↓

'Will Ritchie fire Ronnie *yo*↓ (I'm surprised!)'

(61) *No da wh* interrogative:

Dare-ga Ronnie-o kaiko-sur-u *no da yo*↓
who-NOM Ronnie-ACC fire-do-PRS *no da yo*↓

'Who will fire Ronnie *no da yo*↓'

[1] *P* corresponds to the sentence radical embedded within IMP.

All these sentences cannot bear the other SFCs (i.e., ↑ or →). As for the semantics of these interrogatives, we have seen in Chapter 1 that polar and *wh* interrogatives with *yo*↓ are obligatorily interpreted rhetorically. The *no ka* polar interrogative in (62) expresses S's surprise, bewilderment etc. about the fact that Ritchie fires Ronnie. Finally, (63), which exemplifies *no da wh* interrogative, is in principle a pure *wh* interrogative, but it can also be interpreted rhetorically.

Thus, we have the following table that summarises the distribution of *yo* in interrogatives:

Table 2.3: The distribution of *yo* in interrogatives (to be revised)

INTERROGATIVE TYPE	DISCOURSE FUNCTION
Polar INTER	Rhetorical question
Wh INTER	Rhetorical question
No ka polar INTER	Rhetorical question (surprise, bewilderment etc.)
No da wh	*Wh* interrogative

2.1.4 Summary

Summing up: *yo* can be associated with either ↑, ↓ or → in declarative and imperative sentences, while it can only bear ↓ in interrogatives. ↑ is associated with persuasion; ↓ is tied with correction; and → functions as a provision of a new information/intention in declaratives and imperatives. In interrogatives, *yo*↓ exhibits a variety of discourse functions depending on the type of the interrogative sentence. Polar and *wh* interrogatives with *yo*↓ obligatorily yield a rhetorical reading. *No ka* polar interrogative sentences with the falling *yo* express S's surprise, bewilderment and so forth about *p*. And *no da wh* interrogative sentences are pure *wh* questions even if they are embedded within *yo*↓. In the next section, I propose an account that explains the behaviour of *yo* tied with a particular SFC in each force type based on the model introduced in the last chapter.

2.2 Proposal 1: *Yo* in declaratives as S's public commitment to act upon (the truth of) *p*

This section is devoted to the explanation of *yo*'s semantics and pragmatics in declarative sentences. It will be shown that the particle functions as an articulation of S's commitment to the other DPs

to act upon the truth of p. In other words, *yo* expresses S's public commitment to act in accordance with p('s truthfulness).

2.2.1 Bare declaratives

What is the semantics of *yo*? What kind of role does each SFC play when associated with this particle? To answer these questions, let us first discuss cases in which *yo* is *not* involved. See (62).

(62) Siai-ga hajimar-u↓
match-NOM start-PRS↓
'The match begins↓'

Recall from the last chapter that DECL is a function of type $\langle st, \langle e, \langle c, ct\rangle\rangle\rangle$. In the case of English, Gungloson (2003) argues, the falling tone ↓ specifies that the x be filled by S, as we have already seen in Chapter 1. Davis (2011) basically follows this idea by Gunlogson and assumes that the falling tone in a bare declarative sentence in Japanese also exhibits the same function, assuming that ↓ is a basic tone associated with a bare declarative. Thus, the declarative sentence in (62) has the following semantics, where p = "the match begins":

(63) $[\![\text{DECL}\, p\ \downarrow]\!] = \{\langle \text{C, C'}\rangle \mid p \in \text{PB}_S^{C'}\}$

I basically follow this idea and treat DECL in the same way that Davis and Gunlogson do: that is, DECL functions as a publicisation of a belief that p is true. However, with regard to the treatment of the SFC tied with a bare declarative sentence, I depart from these authors. For one thing, Japanese bare declarative sentences can also bear →. See (64) and Figure 2.9 below.

(64) Siai-ga hajimar-u→
match-NOM start-PRS→
'The match begins→'

Despite the flat profile of the sentence final contour, the utterance still shares the basic semantics with (62): it publicises S's belief that the match starts (now). The availability of this flat SFC when S's belief is publicised indicates that it is not ↓ that is responsible for specifying the holder of the PB in a declarative sentence.

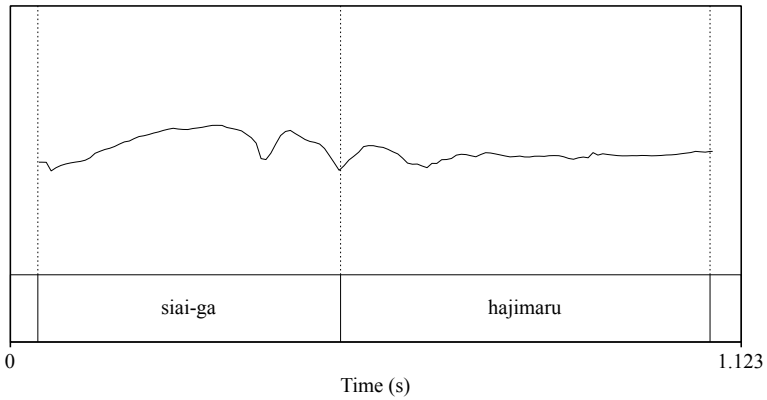
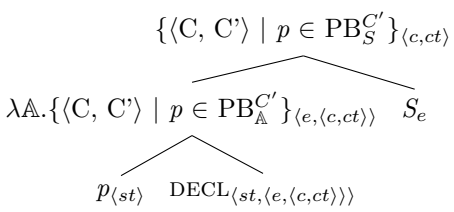


Figure 2.8: The pitch track of (64)

In this connection, it should be noted that there is a clear difference between these two examples in terms of a discourse effect. (62), in which the falling contour is associated with the entire sentence, is felicitous as an answer to questions such as "What starts?": i.e., a bare declarative sentence with the ↓-ending serves as an answer to a specific QUD. In contrast, (64) is awkward in such contexts. (64) is fine only in contexts where no immediate QUD exists that would be resolved by the utterance, or where there is a QUD of the sort "What's the noise," which makes the answer all-new. Thus, it is felicitous when uttered out of the blue, or at least A does not have anything in mind about the match or any question to be resolved by the utterance. In other words, the flat contour is compatible with *all-new information* (see Selkirk 1984; Lambrecht 1994; Truckenbrodt 1995; Ishihara 2003; Sugahara 2003; Büring 2016b; Kratzer and Selkirk 2020 among many others for the correlations between prosody and information structure in various languages).

Hence, the SFC does not seem to introduce the argument (i.e. S) to the semantic computation: rather, it is tightly connected with the status of the context c, in which a sentence with the SFC in question is uttered. Given this, and given also that a declarative sentence should publicise S's belief anyway, I assume that there is a syntactic head S in the treetop in the case of a bare declarative, and this head serves as an argument to $[\![\text{DECL } p]\!] = \lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid p \in \text{PB}_{\mathbb{A}}^{C'}\}$:

(65)



(65) illustrates that it is not a specific SFC but the *S*-head in the treetop that determines that S holds the PB of which p is an element. In our account, each SFC rather reflects the nature of C: if C contains a QUD to be resolved by the utterance, ↓ is associated with the declarative sentence, and if C accommodates no such presupposition, the sentence bears →.

It should be noted at this stage that information structurally *Given* or *presuppositional* elements (in the sense of Jackendoff 1972; Rooth 1985, 1992; Kratzer 1991; Schwarzschild 1999 and much other work) are prosodically weakened in many languages including Japanese (Ishihara 2003, 2011, 2016 and Sugahara 2003). To understand the observation, let us first familiarise ourselves with these concepts. Roughly speaking, an expression is *presupposed* if it is part of the CG. A bit more formally, it can be defined as follows (from Schwarzschild 1999, 151 with modification):

(66) Definition of *presupposition*:

A part of an utterance X counts as *presupposed* iff it has a salient antecedent A and

a. if X is type e, then A and X co-refer;

b. otherwise: A entails ∃-type shifted X.

Let us see what this definition means with a specific example from (52). Ryuichi's utterance introduces the proposition "the movie starts at 9". To this assertion, Yukihiro reacts with "the movie starts at 8". Obviously, Yukihiro's utterance is meant to add the new, correct information about the time when the movie starts. Here, compare Ryuichi's remark with Yukihiro's utterance. One immediately finds that all of the parts of Yukihiro's utterance but "8" (i.e., the new information) are already made salient in C by Ryuichi's false claim. In this sense, (52a) is a salient antecedent to "the movie starts at 8". Next, ∃*-type shifted X* in (66b) is equivalent to X with the element corresponding to *new information* or *focus* substituted to a variable x bound by the existential quantifier ∃. Thus, in the case at hand, it is $\exists x$[the movie starts at x]. Apparently, this is entailed

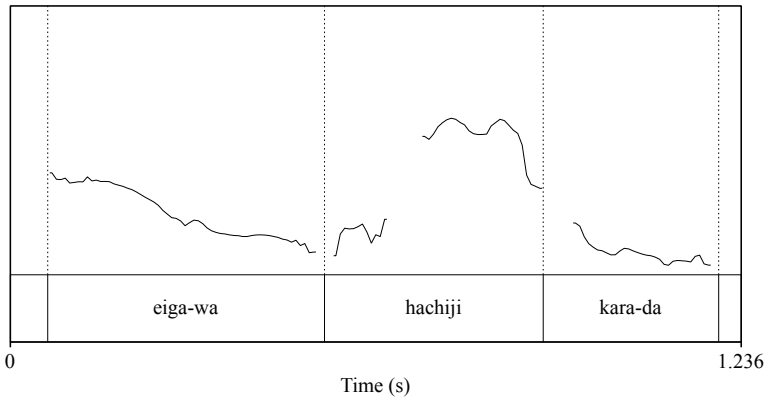


Figure 2.9: The pitch track of *Eiga-wa hachiji-kara da*, in which $\exists x$[the movie starts at x] is presupposed

by the antecedent "the movie starts at 9," the utterance by Ryuichi. Therefore, in (52b), $\exists x$[the movie starts at x] is presupposed.

With this background, Ishihara (2003, 2011, 2016) and Sugahara (2003) among others experimentally show that the presupposed part of an utterance receives prosodic weakening. Particularly, the presupposed part or a *Given* element exhibits strong f_0 downtrending, and hence it is significantly reduced in pitch.[2] Thus, the pure declarative version of (52b) has the prosodic profile in Figure 2.9, which simplifies the utterance in question for the sake of clarity. Compare this with the same sentence uttered as an answer to "Is there anything new about the movie?," which is illustrated in Figure 2.10. As the reader can see, the pitch of *kara da* is significantly lowered in Figure 2.9, in which it is part of the presupposition. In contrast, the information expressed by *kara da* is not presupposed in Figure 2.10.

Notice already that the lowering effect is only observed in sentences where the SFC is realised as $\downarrow$, precisely because $\rightarrow$ is only associated with all-new sentences, which by definition has no presuppositional part. Conversely, this means that all of the declarative sentences with the $\downarrow$ SFC contains at least an implicit presuppositional part: i.e., the utterance of such a sentence is made in connection with the elements in the CG. This will be of crucial importance in our proposal.

[2]There are a load of factors that come into the presence/absence of pitch reduction (e.g., the placement of a focussed element within a sentence: Ishihara 2003). In this dissertation, I simply assume that the presuppositional part of an utterance is prosodically weakened.

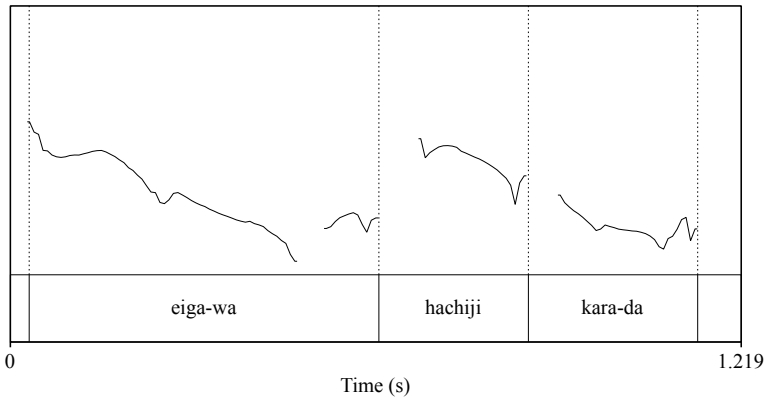


Figure 2.10: The pitch track of *Eiga-wa hachiji-kara da*, in which $\exists x$[the movie starts at x] is *not* presupposed

In sum, we find two basic SFCs in a pure declarative sentence: one is $\downarrow$, and the other is $\rightarrow$. The former is associated with the contents in the CG, while the latter isn't. Regardless of the SFC associated with the utterance, a bare declarative sentence is semantically a CCP which takes S as an argument and suggests a context update to C' (from C) in which p is a member of S's PB.

2.2.2 Declaratives with *yo*

Now, let us turn to declaratives with *yo*. As we have seen, in declarative sentences, *yo*$\uparrow$ serves as persuasion regarding p('s truth); *yo*$\downarrow$ is meant to correct A's belief from one to p; and *yo*$\rightarrow$ is a provision of new information p. It should be desirable that our account explain the semantics of *yo* in a unified manner, and each specific discourse function arises due to a particular SFC with which *yo* is associated. This means that our proposal regarding the semantics of *yo* should be able to abstractly cover *persuasion*, *correction* and *provision of new information*, and it should engender each one of them from the interaction between the particle and the SFCs. How can this be achieved?

In this connection, it is suggestive to observe that *yo* is pertinent to S's commitment to A to act in accordance with the truth of p which it embeds. This is already evidenced by (49). In (49a), Hikaru asserts p = "Mateus came to Kyoto". Haruomi, then, expresses his disbelief about

p in (49b). There are two ways for Hikaru to react to Haruomi's utterance, as depicted in (49c). One is to utter a bare declarative without *yo*, namely, *ki-ta* "come-PST". The other is to use *yo* and say *ki-ta yo*. As noted in Section 2.1.1, McCready claims that this presence/absence is pertinent to Hikaru's desire, intention, suggestion etc. of making Haruomi believe that Mateus indeed came. When *yo* is used, such an intention becomes explicit; when it is absent, no such intention is explicitly declared.

One way to model such a function of *yo* is to introduce the notion of commitment in the sense defined in the last chapter: i.e, commitment as a tripartite relation among a person, a person and a proposition p. In the case of *yo*, it is clear that the utterer of the sentence is the person who is thus publicly committed to the other DPs to act in accordance with p. That is, it is S who is publicly comitted to the DPs other than S-self to act upon p.

Recall here that $[\![p \text{ DECL}]\!] = \lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid p \in \text{PB}_{\mathbb{A}}^{C'}\}$. *Yo* should be an element that does the following two jobs: (i) to specify the output context C' in such a way that in that context, a DP is committed to all of the other DPs to act upon the truth of p, and (ii) the DP thus publicly committed is S.

To achieve these two, I decompose the function of *yo* into two heads. The first head is the $\vdash$-head, based on the earlier proposal by Krifka (2016, 2019, 2021b,a). This head takes a CCP as its input and returns another CCP in which the output context C' is specified as one in which an agent x is committed to all of the other DPs to act in accordance with $p \in \text{PB}_x^{C'}$ (which is defined by $[\![p \text{ DECL}]\!]$). This means that $\vdash$ restricts C' in such a way that it only contains those contexts which contain $p \in \text{PCS}_x^{C'}$. Thus, $\vdash$ has the following semantics when combined with $[\![\text{DECL } p]\!]$:

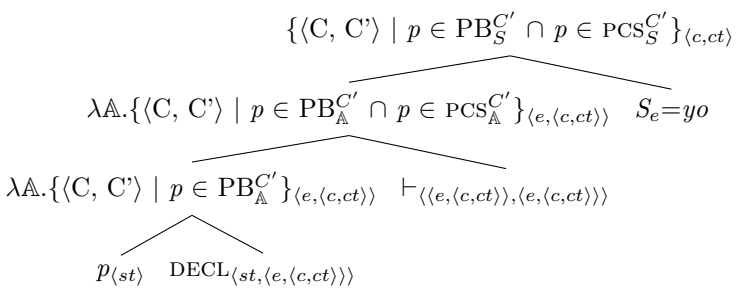
(67) $[\![p \text{ DECL } \vdash]\!] = \lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid p \in \text{PB}_{\mathbb{A}}^{C'} \cap p \in \text{PCS}_{\mathbb{A}}^{C'}\}$, where
for a DP a, $\text{PCS}_a^{C'} := \{p \mid \forall \text{x} \in \text{DP} - \{\text{a}\}\text{: a}\vdash_x^{\text{C}} p\}$

Thus, *yo* can be considered a *force modifier* of type $\langle\langle e, \langle c, ct\rangle\rangle, \langle e, \langle c, ct\rangle\rangle\rangle$.

The other head is *S*, which I already introduced in the last subsection. This head provides an argument of type e and specifies that it be S who holds the PB and the public commitment.

Combining these ideas together, we derive the following LF structure:

(68)



I further claim, in line with *Distributed Morphology* (DM) (Halle and Marantz 1993, Harley and Noyer 1999 and Embick and Noyer 2007), that when S embeds $\vdash$, it is realised as *yo* in the process of *Vocabulary Insertion* (VI) (see also Svenonius 2012 for a similar idea to VI). This is illustrated in (69).

(69) $S \rightarrow yo / \vdash\_\_\_$

Thus, we have the following semantics:

(70) $[\![p \text{ DECL } \vdash \ yo]\!] = \{\langle \text{C, C'}\rangle \mid p \in \text{PB}_S^{C'} \cap p \in \text{PCS}_S^{C'}\}$, where

$\text{PCS}_S^{C'} := \{p \mid \forall x \in \mathbb{A} - \{\text{S}\}\text{: S} \vdash_x^{\text{C}} p\}$

Informally speaking, *yo* is a phonetic realisation of the *S*-head which embeds $\vdash$, and the pragmatic function of $\vdash$+*yo* is to make S publicly committed to act in accordance with p when it embeds a declarative sentence. In short, when *yo* is used in a declarative sentence, it makes S responsible for the truth of p.

Notice that *yo*'s effect of persuading A to believe p, noted by McCready, is readily explained by the present account, but in an indirect manner. Since *yo* necessarily involves all of the DPs other than S-self as the agents to whom S is committed to act in accordance with p, the utterance of a declarative sentence is directed towards those DPs, which includes A. Furthermore, being publicly committed to act in a certain way is *costly* in a sense: it is a self-restriction that can be avoided if S wants. This restriction is different from laws, social customs and so forth in its nature: these restrictions are imposed upon the individual from the outside, whereas the imposition of the liability that comes along with the use of *yo* is entirely up to S.[3] Therefore, it is natural to assume that S as a rational person would avoid using the particle if there is no merit in doing so.

[3]Saving cases where S utters it under duress, S's life is at stake, and so forth.

One of such merits should be that it increases the chance of persuading A to believe the content of the sentence radical *via* pragmatic reasoning. The inference that S intends A to do *via* S's utterance of $[\![p \text{ DECL} \vdash yo]\!]$ goes as follows:

(71) The inference that S intends A to do *via* S's utterance of $[\![p \text{ DECL} \vdash yo]\!]$:

a. S used *yo* despite the fact that S could have avoided using it.

b. There must be a reason for S's use of the SFP.

c. By imposing a self-restriction upon S-self (liability for the truth of p), S seeks to amplify the credibility of p's truthfulness.

If we assume with Roberts (2012) among others that one of the primary goals of a conversation is to enrich the DPs' (public) knowledge, this intention borne by S finds its rationale in the nature of the conversation. Hence, it is (equally) rational for S to assume that A would also enjoy the merit of believing p's truth if it deserves their believing. By using *yo*, S seeks to evoke the flow of inferences depicted in (71) in A's mind. If this aim succeeds, A will be persuaded by S and come to hold the same belief regarding the truthfulness of p. More on this will be discussed later in this chapter.

Therefore, the present account claims that *yo* involves all the DPs other than S, as it *suggests* a CCP from C to C' in which $\text{PCS}_S^{C'}$ contains p. Notice here that it also involves S's PB due to the semantics of the DECL operator. According to my account, *yo*'s effect of "trying to make A believe that p," as observed by McCready, is a result of pragmatic reasoning induced *via* the use of the SFP. Thus, the present account predicts that there should be other discourse effects than *persuasion*.

Before leaving this section, let me note in passing that the above definition of *yo* makes a clear prediction. That is, if the propositional content of an utterance with *yo* turns out false, A is righteously eligible to blame S for deceiving A or making A hold a false belief. This is because S becomes responsible for its truth by the use of *yo*. This is borne out:

(72) a. S:

Bill-ga hachiji-ni koko-ni ki-ta *yo*.
Bill-NOM 8o'clock here-to come-PST *yo*

'Bill came here at 8 *yo*.'

(Bill didn't come at 8)

b. A:

Bill-ga hachiji-ni koko-ni ki-ta *yo* tte it-ta zyan!
Bill-NOM 8o'clock here-to come-PST *yo* that say-PST right

'You said "Bill came here at 8 *yo*"!'

S's utterance in (72a) imposes liability for the truth of p = "Bill will come at 8" upon S. As (72b) shows, A can righteously blame S for p's falsity, because of S's use of *yo*. Thus, it seems initially plausible to assume that *yo* encodes the information that $p \in \text{PCS}_S^{\text{C}}$ in C.

However, S's utterance in (73a), in which *yo* is not used, also legitimises A's laying the blame on S.

(73) a. S:

Bill-ga hachiji-ni koko-ni ki-ta.
Bill-NOM 8o'clock here-to come-PST

'Bill came here at 8.'

(Bill didn't come at 8)

b. A:

Bill-ga hachiji-ni koko-ni ki-ta tte it-ta zyan!
Bill-NOM 8o'clock here-to come-PST that say-PST PRT

'You said "Bill came here at 8"!'

This seems to indicate that it is not *yo* but an utterance of a declarative sentence (which is conventionally associated with *assertion*) that makes S liable to the truth of p.

There is another way of construing the contrast, however. I propose that the relevant imposition of liability to the truth of p in a bare declarative sentence is derived from a pragmatic implicature (Grice 1975). See the following example.

(74) a. S:

Bill-ga kimi-no hon-o nusun-dei-ta. Kedo, man-ga-iti matigatte-ite-mo
Bill-NOM you-GEN book-ACC steal-PROG-PST but just.in.case wrong-be-even
boku-o seme-nai-de hosi-i.
I-ACC blame-NEG-by want-PRS

'Bill was stealing your book. But I don't want you to blame me if I happen to be wrong by any chance.'

b. S:

Bill-ga kimi-no hon-o nusun-dei-ta *yo*. # Kedo, man-ga-iti
Bill-NOM you-GEN book-ACC steal-PROG-PST *yo* # but just.in.case
matigatte-ite-mo boku-o seme-nai-de hosi-i.
wrong-be-even I-ACC blame-NEG-by want-PRS

'Bill was stealing your book *yo*. # But I don't want you to blame me if I happen to be wrong by any chance.'

(74a), where *yo* is absent, can be followed by an utterance that is meant to cancel the liability S takes upon the truth of p = "Bill was stealing your book". In contrast, when S uses *yo*, this cancellation sounds awkward, as indicated in (74b). It is a widely acknowledged fact that one of the most conspicuous features of an implicature is its cancelability. Therefore, (74) expresses the plausibility of the proposal.

Indeed, it is intuitively natural to assume that an utterance of $[\![\text{DECL}\ p\ S]\!]$ implicate S's relevant public commitment in the presence of A. The utterance publicises S's PB in C, and this publicisation of S's belief should be made under normal circumstances only if S is confident in its truthfulness. Particularly, if the utterance is made as a response to a question asked by A, then it is natural for A to assume that S is indeed confident in p's truthfulness and thus S assures (i.e., takes the liability for) the truth of the proposition. Thus, even though McCready's observation is correct that (49c) does not explicitly express Hikaru's intention of making Haruomi believe that Mateus came to Kyoto, Haruomi *expects* Hikaru to be responsible for its truth by the utterance. The fact that Haruomi can later blame Hikaru if it turns out that Mateus did not actually come to Kyoto illustrates that this is the case.

The net effect of *yo* is, then, the *semanticisation* of such an implicature, so to speak: the SFP encodes the discourse effect induced by the implicature from the utterance of $[\![\text{DECL}\ p\ S]\!]$

and entrenches it in the realm of semantics by directly Merging $\vdash$ in the process of the syntactic structure building. Hence, it semantically encodes the information that $p \in \text{PCS}_S^C$ and in so doing it makes S's liability for the truth of p uncancellable. In a sense, thus, it *amplifies* S's commitment to A (and other DPs) to act in accordance with what is described in the sentence radical, as we have already seen. We can also say that the use of *yo* is *costly* in the sense that it makes S's relevant responsibility uncancellable. See Section 2.5.1 for more on this issue.

Summing up: I have shown in this section that *yo* is a phonetic realisation of S which embeds the $\vdash$-head. The effect of the particle is to semanticise S's public commitment to act in accordance with the content of the sentence radical, which is induced *via* pragmatic implicature in the case of an utterance of a bare declarative sentence. In the next subsection, we will see that this semantics of *yo* induces various discourse effects, which is already summarised in Table 2.1.

2.2.3 *Yo* with SFCs in declaratives

As we have already seen, *yo*'s discourse function seems to change slightly depending on the specific SFC it bears.

2.2.3.1 *Yo*↑

Let us first discuss how the present account derives the function of *yo*↑. (50b) provides us with an example. Yukihiro's second utterance in (50b) obligatorily bears *yo*↑, and the sentence as a whole functions as a means of persuading A (Ryuichi) to believe that the movie starts at 8. This *persuasion* function of *yo* is precisely what we have seen in the last subsection: thus, we do not need an independent explanation for the behaviour of *yo*↑ in this example.

However, this kind of explanation still provides no revealing account for what ↑ does in this type of utterance. We have seen, particularly, that *yo*↑ is allowed as an answer to a QUD, while it is infelicitous when no such immediate QUD is waiting in the stack of questions to be resolved. How can we explain this discourse-related restriction regarding the use of *yo*↑, without undermining our account for its *persuasion* function?

It is highly suggestive at this stage of discussion to take a look back at the fact that the prosody of Japanese sentences are heavily influenced by their information structural status. Particularly, we have seen that *presupposed* parts of a sentence are significantly reduced in pitch. Thus, what is already in C is prosodically weakened. The definition of presupposition is provided in (66), which says that X is presupposed if a salient antecedent entails ∃-type shifted X.

Although this notion of *presupposition* is defined in the context of examining the semantics of *focus* under the truth-conditional semantics (Schwarzschild 1999) and hence says nothing about the role of commitment and its information structure roles, one can easily extend this to cover the cases under discussion as well. Actually, the extension does not need the definition of presupposition to be modified.

To see this, let us discuss (50b) once again. As we have seen, Ryuichi's utterance (50a) provides a presupposition $\exists x$[the movie starts at x]. Crucially, however, there is no presupposition as to S's commitment in C whatsoever: what is presupposed in C, after Ryuichi's remark, is just that there is a time x such that the movie starts at x, not that there is a time x such that S is committed to A to act upon the truth of "the movie starts at x". In this sense, *yo* is not in the realm of presupposition.

Let us get back to the issue of presupposition and prosodic weakening. Given the fact that non-presuppositional parts of an utterance do not undergo the process of prosodic weakening, the non-presupposed *yo* should stay prosodically salient, without being dephrased at the level of a prosodic structure ϕ (cf. Selkirk 2009, 2011, Itō and Mester 2012; Féry 2013 and much other work). I submit that this is precisely what underlies the obligatory rising contour borne by *yo* in contexts where there is a QUD to be resolved by an utterance with *yo*. As Karttunen and Peters (1979); Comorovski (1989); Dayal (1996); Tomioka (2007); Biezma and Rawlins (2012) among others observe, each QUD sets the presupposition $\exists x$[P(x)], where x is a variable ranging over the possible answers. Thus, a QUD essentially makes all of the parts of a sentence, saving the focus *and an agent's public commitment*, presupposed. In the case of (50), Ryuichi's utterance in (50a) provides C with a(n indirect) QUD "When does the movie start?," and this QUD in turn sets the

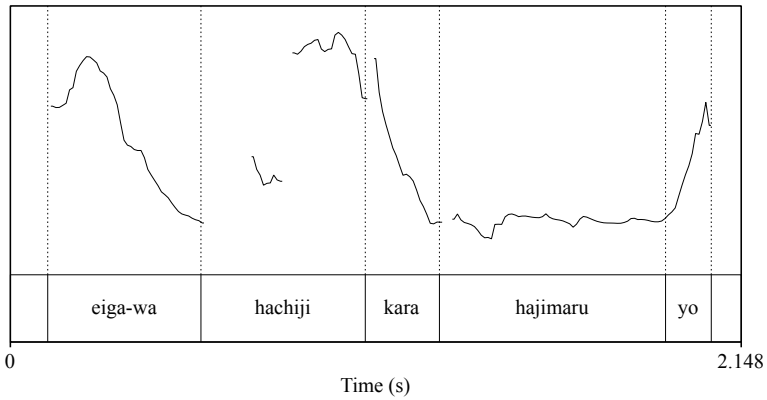


Figure 2.11: The pitch track of (50b)

presupposition $\exists x$[the movie starts at x] for later utterances (particularly, Yukihiro's (50b)).

Now, we have a straightforward account for why *yo*↑ requires a QUD to be resolved. This QUD provides C with a presupposition. The presuppositional part of an utterance with *yo* must be prosodically weakened. At the same time, no such presupposition is provided for S's public commitment in C. Therefore, *yo*, which phonetically encodes S's relevant public commitment, must remain prosodically salient. Since a high-pitch bearing *yo* follows a presuppositional, prosodically weakened part of an utterance, the resulting contour associated with the SFP is essentially ↑. This is precisely what we observe in the pitch track of (50b) in Figure 2.1, repeated here as Figure 2.11. Thus, our account provides a straightforward explanation for why *yo* should be associated with ↑ in the context where a QUD is asked to be resolved by the utterance with the particle.

2.2.3.2 *Yo*→

This proposal further explains the relation between C and the other SFCs borne by *yo* fairly straightforwardly. If an utterance contains no presupposition (i.e., no QUD), no prosodic weakening should be observed. Figure 2.8, which is the pitch track of (64), shows that this is the case: if *siai-ga hajimaru* "the match starts" is uttered out of the blue, the sentence exhibits the → ending. The same SFC is observed in an utterance with *yo* produced out of the blue: see (53) and its pitch track illustrated in Figure 2.4, repeated here as (75) and Figure 2.12, respectively.

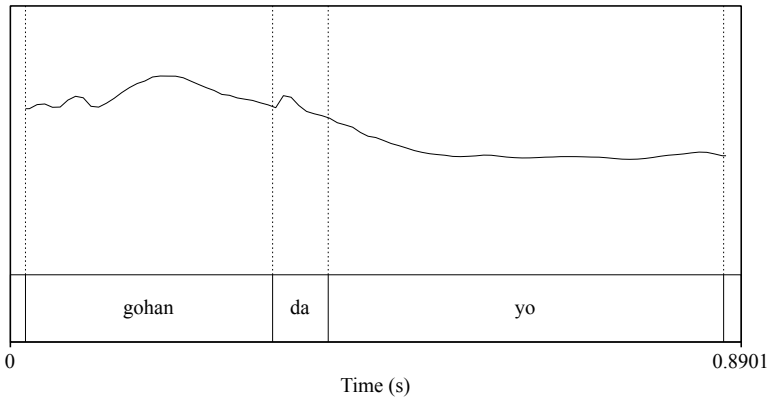


Figure 2.12: The pitch track of (75)

(75) Context: Kate is a mother of two children. While she is cooking, these children are playing in the park together. Once the dinner gets ready, Kate goes to the park and says to the children

Gohan da *yo*→
food be *yo*→

'Dinner is ready *yo*→'

The same contour is observed in the following all-new sentence uttered out of the blue, which constitutes a minimal pair with Yukihiro's second utterance in (50b):[4]

(76) Context: While he is with Henrik, Jonah unexpectedly finds out that the movie that he and Henrik were initially planning on watching starts at 8pm. But they gave up on the plan as they thought it wasn't on screen anymore several weeks ago. Henrik isn't aware of the movie starting at 8 and Jonah knows this fact. Assuming that Henrik completely forgot about the movie as several weeks have passed, Jonah notifies Henrik that

Eiga-ga hachiji-kara hajimar-u *yo*→
movie-NOM 8o'clock-from start-PRS *yo*→

'The movie starts at 8 *yo*→'

[4]In (76), the NOM-Case is assigned to *eiga* (movie), since the topic marker -*wa* evokes the existence of a presupposition.

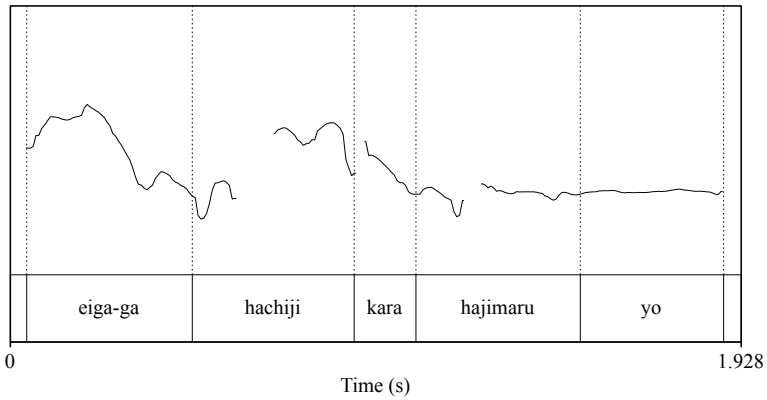


Figure 2.13: The pitch track of (76)

These examples eloquently speak to the present account, where the flat SFC is required to be associated with *yo* in an all-new sentence uttered in C with no QUD to be resolved by that utterance. The semantics of the utterance (76) *per se* is the same as that of the second sentence in (50b): they both take $[\![p \text{ DECL}]\!]$ and return a CCP from C to C', the latter of which p is a member of S's PCS. The provision effect of *yo*→ is a result of the fact that the utterance is made out of the blue, with no QUD to be resolved by the utterance. It is of course possible for Jonah to just share the information that the movie starts at 8 without using *yo* in (76). In such a case, this only publicises Jonah's belief, and hence no update of Henrik's private or public commitment is suggested directly. What Jonah does with *yo* in this example is go beyond this. For instance, by using this particle, he seeks to evoke the following inferential reasoning in Henrik's mind:

(77) The inference that Jonah intends Henrik to execute *via* (76):

a. Jonah used *yo* despite the fact that he could have avoided using it.

b. There must be a reason for S's use of the SFP.

c. By using the SFP, Jonah makes p relevant to Henrik, as *yo* encodes $S \vdash^{C}_{A} p$, where S and A = Jonah and Henrik, respectively.

d. Jonah and Henrik once talked about going to the movie.

e. By making p relevant to Henrik, Jonah indirectly invites Henrik to go to the movie

starting at 8.

Here, the liability effect plays little role (if any) in Henrik's expected inference. This is simply because C in question does not put much sanction upon Jonah if p turns out false: Henrik did not expect the movie to be on screen anyway. The fact that the movie starts at 8 is an unexpected virtue for Henrik (and Jonah). Hence, *yo*'s effect of making A relevant to p plays a much more important role in Henrik's inference than its effect of imposing a self-restriction upon Jonah. This (near) absence of the liability effect in Henrik's inference finds its rationale in the nature of the context (76) is uttered: the sentence is all-new, and therefore it is not meant to be a resolution for a QUD. If it is uttered for the sake of a QUD resolution, the utterance's credibility should be at stake. However, if it is not the case, then it should not be put at stake.

Thus, the present account neatly explains the difference and similarity between *yo*↑ and *yo*→. Both provide new information regarding C, but the contexts where they are used are different: the former should be used in an utterance as an answer to a QUD, whilst the latter should be used in an all-new sentence with no relevant QUD.

2.2.3.3 *Yo*↓

Finally, our proposal expounds the *corrective* flavour of *yo*↓ in basically the same fashion. This SFC is associated with the presuppositional status of the element it is associated with, as we have seen. Thus, the present account has it that S's public commitment to act upon p should be presupposed before *yo*↓ is uttered.

This is precisely what is observed in the following example, where Frank's utterance (78d) contains *yo*↓:

(78) a. Steve:

Eiga nanji-kara?
movie what.time-from

'When does the movie start?'

b. Frank:

Hachiji-kara *da yo*↑
8o'clock-from *da yo*↑

'It starts at 8 *yo*↑'

(After a couple of moments)

c. Steve:

De, eiga nanji-kara?
so movie what.time-from

'So what time does the movie start?'

d. Frank:

Daraka, hachiji-kara *da yo*{↓/#↑/#→}
so 8o'clock-from *da yo*{↓/#↑/#→}

'I told you– it starts at 8 *yo*{↓/#↑/#→}'

By (78b), the entire utterance including *yo* by Frank becomes presupposed in later dialogs. Despite Frank's provision of an answer to the QUD "What time does the movie start?," Steve asks the same question again in (78c). At this point, $\exists x$[Frank is committed to Steve to act in accordance with the proposition that the movie starts at x][5] is presupposed, and hence *yo* should be prosodically weakened in (78d). This is indeed borne out by the infelicity of the other SFCs in this example. Since Frank's utterance (78d), including his commitment, is repetitive and hence redundant for him, the utterance may sound offensive or pejorative, depending on the relation between these two individuals.

But the example above does not sound *corrective*, at least in the same sense that Yukihiro's utterance in (52b) sounds. In (52b), the utterance is meant to correct Ryuichi's false belief that the movie starts at 9. How is this corrective flavour derived? Notice already that Yukihiro's public commitment in question is not presupposed before his utterance. Should we give up our hypothesis that *yo*↓ is associated with the presuppositional status of S's relevant commitment, then?

Actually, no. To the contrary, the corrective effect of the utterance is precisely what we expect from the current proposal that the falling SFC is associated with the presuppositional status of S's commitment. Our explanation is again based upon pragmatic reasoning: this time, Yukihiro's

[5] More simply, Frank$\vdash^{C}_{Steve}\exists x$[the movie starts at x].

use of *yo*↓ is meant to evoke the following inference in Ryuichi's mind:

(79) The inference that Yukihiro expects Ryuichi to execute *via* (52b):

a. Yukihiro used *yo*↓ despite the fact that his relevant commitment is not presupposed.

b. There must be a reason for Yukihiro's use of the falling SFC.

c. By using this SFC, Yukihiro intends to mean that he thought it had been presupposed, or that it should have been.

d. Thus, by the use of the falling contour, Yukihiro intends to mean that Ryuichi should have known that the movie starts at 8 already.

Crucially, this inference flow is based upon the very assumption that *yo*↓ is associated with the presuppositional status of the relevant commitment by S. With this basic tacit knowledge of the Japanese SFP *yo* and its relation with the falling SFC as a starting gun, Ryuichi is expected by Yukihiro to reach the conclusion that Yukihiro intended to convey that he should have known when the movie starts. This tacit knowledge is based upon the fact that ↓ is observed in a prosodically weakened presuppositional part of an utterance, and it is indeed observed in sentences both with and without *yo*, as we have seen above. Thus, the effect is derived from an intentional violation of Grice's (1975) maxims.

Summing up, the present account explains the interaction between *yo* and the SFCs it is associated with, along with the specific pragmatic effects that the combinations of these two yield. Each SFC receives no independent semantic treatment under this account: it is treated in a unified manner with its bare declarative counterpart. In this sense, this proposal is conceptually desirable. Furthermore, the fact that *yo* essentially involves all of the other DPs than S is captured by the notion of public commitment as a tripartite relation among a person, a person and *p*.

Before moving on to how this account explains *yo*'s behaviour in imperatives, let us note an important consequence of the present account. The theory proposed in this section essentially defines *yo* as a head that restricts a CCP in such a way that $p \in \textsc{pcs}_S^{C'}$ in the updated context C'. No other specification is made with respect to its semantics. Thus, intuitively observed functions

of *yo* such as *correction*, *persuasion* and *correction* are all ancillary: they are all derived from the use of *yo* in a particular C. Indeed, it is possible to construe *yo*↑ in (50b) as corrective, if Yukihiro thinks that Ryuichi has a misbelief about when the movie starts. Given this, I modify Table 2.1 and summarise the distribution of *yo* in declaratives as in Table 2.4.

Table 2.4: The distribution of *yo* in declaratives (final version)

SFC	Discourse Function
↑	Provision of new $p \in \text{PCS}^{\text{C}}_S$ to facilitate the resolution of a QUD
↓	Provision of presupposed $p \in \text{PCS}^{\text{C}}_S$ to facilitate the resolution of a QUD
→	Provision of new $p \in \text{PCS}^{\text{C}}_S$ with no relevant QUD

It should be noted here that one of the most conspicuous discourse functions of *yo* in declaratives is to facilitate the enrichment of the CG, the process of which is depicted in (47) and repeated here as (80).

(80) The process of the CG enrichment:

a. a publicises their belief about p (i.e., a publicises $a \vdash^{\text{C}}_a p$),

b. b concurs with (accepts) it and thus adds p to their self commitment set (i.e., $b \vdash^{\text{C}}_b p$),

c. b publicises this belief, and by doing so p is added to the $\text{CG}^{\text{C}}_{a,b}$.

The crucial process pertinent to the use of *yo* is (80b). In order for (a's public belief about) p to be added to the CG, b has to accept its truthfulness. b as a rational agent will accept p if there is sufficient reasons/evidence of doing so.[6] One of such reasons is S's declaration to be responsible for its truth. Particularly, even though S can be committed to A to act upon the truth of p by uttering a bare declarative sentence, it is in principle cancellable, as we have seen. *Yo* makes it uncancellable by semanticising the implicature. Thus, S's liability for the truthfulness in question gets amplified. This in turns serves to facilitate b's acceptance of p: by means of S's use of *yo*, it becomes easier for b to accept the proposition. Thus, *yo* in declaratives makes p easier to be added to the CG.

With this in mind, let us next move on to the explanation of the behaviour of *yo* in imperatives.

[6] Or there is no reason to deny its truthfulness.

2.3 Proposal 2: *Yo* in imperatives as S's public commitment to act upon the intention of making p true

Now we turn to the use of *yo* in imperatives. We will see that the use of the SFP in imperative sentences receives the same explanation as that of *yo* in declaratives. The only difference between $[\![p \text{ DECL } yo]\!]$ and $[\![p \text{ IMP } yo]\!]$ resides in the different semantics between DECL and IMP, and thus *yo*'s behaviour is uniform across the sentence types. To see this, let us first briefly overview the semantics of pure imperative sentences.

2.3.1 Bare imperatives

Thus far, the present dissertation has considered that C consists of the DPs, PBs and public commitments. This sufficed the purpose when we discussed how declarative sentences provide a particular CCP in a given C. However, if we aim to extend the analysis to an imperative sentence, we need an additional concept to correctly capture the semantic effect of this clause type under the CCP model advocated here.

For this purpose, I follow the proposals made by a number of researchers (Han 1998, 1999; Roberts 2004; Portner 2004; Davis 2010, 2011 among many others) that the formal model of C also encompasses an agent-specific *To-Do List*, which is a set of properties of type $\langle e, \langle e, t\rangle\rangle$ that the agent a is committed to making true of a-self (Portner 2004), or a *plan set* (Han 1999), which is a set of irrealis propositions of type $\langle s, t\rangle$, to act upon the realisation of which the agent is committed (to a person). To adopt the idea, in this dissertation I further follow (Davis, 2011, 148) that "an agent's public intentions are modeled as a set of propositions," which "is understood as providing information as to how the agent intends the world to become, rather than information as to how the agent thinks the world actually is". Thus, an agent's public intentions are formally represented as follows (from Davis 2011, *ibid*):

(81) For any context C and an agent $x \in$ DP:

$\text{PI}_x^{\text{C}} := \{p \mid p \text{ is a public intention of } x \text{ in C}\}$

If $p =$ "Max writes a new song," for instance, then x is understood as having the intention of making true that Max writes a new song in the actual world. With (81), our model of the discourse context C is enriched so that it encompasses PIs: C is an ordered set of the DPs, PBs and PIs of each DP. Below, I use the term PI as a cover term for a set of *publicised intentions*, which is a set of an agent's intentions that are publicised. Under normal circumstances, if a publicises an intention of making a particular proposition true, then the other DPs comes to believe that a intends to make it true.

With these in mind, I claim with Han (1999) that imperative sentences have the following semantics:

(82) $[\![p \text{ IMP}]\!] = \lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid p \in \text{PI}_{\mathbb{A}}^{C'}\}$

(83) $\lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid p \in \text{PI}_{\mathbb{A}}^{C'}\}_{\langle e,\langle c,ct\rangle\rangle}$

$p_{\langle s,t\rangle}$ $\quad$ $\text{IMP}_{\langle st,\langle e,\langle c,ct\rangle\rangle\rangle}$

In most cases, this imperative is directed towards A. In such cases, p is of the form

(84) $p_{\langle s,t\rangle}$

you_e $\quad$ $P_{\langle e,st\rangle}$

But there are also cases where the imperative is directed towards a third person:

(85) Context: Tim is talking to Cory about how furious he is at Plini, and says

(Nande ore-ga aitu-ni ayam-aranak-ereba ikena-i *no da*.) Aitu-ga ore-ni ayamar-e!
(why I-NOM he-DAT apologise-NEG-if bad-PRS *no da*) he-NOM I-DAT apologise-IMP

'(Why do I have to apologise to him?) He apologise to me!'

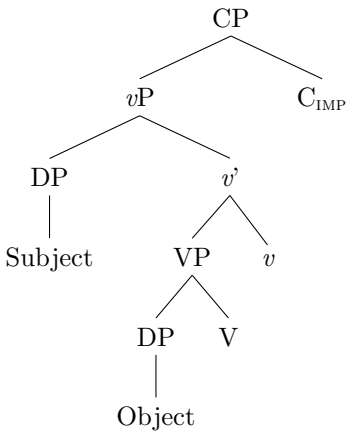
In (85), Tim's imperative utterance is made in a dialog with Cory, but his anger and demand for apologies are directed towards not Cory but Plini. In other words, *aitu* refers to Plini in this example. I propose that (85) has the following structure, where $P =$ "apologise to Tim":

(86) $p_{\langle s,t\rangle}$

$\text{Aitu} = \text{Plini}_e$ $\quad$ $P_{\langle e,st\rangle}$

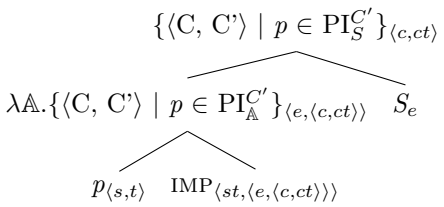
As for the syntax of imperative sentences, I assume with Alcázar and Saltarelli (2013) among others that it lacks the TP-projection, which is responsible for the irrealis nature of the imperative proposition. Thus, the IMP-operator embeds a *v*P at the level of syntax:[7]

(87)



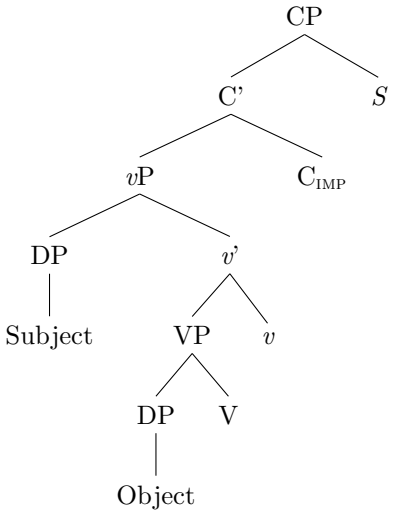
(87) corresponds to (83). I further assume, just like I did in the last section, that when no SFP is attached to the structure, the *S*-head is Merged to the structure as a default option, determining that it is S who holds the PI in C in question.

(88)



[7]In the standard literature (cf. Chomsky 1995; Hiraiwa 2005 and much other work), the NOM-Case is assigned to a nominative argument *via Agreement* with the Tense-head, at least in languages like English. If one is to adopt this approach to the Japanese language and assume that the Case borne by *aitu* in Tim's utterance in (85) is indeed assigned by T, then the TP-projection should be present in the syntax, contrary to the assumption made here. To accommodate this, one can instead assume that there indeed is a TP in an imperative sentence, but the T-head is a special type of Tense responsible for the irrealis status of *p*. Since the exact syntax of imperatives is a complex issue with a load of open questions, I assume for the sake of brevity that it lacks the TP. Nothing about my semantics of imperatives hinges upon the choice, though.

(89)



These constitute the formal apparatus to examine the semantics of an imperative sentence. In the next subsection, we will see how the present proposal explains the semantico-pragmatic behaviour of *yo* in this clause type. Before moving on, however, it is noteworthy that Geurts (2019) argues, based upon Brandom's persuasive argumentation, that intentions and beliefs are just two sides of the same coin. According to him, a belief is an atelic commitment of an agent to (act upon the truth of) a proposition, whilst an intention is a telic commitment of an agent to (act upon the truth of) a proposition. A belief is an atelic commitment as the belief that p is true in a world w is not goal-directed. In contrast, an intention of making p true is essentially telic in the sense that it is goal-directed: i.e., a telic commitment is inherently doomed to an end. Therefore, the difference between beliefs and intentions lies at the (a)telicity of the commitment to the truth of p.

It should be obvious that in the case of declarative and imperative sentences, the difference between these two types of commitment arises from the different semantics of DECL and IMP. The former involves the TP-projection while the latter doesn't. This is why the commitment involved in the former is atelic while that in the latter is telic. This further indicates that our semantics of *yo*, which treats the particle as a grammatical morpheme that encodes the information that $p \in \text{PCS}^{\text{C}}_{S}$, should be identical in both declarative and imperative sentences. And the same applies for our treatment of the SFCs, *ceteris paribus*.

Let me note in passing that an utterance of a bare imperative sentence makes S committed to

A to act upon making the relevant proposition p true under normal circumstances (cf. Condoravdi and Lauer 2009, 2010). This indicates that just like as we saw in bare declarative sentences, bare imperatives also yield a pragmatic implicature that S is committed to A to act upon making p true. The prediction is thus that this implicature is cancellable. This is indeed borne out, as the following example shows:

(90) Context: Watching a male football match and a player of the team you support starts dribbling, and you say to the player

Zibun-de ik-e! Sore-ka yoko-ni pasu-o das-e!
self-by go-IMP that-or side-to pass-ACC give-IMP

'Go all by yourself! Or pass the ball to the side!'

The second sentence in this example clearly cancels S's commitment to A (the player to whom the utterance is directed) to make p = "A goes all by himself" true by suggesting another option. This indicates that S's relevant commitment is cancellable in the case of bare imperatives as well.

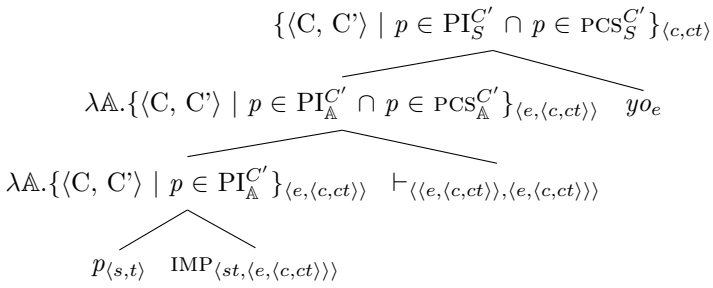
2.3.2 Imperatives with *yo*

The semantics of *yo* is argued to be a CCP in which the members of the updated C' contains $p \in \text{PCS}_S^{C'}$. More precisely, it is argued that the $\vdash$-head and the S-head together yield the following semantics when combined with $[\![p \text{ IMP}]\!]$:

(91) $[\![p \text{ IMP } \vdash \textit{ yo}]\!] = \{\langle \text{C, C'}\rangle \mid p \in \text{PI}_S^{C'} \cap p \in \text{PCS}_S^{C'}\}$

with the following LF structure:

(92)



Informally, *yo* suggests that the output/updated context be one in which S is telicly committed to the other DPs to act in such a way that p comes to be true. Although $\mathrm{PI}_S^{C'}$ independently expresses that S intends p to be true, it does not express S's commitment to the other DPs to act in accordance with its truthfulness.

With this much in mind, let us delve into how the present proposal expounds the behaviour of *yo* in imperatives.

2.3.3 *Yo* with SFCs in imperatives

2.3.3.1 *Yo*↑

The first pattern we discuss is $[\![p$ IMP *yo* ↑$]\!]$. The example of this pattern is depicted in (54), repeated here as (93).

(93) Context: A teacher finds some students playing at the playground at 6:50 pm and the curfew is 7. After telling the students that the curfew is 7, he says

Mongen-made ni kaer-e *yo*↑
curfew-until by go.home-IMP *yo*↑

'Go home before the curfew *yo*↑'

According to the proposal made in the last section, the rising contour ↑ is a result of the prosodic weakening of the other parts of the sentence. This weakening is in turn argued to be the result of their presuppositional status. Especially, it is argued that the existence of a QUD to be resolved by the utterance with the use of *yo* provides such a presupposition. But what is the *Question Under Discussion* that is to be resolved by an imperative sentence?

I propose based on van Rooy (2003) and Davis (2010) that those QUDs to be resolved by an imperative sentence are *decision problems*, which can be roughly translated as "What should an agent x do?" and so on. In other words, such QUDs correspond to a set of *intentions* that a particular agent should have.

In the case at hand, the relevant QUD is "Should the students go home before the curfew?" Here it should be noticed that the teacher's notification that only ten minutes are left before the

curfew suffices to raise this QUD in the students' (and the teacher's) mind, assuming that both of these DPs are rational and willing to act in compliant with the social custom that the curfew be observed. Therefore, the proposition p = "the students should go home" is presupposed in this discourse. This means that in (93), everything but ($\vdash$ and) *yo* is presupposed, and hence prosodically weakened, while *yo* remains to be prosodically salient. This yields the rising contour annotated as $\uparrow$.

The discourse effect of *persuasion* in this example is again derived from a pragmatic inference. Particularly, by the use of *yo* in this context, the teacher aims at evoking the following reasoning in the students' mind.

(94) The inference that the teacher intends the students to execute *via* (93):

a. The teacher used *yo* despite the cost of doing so.

b. There must be a reason for the teacher's use of the SFP, especially in this context where "Should students go home before the curfew?" is a QUD.

c. By imposing a self-restriction upon themselves (liability for the truth of p), the teacher seeks to amplify the seriousness/importance of making p true and that of resolving the QUD by doing so.

d. Thus, by the use of the SFP, the teacher intends to persuade the students to go home before the curfew.

A load of sociopsychological (and other) factors come in to this reasoning. The social hierarchical relation between the participants may affect the reasoning to land in a particular conclusion, and so forth. All of such factors facilitate the inference flow. The flow depicted here is pretty much a reminiscent of (71). Both of these inferences yield the *persuasion* effect of *yo* in an utterance that is meant to resolve a QUD. The difference between them is derived from that of the clause type operators used. If it is the DECL operator, the resulting commitment will be an atelic commitment = a commitment to act in accordance with one's belief, whilst the commitment will be telic (i.e., it will be a commitment to act upon one's intention) if the IMP-operator is used.

2.3.3.2 *Yo*↓

The present account explains the behaviour of *yo*↓ in (54) as well (the example is repeated here as (95) for convenience's sake). This falling contour associated with *yo* indicates that the relevant commitment is presupposed/Given in C.

(95) Context: A teacher finds some students playing at the playground at 8 pm despite the curfew being 7. The teacher tells the students

Mongen-made ni kaer-e *yo*↓
curfew-until by go.home-IMP *yo*↓

'Go home before the curfew *yo*↓'

How does the effect of preachment arise in this example? Especially, how is the falling SFC licensed in this example despite the lack of S's commitment explicitly made (i.e., presupposed) in the discourse?

Notice here that assuming that the teacher and the students acknowledge the social custom that the curfew should not be broken, it is impossible for both to make p true, which makes the utterance a lost cause. Therefore, (95) is not something to be made in the hope that the students would go home before the curfew *in this particular context* C. Rather, what the teacher tries to tell to the students is something more general: it is a social custom that the students should not break the curfew– the custom that both the teacher and the students are assumed to be committed to. Due to the very nature of social customs in general, this type of commitment to act upon a particular social custom is public/social *ipso facto*. It is not something that must be explicitly articulated so as to be public. Succinctly put, this type of commitment is born public.

This indicates that a commitment to a social custom is always presupposed in C as long as the DPs think that they should obey the custom. Then, we have a natural explanation for why *yo* is associated with ↓ in this case. The ↓ is obligatory in (95) since the imperative sentence and S's relevant commitment are both presupposed by virtue of the existence of the social custom that students should go home before the curfew.

This analysis further provides us with a way of capturing the preachment effect of *yo*↓ fairly straightforwardly. Notice already that the imperative sentence in question practically demands A = the students to obey the social custom which S = the teacher (is assumed to) assume that they are committed to. Thus, the utterance is expected to evoke the following reasoning in the students' mind:

(96) The inference that the teacher intends the students to execute *via* (95):

a. The teacher demands the students obey the social custom in question, the commitment to which is presupposed/Given (hence ↓).

b. By using this SFC, the teacher intends to mean that the commitment in question should have been presupposed.

c. Despite that, the students failed to obey it, either because they are not committed to act upon the custom or because they are committed to it but acted inconsistently with this commitment.

d. They live with the social custom, and hence they are committed to it.

e. Therefore, they acted in violation of their own social commitment.

f. By the utterance, the teacher seeks to tell them that they should have not broken the custom.

In the way roughly depicted in (96), the preachment effect is successfully derived under the present proposal.

It should be obvious that this discourse effect is only ancillary. Thus, the proposal predicts that there should be in principle many other discourse effects of *yo*↓ in this example, depending on the way the utterance is pragmatically interpreted. This is indeed the case. For instance, the utterance (95) can be understood as a demand to be observant of the social custom from now on, if the students infer from it that the teacher tried to emphasise the importance and the *common-sense-ness* of the custom by articulating his public commitment to it (and the inference goes on to reach what they reasoned). One can think of many other readings.

In sum, the present account derives the reading(s) associated with *yo*↓ in an intuitive sense from the semantics of *yo* and the presuppositional status of the particle when it is realised with the falling SFC. Each specific discourse effect is endowed to the utterance with *yo*↓ by pragmatic reasoning based upon the contextual cues including social customs. The QUD to be resolved by the utterance in this case is "out of question," in the sense that the answer is simply to act in accordance with one's public commitment.

2.3.3.3 *Yo*→

Finally, *yo*→, the example of which is given in (57) = (97), receives a natural explanation.

(97) Context: A teacher finds some students playing at the playground at 5:30 pm. Knowing that the students know that the curfew is 7, the teacher tells the students

Mongen-made ni kaer-e *yo*→
curfew-until by go.home-IMP *yo*→

'Go home before the curfew *yo*→'

The flat contour is associated with the all-new-ness of a given sentence which resolves no QUD, as we have seen. Thus, (97) is expected to resolve no QUD (decision problem) under consideration. Obviously, there is no QUD to be resolved by the utterance. It is still 5:30 pm and one and a half hours is left for the students to keep playing at the playground. It is fairly natural to assume that the students are not worrying about the curfew at the moment. And it is equally natural to assume that no such worry is in the teacher's mind. In such a context, the question "Should the students go home before the curfew?" is not imminent and hence not in the QUD stack to be resolved. Therefore, the utterance resolves no QUD, and it serves as a suggestion that evokes the social custom that the students should go home before the curfew in their mind. The teacher's duty is (and should be) pretty much done by this in this particular context.

Note before leaving this section that an imperative with *yo* makes S's relevant public commitment uncancellable, which is what is expected by our analysis:

(98) Context: Watching a male football match and a player of the team you support starts dribbling

Zibun-de ik-e *yo*! # Sore-ka yoko-ni pasu-o das-e!
self-by go-IMP *yo* # that-or side-to pass-ACC give-IMP

'Go all by yourself *yo*! # Or pass the ball to the side!'

The comparison between this example and (90) shows that what makes the relevant commitment by S uncancellable is the presence of *yo*, which is a grammatical marker that encodes the semanticisation of the status of p as a member of $\textsc{pcs}^{\textsc{c}}_S$.

All in all, this proposal again treats the SFCs borne by *yo* in a unified manner with their counterparts associated with bare declaratives/imperatives. The specific discourse functions of *yo* in imperatives are again derived pragmatically, and I take this as a virtue: as shown in this section, *yo* with a particular SFC has many choices of interpretation, depending on the nature of C. Thus, this sort of underspecification should be welcomed. See Section 2.5.2 for more on this.

Summarising what is discussed here, we obtain the following table, which modifies Table 2.2:

Table 2.5: The distribution of *yo* in imperatives (final version)

SFC	Discourse Function
↑	Provision of new intention $p \in \textsc{pcs}^{\textsc{c}}_S$ as an answer to a QUD
↓	Provision of presupposed intention $p \in \textsc{pcs}^{\textsc{c}}_S$ as an answer to a QUD
→	Provision of new intention $p \in \textsc{pcs}^{\textsc{c}}_S$ with no QUD to be resolved by the utterance

Recall that *yo* in declaratives has a function of facilitating the addition of p to the CG = a set of mutual beliefs between S and A. This notion of the CG can be expanded to cover the set of mutual intentions between S and A. Let us call the set *Common Intention* (CI). The CI can be defined in virtually the same way that the CG is defined in (47) = (80). The process of the CI enrichment is depicted in (99) below.

(99) The process of the CI enrichment:

a. a publicises their intention about $p_{irrealis}$ (i.e., a publicises $a \vdash^{\textsc{c}}_a p_{irrealis}$),

b. b concurs with (accepts) it and thus adds $p_{irrealis}$ to their self commitment set (i.e., $b \vdash^{\textsc{c}}_b p_{irrealis}$),

c. *b* publicises this intention, and by doing so $p_{irrealis}$ is added to the $\text{CI}^{\text{C}}_{a,b}$.

What *yo* does in imperatives is a reminiscent of its role in declaratives: this particle facilitates the DPs (other than S) to accept $p_{irrealis}$ so that it is added to the $\text{CI}^{\text{C}}_{a,b}$.

In the next section, I discuss the function of *yo* in interrogatives.

2.4 Proposal 3: *Yo* in interrogatives as S's public commitment to seek the answer to Q

The final clause type I discuss is interrogatives. In this section, I will show that the discourse effect of *yo* in interrogative sentences, observed in (58), (59), (62) and (63), again derives from its semantics and the SFC it is associated with.

The central proposal of this dissertation regarding *yo*'s meaning is that this particle encodes the information that p is a member of $\text{PCS}^{\text{C}}_{S}$. When it embeds a declarative sentence, it expresses S's commitment to the other DPs to act upon the truth of p. When it embeds an imperative sentence, in contrast, it expresses S's public commitment to act upon (the intention of) making p true. The differences between these two types were shown to result from the difference of the semantics of p that these clause type operators (i.e. DECL and IMP) select. To extend this approach to the interrogative clause type, we first have to look at the semantics of the sentence radical and the INTER operator which selects it.

Before moving on, let me note in passing that the most basic SFC in interrogatives is ↑. ↓ is much less frequent than ↑ but still widely observed. → is, in contrast, completely absent in interrogatives in general. This might be because of the fact that an interrogative sentence is generally built upon some presupposition, as I will discuss in detail. Though I think this is initially plausible, I will not attempt an in-depth investigation of this idea as it will take us too far afield, and I will simply assume that the flat contour is generally incompatible with interrogatives.

2.4.1 Bare interrogatives

I basically follow Hamblin (1973) that the interrogative sentence radical, which I refer to by Q, denotes a set of propositions. For instance, a polar interrogative sentence *p?* semantically denotes a set of propositions p and $\neg p$, *viz.* $\{p, \neg p\}$. I assume that a designated Q-morpheme (Q_{morph}) is responsible for introducing the set of propositions. Particularly, I assume following Uegaki (2018) that the Q-morpheme, which is realised as *ka* in many grammatical environments, introduces a set of alternatives (i.e., the *focus semantic value*) as the *ordinary semantic value* of its prejacent in the sense of Rooth (1985, 1992); Beck (2006). Thus, the semantics of the polar Q "Did Adris buy a book?" is (100) below.

(100) $[\![\textit{Did Adris buy a book? } Q_{morph}]\!] = \{$Adris bought a book, Adris didn't buy a book$\}$

The semantics of a *wh*/constituent question is defined in terms of a set of propositions as well: a *wh* question denotes a set of propositions that correspond to the potential answers. *Wh* words are said to be defective in the sense that their ordinary semantic value is undefined (cf. Beck 1996, 2006; see also Shimoyama 1999, 2001, 2006; Yatsushiro 2009 for the semantics of *wh* expressions in Japanese, and see Kamali and Matsumoto To appear for its extension to other universally quantified negative polarity expressions in the same language). If a structure with a *wh* phrase is Merged with a Q-morpheme, the entire $[\![wh \cdots Q_{morph}]\!]$'s ordinary semantic value $[\![wh \cdots Q_{morph}]\!]^o$ becomes equivalent to its focus semantic value $[\![wh \cdots Q_{morph}]\!]^{alt}$ (Uegaki 2018). Thus, the *wh* question in (101a) semantically means (101b), assuming that the relevant things that Adris potentially bought are only a painting and a guitar.

(101) *What did Adris buy?* and its semantics:

a. What did Adris buy?

b. {Adris bought a painting, Adris bought a guitar}

I further extend this basic semantics of Q to the present CCP-account following Davis's (2011) lead. The CCP semantics of interrogatives is essentially the same as its declarative and imperative

counterparts: the force head INTER attaches to a sentence radical and returns a function from (a set of) DPs to a relational CCP that serves as a guide to the context update. The update suggestion is something that is relevant to a particular set of DPs' PB and PI in the case of declaratives and imperatives, as we have seen. Then, what kind of discourse concept pertains to the CCP semantics in the case of interrogatives?

We have already seen what an obvious candidate is. It is *Question Under Discussion* (QUD) (Roberts 2012 and Ginzburg 1996). The QUD is defined as a set of questions, the resolution of which is/should be at issue in C. Roberts (2012) defines the QUD as a (push-down) *stack*. The topmost Q in the stack is the most urgent question that should be resolved, which I have informally called an *immediate QUD* in the last two sections. The resolution of this immediate QUD *eliminates* it from the stack, and the Q which is directly embedded within it will *pop up* to the topmost position in the stack. This makes the popped up Q the next immediate QUD. Discourse is governed by this topmost/immediate QUD, in such a way that the DPs are (expected to be) committed to its resolution.

The above concept of QUD is essentially public, in the same sense as the concepts of PBs and PIs are. Thus, a QUD in this sense is construed as a *public question* (PQ). Davis (2011) decomposes the QUD defined in this way into an agent-specific $\mathrm{PQ}^{\mathrm{C}}_{\mathbb{A}}$, which reads "questions (i.e., sets of propositions) that an agent x is committed to address in C". Following Davis, I refer to the immediate QUD of an agent x in C as $\mathrm{PQ}^{\mathrm{C}}_{x}[0]$ henceforth. And just like PBs and PIs, PQ refers to a set of a particular agent's *publicised questions*.

The INTER operator, then, denotes a CCP constraining the immediate PQ of a particular DP. This is depicted in (102).

(102) $[\![\textsc{inter}\ Q]\!] = \lambda\mathbb{A}.\{\langle \mathrm{C}, \mathrm{C'}\rangle \mid \mathrm{PQ}^{C'}_{\mathbb{A}}[0] = Q\}$

Thus, a polar interrogative and a *wh* interrogative have the following LF structures:

(103) The LF structure of a polar interrogative "Did Adris buy a book?":

$\lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid \text{PQ}^{C'}_{\mathbb{A}}[0] = Q_1\}$

$\{$*Adris bought a book*, *Adris didn't buy a book*$\} = Q_1$ INTER

Did Adris buy a book? *Q-morph*

(104) The LF structure of a *wh* interrogative "What did Adris buy?":

$\lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid \text{PQ}^{C'}_{\mathbb{A}}[0] = Q_2\}$

$\{$Adris bought a painting, Adris bought a guitar$\} = Q_2$ INTER

What did Adris buy *Q-morph*

As we have assumed, (103) and (104) further Merge with the *S*-head and yields the following LF structures:

(105) The LF structure of a polar interrogative *Did Adris buy a book?*:

$\{\langle \text{C, C'}\rangle \mid \text{PQ}^{C'}_{S}[0] = Q_1\}$

$\lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid \text{PQ}^{C'}_{\mathbb{A}}[0] = Q_1\}$ S

$\{$*Adris bought a book*, *Adris didn't buy a book*$\} = Q_1$ INTER

Did Adris buy a book? *Q-morph*

(106) The LF structure of a *wh* interrogative *What did Adris buy?*:

$\{\langle \text{C, C'}\rangle \mid \text{PQ}^{C'}_{S}[0] = Q_2\}$

$\lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid \text{PQ}^{C'}_{\mathbb{A}}[0] = Q_2\}$ S

$\{$*Adris bought a painting*, *Adris bought a guitar*$\} = Q_2$ INTER

What did Adris buy *Q-morph*

I further assume with Groenendijk and Stokhof (1984) and Groenendijk (1999) that these sets of propositions correspond to how the possible worlds are *partitioned* (see also the framework of *Inquisitive Semantics* advocated by Groenendijk 2009; Ciardelli 2009; Ciardelli and Roelofsen 2009; Ciardelli et al. 2019 among others for a recent theory of partition semantics; see Krifka 1992, 2001a,b; Kamali and Krifka 2021 among others for a different way of construing the semantics of a constituent question). A polar Q, which asks whether p is true or not, partitions a set of

possible worlds into the ones in which p is true and the other ones in which p is false. Similarly, a *wh* Q in (101) sorts the possible worlds into two cells consisting of possible worlds on the basis of the potential answers to the question: in all of the possible worlds in one cell, "Adris bought a painting" is true, and "Adris bought a guitar" is true in all of the possible worlds in the other cell. Under this definition of the semantics of Q, two worlds w and w' are equivalent with respect to the QUD iff they contain the same answer to the QUD. This in turn means that a QUD is resolved for an agent x in C iff the set of worlds compatible with x's PB in C is in a single cell of the partition.

Therefore, an agent a's commitment to act upon Q is a's commitment to act upon the partition of the world. If a QUD is resolved, the cells are reduced to the ones which only consist of the worlds that contain the answer to the QUD. This indicates that a is committed to act upon Q, the same agent assumes the presence of the partition of possible worlds in a given context C. This further means that if a is committed to act upon Q, then a assumes that the Q remains unresolved, for the presence of a partition is indicative of the unresolvedness. If the commitment is only private/self, the agent claims that the Q is unresolved only for the same agent, and thus the agent does not necessarily indicate that the Q is unresolved for the other DPs as well. However, if a's commitment is public, a directs/suggests/requests the other DPs the unresolved status of the same question, to act upon which a is committed. Whether the DPs to whom a is committed to act upon Q take this commitment seriously and follow a with regard to the unresolvedness of the Q is ultimately up to themselves. For instance, if a's relevant commitment is valid enough for the other DPs to discard their beliefs that the question has already been resolved, then they will be committed to act upon Q as well. On the other hand, if their beliefs are firm enough to ignore a's commitment to act upon the question, then they essentially come to hold different personal questions (i.e., self commitment set SCS with regard to Qs) than a does in their minds. Thus, this account can model cases where two (groups of) DPs "agrees to disagree" with regard to their opinions about a QUD (cf. Farkas and Bruce 2010).

With the above formal analysis of interrogative sentences in mind, let us discuss bare interrog-

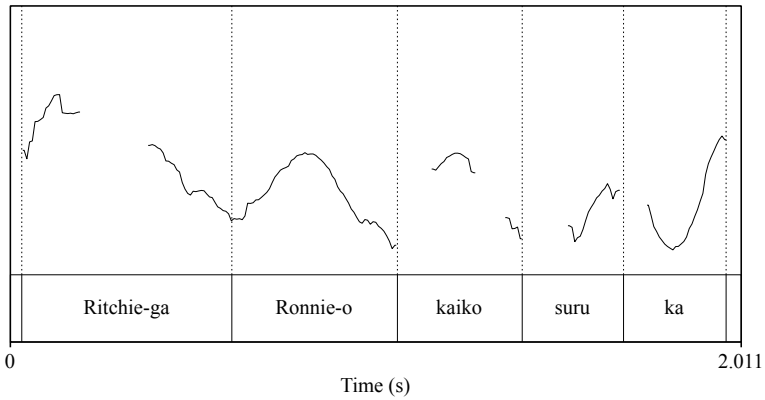


Figure 2.14: The pitch track of (107)

atives pertinent to the present dissertation in detail.

2.4.1.1 Polar interrogative with *ka*

The first example of an interrogative sentence is a polar interrogative that ends with *ka*. An example is provided in (107):

(107) Polar interrogative:

Ritchie-ga Ronnie-o kaiko-sur-u *ka*↑
Ritchie-NOM Ronnie-ACC fire-do-PRS Q↑

'Will Ritchie fire Ronnie *ka*?'

The *ka*-morpheme marks the *Q*-flavour of the sentence (Cable 2007, 2010), which I take as evidence that this is the *Q*-morph that takes a proposition and returns a set of propositions, following the lead of Davis (2011). The entire sentence is associated with ↑, which is the hallmark of an interrogative sentence in Japanese. The entire sentence serves as a polar interrogative, which corresponds to the set {Ritchie will fire Ronnie, Ritchie will not fire Ronnie}. The pitch track of the sentence is given in Figure 2.14.

Interestingly, however, ↓ is also available in the same expression. And if this SFC is associated with *ka*, it indicates S's surprise or a rhetorical answer to the question (i.e., "Richie won't fire Ronnie").

How does this rhetorical meaning result? Recall that ↓ is associated with the presuppositional status of a given part of the sentence. Then, we naturally expect the Q associated with ↓ to be presuppositional in C. But what does it mean that a Q is presupposed? By its very nature, a Q does not have any truth value: it is a set of propositions which corresponds to a partition over possible worlds. Thus, we cannot define a presuppositional status of a given Q on the basis of (66b).

Fortunately, there is a way to provide a straightforward definition of presupposition in interrogatives proposed in the previous literature. The particular proposal I adopt here is the one by Büring (2003), which is made in the context of defining the semantics of *Contrastive Topic* (CT) of the sort in (108) (see also Tomioka 2010a,b; Wagner 2012; Constant 2014; Matsumoto forthcomingb among others).

(108) a. What about David and Peter? What did they buy?

b. David$_{CT}$ bought a book, and Peter$_{CT}$ bought a table.

The *wh* Q in (108a) asks what David and Peter bought, respectively, and (108b) provides an answer to the question. According to Büring, the Q is partitioned on the basis of the non-*wh* arguments, *viz.*, David and Peter. Building on *alternative semantics* proposed by Rooth (1985, 1992), he calls such arguments CTs. According to Büring, the CTs take scope over a *wh* Q = a set of propositions and they introduce a set of sets of propositions of the following form:

(109) {{David bought a book, David bought a table, David bought a cake, $\cdots$}, {Peter bought a book, Peter bought a table, Peter bought a cake, $\cdots$}, $\cdots$}

That is, the CTs in (108) embed the QUD "What did they buy?" and put "Who bought what?" on the topmost QUD stack, where the answers to *who* are restricted to David and Peter. Practically, CT in this sense introduces a "bigger" QUD to the discourse, the resolution of which leads to another QUD embedded directly below it in the stack. The bigger QUD in (108) = "Who bought what?" is semantically equivalent to (109). What (108b) does is to sort the answers to the QUD into two on the basis of the answers to the CTs. The first clause in the sentence (i.e. "David

bought a book") is thus an answer to the QUD below this bigger QUD = "What did David buy?," which in turn is equivalent to the set {David bought a book, David bought a table, David bought a cake, $\cdots$}. The same applies to the second clause: it provides an answer to "What did Peter buy?" = {Peter bought a book, Peter bought a table, Peter bought a cake, $\cdots$}. In (108), these two answers are sorted by the CTs (i.e., Peter and David).

Notice here that the last two sets are proper subsets of the QUD "Who bought what?" Thus, the answers to the latter *entail* the answers to the former. Based upon this, I claim that the presuppositional status of a Q is defined on the basis of the entailment relation between two Qs. Specifically:

(110) A question Q_1 counts as *presupposed* iff it has a salient antecedent question Q_2, and the answer to Q_2 entails the answer to Q_1.[8]

This definition provides a ground for analysing the discourse effect of (107) with the falling SFC. The falling contour in this example is felicitous if there is a Q that entails "Will Ritchie fire Ronnie?" At this point, it should be noted that ↓ is felicitous only when it is preceded by an utterance of the following sort:

(111) Ritchie-ga Ronnie-o kaiko-sur-u tte.
Ritchie-NOM Ronnie-ACC fire-do-PRS that
'Rumour has it that Ritchie will fire Ronnie.'

(111), even if uttered out of the blue as an event reporting sentence, serves as an answer to the Q "Will Ritchie fire Ronnie?" In this sense, it *evokes* the Q "Will Ritchie fire Ronnie?" in the DPs' mind in C. In other words, after the utterance of (111), this Q becomes presupposed. Since this Q equals, and thus entails, (107), the utterance counts as presupposed in C. Therefore, the fact that ↓ can be associated with (107) in such a context is explained. Quite generally, an assertive speech act presupposes its corresponding QUD, and hence it makes the QUD presupposed. The same holds true for other information providing sentences/utterances.

In contrast, the same example with ↓ cannot be preceded by the following *wh* Q.

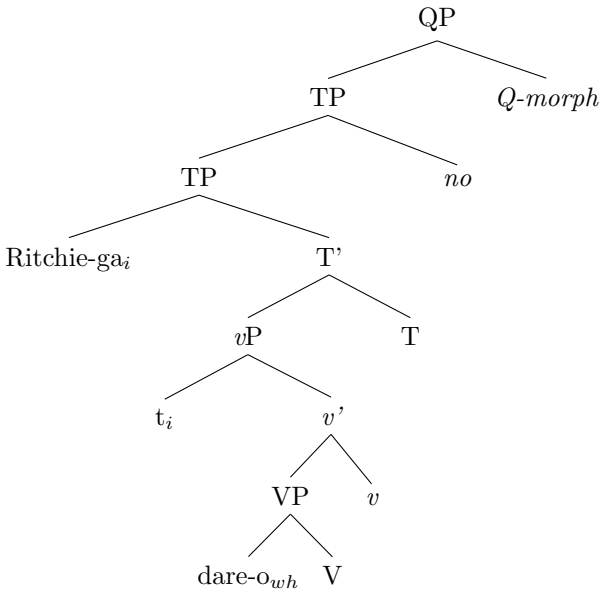
[8] Actually, Groenendijk and Stokhof (1984) propose that a question is entailed by another based upon a similar definition as (110). See also Roberts (2012).

(112) Ritchie-ga dare-o kaiko-sur-u *no*↑
Ritchie-NOM who-ACC fire-do-PRS *no*↑
'Who will Ritchie fire?'

The potential answers to this *wh Q* contains one of the potential answer to (107) (i.e., Ritchie will fire Ronnie). However, there is no entailment relation between these two *Q*s: i.e., $\{p, \neg p\}$ is not included in (112), and *vice versa*. Therefore, the fact that (112) does not license ↓ in (107) lends further support for the present analysis.

Before turning to the analysis of the non-literal reading of (107) with the falling contour, let us briefly cover the syntactic structure of (112). I assume that there is a Q-morpheme in the narrow syntax Merged above *no* in (112). This morpheme is required to introduce the set consisting of propositions, which corresponds to the meaning of a question according to Hamblin (1973). Hence, the syntactic structure of (112) is of the form in (113).

(113)



I further assume that this *Q-morph* will be post-syntactically deleted *via* VI when ↑ is associated with the sentence. Thus, the following example is ungrammatical because of this post-syntactic language-specific condition:

(114) *Ritchie-ga dare-o kaiko-sur-u *no ka*↑
Ritchie-NOM who-ACC fire-do-PRS *no ka*↑
Intended. 'Who will Ritchie fire?'

In contrast, *ka* is optional when the SFC is realised as ↓:

(115) Ritchie-ga dare-o kaiko-sur-u *no* (*ka*)↓
Ritchie-NOM who-ACC fire-do-PRS *no* (*ka*)↓
'Who will Ritchie fire?'

Based upon these observations, the following post-syntactic VI rules obtain.[9]

(116) The VI of a Q-morpheme in a non-honorific *wh* interrogative:

a. *Q-morpheme* → Ø / *no* ___ ↑

b. *Q-morpheme* → Ø or *ka* / *no* ___ ↓

This syntax-morphology of *ka* will be important throughout the analysis of interrogatives in this dissertation.

Now, the non-literal reading that (107) with the falling SFC enjoys receives a straightforward account under the present proposal. The explanation is a now-familiar one, based upon the pragmatic reasoning. S's utterance of (107) with ↓ evokes the following inference in A's mind:

(117) The inference that the teacher intends the students to execute *via* (107)↓:

a. S asks the *Q* despite its presuppositional status, and despite the fact that the answer to it has already been provided by the immediately preceding utterance by A.

b. S asks the *Q* for some reasons other than seeking an answer to it.

c. By asking it again, S indicates that it has not been resolved yet.

d. BY indicating so, S intends to mean that Ritchie will not fire Ronnie, expressing S's unbelievability about *p*.

Essentially, asking a presupposed, or already resolved *Q* evokes a series of inferences which can lead A to many potential interpretations. In the case at hand, S's utterance can be interpreted as an expression of unbelievability, a rhetorical remark that basically means that Ritchie will never fire

[9] If one is to be more compliant with DM's standard assumption, the rules in (116) are not acceptable. This is because prosodic assignment does not happen at the stage as VI does, but it essentially *follows* VI. The problem can be resolved easily, by assuming that what is relevant is not the SFCs but the information structure feature(s) borne by the relevant expressions. If they bear [+new] in the sense of Selkirk (1984), then *ka* should be deleted; in contrast, if they bear [-new], then *ka* may surface. With this caveat in mind, I adopt the transcription in the body text for the sake of expository convenience.

Ronnie, and so forth. The exact interpretation depends on the discourse and other factors including the socio-psychological relationship between/among the DPs. This kind of underspecification should be taken as a virtue, for the reasons discussed in the last two sections.

In this way, the present account explains the semantic and prosodic behaviours of a bare polar interrogative in Japanese. Next, I will discuss *wh* interrogatives.

2.4.1.2 *Wh* interrogative with *ka*

The next type of interrogatives I discuss is *wh* interrogative with *ka*, which I refer to as *wh Q ka*. First of all, a *wh Q ka* is incompatible with ↑ when there is no honorific marking:

(118) a. *Dare-ga Ronnie-o kaiko-sur-u *ka*↑
who-NOM Ronnie-ACC fire-do-PRS Q↑
Intended. 'Who will fire Ronnie?'

b. Dare-ga Ronnie-o kaiko-si-mas-u *ka*↑
who-NOM Ronnie-ACC fire-do-POL-PRS Q↑
'Who will fire Ronnie?'

As for the ungrammaticality of (118a), I extend the analysis given in (116) to this case and assume that the Q-morpheme should be realised as Ø post-syntactically when it is associated with ↑ in a *wh* interrogative sentence with no honorific marking. If it embeds the relevant honorific marking, however, it can be overtly realised as *ka* even with ↑.

In the rest of this dissertation, I will focus my attention on interrogatives without honorification. What is important here is that if the sentence is associated with ↓, (118a) becomes felicitous:

(119) Dare-ga Ronnie-o kaiko-sur-u *ka*↓
who-NOM Ronnie-ACC fire-do-PRS Q↓
'Who will ever fire Ronnie? (No one will!)'

The resulting interpretation of the sentence is, as indicated in the translation, essentially rhetorical: the sentence expresses S's belief that no one will fire Ronnie. (119) is felicitous only in those contexts where the remarks are present such as "Someone will fire Ronnie" and "(I heard that) Ritchie will fire Ronnie" and so forth.

These remarks do not provide an answer to the QUD, and hence it does not make it presuppositional. Therefore, the use of the falling contour should be made as an intentional violation of a pragmatic norm. The candidate for such a discourse effect due to the use of the contour is the rhetorical reading of the sentence, along with the expression of S's anger, surprise and so forth. The pragmatic reasoning that yields this reading from ↓ is illustrated below:

(120) The inference that S intends A to execute *via* (119):

a. S used ↓ despite the fact that the Q is not presupposed.

b. There must be a reason for S's use of the falling SFC.

c. By using this SFC, S intends to mean that it should have been presupposed.

d. The fact that the Q should have been presupposed means either that the answer to it should have been provided already or that at least the candidates for the person who will fire Ronnie should have been specified if there is any, given the entailment relation between two Qs in (110).

e. Nonetheless, there is no such answer candidate that has been proposed or specified whatsoever in c.

f. Since (120e) is not fulfilled, S intends to indicate that there is no such person who will fire Ronnie.

Interestingly, (119) is also usable as an answer to utterances like "Ritchie will fire Ronnie," as I noted. In this case, the QUD in question is presupposed, since such utterances are meant to resolve it. Thus, the use of the falling contour is valid. The interesting point is that despite this difference, the reading (119) yields is the same in the two cases under consideration. Why?

I submit that this is because the same conclusion is reached from a different starting point of the pragmatic inference. Specifically, when (119) is uttered as a presupposed QUD, the following reasoning is executed in A's mind/brain (compare (121) with (120)) :

(121) The inference that S intends A to execute *via* (119) as a presupposed QUD:

a. S used ↓ despite the fact that the Q is presupposed if A's assertion is true.

b. There must be a reason for S asking the presupposed Q other than seeking an answer to it.

c. By asking it again, S indicates that it has not been resolved yet.

d. Thus, S indicates that "Ritchie fired Ronnie" is false.

e. Furthermore, the same purpose can be fulfilled by the utterance of a more specified Q: namely, (107) which entails (119).

f. There must be a reason for S asking this less specified Q.

g. By asking it, S indicates that the more specified Q (107) has not yet been resolved either.

h. Since the utterances that make the Q in (119) presupposed are shown to be false and unresolved, the Q in question has been shown not to be presupposed.

i. S used $\downarrow$ despite the fact that the Q is not presupposed.

j. There must be a reason for S's use of the falling SFC.

k. By using this SFC, S intends to mean that it should have been presupposed.

l. That the Q should have been presupposed means either that the answer to it should have been provided already or that at least the candidates for the person who will fire Ronnie should have been specified if there is any, given the entailment relation between two Qs in (110).

m. Nonetheless, there is no such answer candidate that has been proposed or specified whatsoever in C.

n. Since (120m) is not fulfilled, S intends to indicate that there is no such person who will fire Ronnie.

The reasoning dictated here is admittedly cumbersome, but it merits being so. Crucially, (119) as a response to the assertion that Ritchie fired Ronnie yields the inference that the Q is not presupposed, even though the reasoning starts from the assumption that it is. Thanks to this

inference, the rest of the reasoning becomes equivalent to (120). Thus, the same discourse effect is successfully derived in both (120) and (121), as we desire.

Summing up, the present account provides a straightforward explanation for the discourse effect of *wh Q ka*↓. This type of interrogative serves as a usual *wh* question, and the reason for the absence of *ka* when ↑ is associated with the sentence was explained from the perspective of DM.

Before moving on to the next interrogative type, let us note in passing that despite the widely-held impression among native Japanese speakers that *wh Q ka* is only compatible with the present tense, the construction can be used in the past tense as well:[10]

(122) Ano-seitoo-no giin-no-naka-de, dare-ga ano-jiken-nituite syazai-si-ta *ka*↓
that-party-GEN member-GEN-in-DAT who-NOM that-incident-about apologise-do-PST *ka*↓
'Who among the members of that party apologised about the incident↓'

The grammaticality of examples like this shows that there is no restriction on tense in this interrogative type, like declarative and unlike imperative.

2.4.1.3 *No ka* polar interrogative

The next construction I discuss is *no ka* polar interrogative. (62) provides us with an example of this construction with *yo*. This construction is also grammatical without the particle:

(123) Ritchie-ga Ronnie-o kaiko-si-ta *no ka*↑/↓
Ritchie-NOM Ronnie-ACC fire-do-PST *no* Q↑/↓
'Did Ritchie fire Ronnie?'

As shown in (123), *no ka* polar interrogative is compatible with the past tense, which evidences that the construction has the TP-projection. Therefore, it is a *Q* that involves an agent's (public) belief. In addition, it can be associated with both the rising and falling SFCs. If the SFC is realised as ↑, the sentence is a pure information seeking *Q* which introduces a set of propositions. In the case of (123), it asks whether Ritchie fired Ronnie or not.

If, on the other hand, (123) is associated with ↓, the sentence indicates S's surprise, bewilderment, anger etc. about the fact that Ritchie fired Ronnie. Crucially, however, it does not yield

[10] I thank Yutaka Morinaga and Takuhiro Horie for relevant discussions.

the reading "Ritchie didn't fire Ronnie," or "No one fired Ronnie". Why?

Here it is crucial to pay attention to the particle *no* here. Sudo (2013) makes an interesting observation that *no* pertains to evidentiality.

(124) Context: A came into the room with a wet umbrella, and S asks A

a. Ame hutte-ru *no*?
rain fall-PROG *no*
'Is it raining *no*?'

b#Ame hutte-ru?
rain fall-PROG
'Is it raining?'

(125) Context: A person with a pair of sunglasses came into the room, and S asks A

a#Ame hutte-ru *no*?
rain fall-PROG *no*
'Is it raining *no*?'

b. Ame hutte-ru?
rain fall-PROG
'Is it raining?'

In (124), the context is specified in such a way that it seems objectively likely that it is raining. In such a context, the use of *no* is not just felicitous, but actually favoured. In contrast, the same particle is not available in (125), where the context provides evidence against the truth of "it is raining". The contrast between these two cases indicates that *no* is available only when there is contextual evidence in favour of the truth of the proposition which the particle embeds.

With this influential observation by Sudo in mind, I assume that *no* in *no ka* interrogatives has the same function of encoding positive evidentiality for the truth of p. This assumption further leads us to the claim that the *no ka* interrogative in (123) is a Q that asks whether $p =$ "Ritchie fired Ronnie" is true with contextual evidence in favour of it or not.

Now the fact that (123) with ↓ cannot yield a rhetorical interpretation of the sort observed in polar and *wh* Qs can be expounded in terms of the present analysis. The falling SFC indicates that the entire QUD is presupposed. According to our account, a QUD counts as presupposed iff

the answer to a preceding QUD entails the answer to the QUD in question, or the answer to it has already been proposed in C. It should be noted here that the interrogative in question is felicitous only when there is contextual evidence that speaks to the truthfulness of p. For instance, it can be uttered after S directly heard Ritchie's declaration of firing Ronnie, or after hearing a trustworthy person saying that Ritchie fired Ronnie. The use of ↓ is satisfied, in such cases.

The utterance of (123) with the falling SFC, then, leads A to run the following series of inferences in their mind/brain.

(126) The inference that S intends A to execute *via* (123):

a. S proposes the Q despite its presuppositional status.

b. There should be a reason for this utterance.

c. Crucially, the utterance is made in spite of the fact that the answer to the Q has already been proposed *with objective evidence*.

d. Assuming that S is rational enough not to try to deny objective evidence, A interprets S's utterance as an expression of surprise, bewilderment, anger, unbelievability etc. about p.

The crucial stage is (126c), where A takes into consideration the fact that there is *objective evidence* in favour of p's truth in C. This is due to the use of *no* in (123). From this reasoning, A further infers that S as a rational person would not have uttered the presuppositional Q in order to inquire the answer. Accordingly, the observed effects are successfully derived as we want. Notice here that the assumption in (126d) that S is a rational person who would never deny the truth of p with objective evidence makes it impossible for A to interpret (123) as the expression like "No one will$\cdots$". Such a reading directly contradicts the presence of objective evidence in favour of p's truth. Therefore, the present account provides a straightforward account for the reading of (123) with the ↓ contour.

2.4.1.4 *No da wh* interrogative

The final type of interrogative I discuss is what I call *no da wh* interrogative, the example of which is provided in (127) below:

(127) Dare-ga Ronnie-o kaiko-si-ta *no da*↑/↓
who-NOM Ronnie-ACC fire-do-PST *no da*↑/↓
'Who fired Ronnie *no da*↑/↓'

If ↑ is associated with the sentence, (127) serves as a genuine *wh Q* that asks who fired Ronnie, just like (123). If it is realised with ↓, in contrast, it expresses S's anger and similar negative emotions at the fact that someone fired Ronnie or the same emotions at the individual who fired him. The former reading derives naturally from the construction *per se*, and hence it requires no further discussion. The latter reading, in contrast, needs an explanation. To reach a satisfactory analysis, let us decompose the utterance into parts and examine them in some detail.

First, *no* in (127) marks evidentiality in favour of the truth of an embedded proposition, according to the present account. But since the embedded sentence radical is a *wh Q*, there is no proposition that can be assigned a truth value in this sentence. So it seems.

However, there is a way of circumventing this problem. Recall that a *wh Q* presupposes that $\exists x[\mathrm{P}(x)]$. In the case at hand, the *Q* presupposes $\exists x[\textit{fired.Ronnie}(x)]$. Taking advantage of this factual assumption, I propose that *no* in *no da wh* interrogative encodes the existence of positive evidence in favour of $\exists x[\mathrm{P}(x)]$ in C. This proposal is initially plausible given the fact that (127) is felicitous only when there is a contextual piece of evidence that Ronnie was fired. Indeed, a *wh Q* generally requires *no* when a concrete (exhaustive) answer is expected (cf. Uegaki 2018; Sudo and Uegaki 2019). Thus, what is presupposed in this sentence is the existence of an answer to the *Q*, and the positive evidentiality of such existence is expressed *via no*.

The QUD *per se* is not presupposed, however. Therefore, ↓ still looks infelicitous at first glance. However, we have already seen such an instance of the use of ↓ in (52b). There, it is argued that the inference flow depicted in (79) licenses the use of the seemingly infelicitous falling SFC. The exact same argumentation successfully derives the use of the same contour, along with

the discourse effects that it exhibits in (127)

(128) The inference that S intends A to execute *via* (127):

a. S used ↓ despite the fact that the *Q* is not presupposed.

b. There must be a reason for S's use of the falling SFC.

c. By using this SFC, S intends to mean that it should have been presupposed.

d. That the *Q* should have been presupposed means either that the answer to it should have been provided already or that at least the candidates of the person who fired Ronnie should have been specified, given the entailment relation between the two *Q*s in (110).

e. Since neither of them is fulfilled, S intends to express their anger by the utterance of (127).

The inference pattern is pretty much a reminiscent of (79). Both yield the preaching, angry colour of the utterance from the use of the falling contour in an infelicitous context. The effect is derived from an intentional violation of Grice's Conversational Maxims.

As for the syntax of a *no da wh* interrogative sentence, I assume again that there is a silent Q-morpheme above *da*, which is post-syntactically realised as Ø when associated with ↑. The same morpheme can be optionally realised when it is associated with ↓. These are exactly what (116) dictates. Thus, we obtain the following contrast:

(129) a. *Dare-ga Ronnie-o kaiko-si-ta *no da ka*↑
who-NOM Ronnie-ACC fire-do-PST *no da* Q↑
Intended. 'Who fired Ronnie *no da*↑'

b. Dare-ga Ronnie-o kaiko-si-ta *no da ka*↓
who-NOM Ronnie-ACC fire-do-PST *no da* Q↓
'Who fired Ronnie *no da ka*↓'

Before summarising, let me note in passing that bare interrogatives can be followed or preceded by an expression that cancels the implicature of S's public commitment to act upon *Q*.

(130) Phil-wa nani-o kat-ta *no da*? Moo sudeni kotae-o ki-ita kamo
Phil-TOP what-ACC buy-PST *no da* yet already answer-ACC hear-PST may
sire-na-i kedo.
know-NEG-PRS but
'What did Phil buy? Perhaps you've already told me the answer to this question, though.'

This shows that even though S's public commitment to act upon Q is implicated by a bare interrogative, this implicature can be cancelled. In contrast, when *yo* is used, the relevant expression becomes infelicitous:[11]

(131) Phil-wa nani-o kat-ta *no da yo*. # Moo sudeni kotae-o ki-ita kamo
Phil-TOP what-ACC buy-PST *no da yo* # yet already answer-ACC hear-PST may
sire-na-i kedo.
know-NEG-PRS but
'What did Phil buy? # Perhaps I have already told me the answer to this question, though.'

This indicates that *yo* encodes the information that $Q \in \text{PCS}_S^C$ in interrogatives as well, which makes it uncancellable.

2.4.1.5 Summary

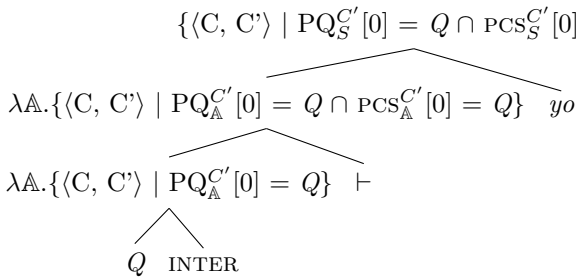
Summing up this subsection, the semantics and pragmatics of the four interrogative types, namely, polar, *wh*, *no ka* polar and *no da wh* interrogatives, were neatly accounted for in this subsection. They exhibit an intriguing discourse effect when they are associated with ↓, and it was shown that this fact immediately follows from the proposal of the present dissertation without further ado.

2.4.2 *Yo* with the falling SFC in interrogatives

I turn to interrogatives with *yo*. As we have seen, *yo* can be associated only with the falling SFC ↓. Then, we expect that interrogatives with *yo* exhibit the same basic discourse effect as their bare interrogative counterparts. In addition, we also expect them to involve S's public commitment to act upon Q, given my central hypothesis that *yo* expresses the information that $p/Q \in \text{PCS}_S^C$. In short, the present proposal expects an interrogative with *yo* to have the following LF structure:

[11] The same holds true for *sira/i*, the particle which substitutes for *yo* when the sentence is associated with ↑, which I will discuss in the next subsection.

(132)



Furthermore, since ↓ associated with *yo* is different from ↓ associated with a bare interrogative in that the former indicates that S's public commitment is presupposed while the latter indicates the presuppositional status of a Q, this difference should yield a further slight but significant difference in discourse effects between the two examples.

2.4.2.1 Polar interrogative with *yo*

The first type of interrogative I discuss is *polar interrogative* with *yo*, the example of which is shown in (58). The example is repeated here as (133) for the sake of convenience.

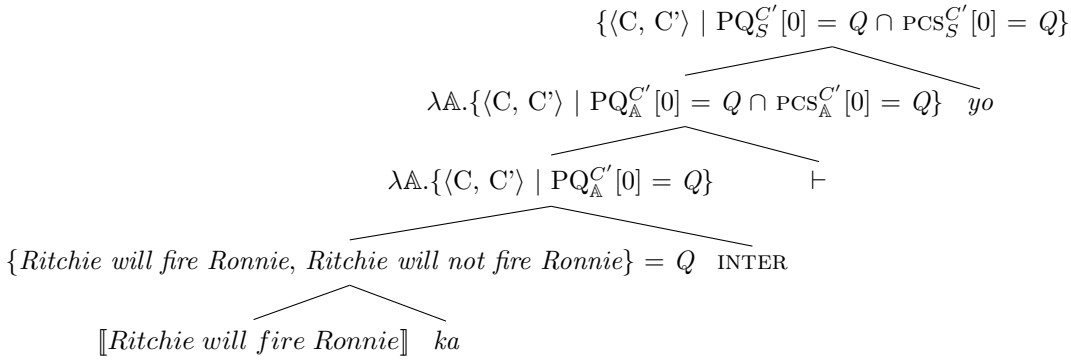
(133) Polar interrogative:

Ritchie-ga Ronnie-o kaiko-sur-u *ka yo*↓
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *yo*↓

'Will Ritchie fire Ronnie *yo*↓ (No, he won't!)'

When we compare this sentence and its bare counterpart, which I discussed in Section 2.4.1.1, we find that both are understood rhetorically. In addition, both are licensed only in the presence of a QUD that entails it in the preceding context. The crucial difference between them is, however, that while the latter does not necessarily expect A to agree with S's belief that Ritchie won't fire Ronnie, the former explicitly does. Indeed, the latter is felicitous as a part of soliloquy, where no other DP is involved in the discourse whilst the former sounds awkward in such a context, if not impossible. This is a reminiscent of what we have seen in the comparison between a bare declarative and a declarative with *yo*. Thus, (133) has the following LF structure:

(134) The LF structure of (133):



Furthermore, (133) connotes a much stronger sense of surprise, anger, unbelievability, bewilderment etc. associated with polar interrogatives than its bare interrogative counterpart. Particularly, in (133) such emotions are directed towards A, while in bare polar interrogatives with ↓ are not necessarily intended to express such emotions towards A.

These two discourse effects peculiar to the use of *yo*↓ is what the present analysis readily expects. Specifically, the present account explains them by means of the following pragmatic reasoning A is expected to execute from (133):

(135) The inference that S intends A to execute *via* (133):

a. S asks the Q despite its presuppositional status, and despite the fact that the answer to it has already been proposed by the immediately preceding utterance by A.

b. S asks the Q for some reasons other than seeking an answer to it.

c. By asking it again, S indicates that it has not been resolved yet.

d. By indicating so, S intends to express that Ritchie will not fire Ronnie.

e. Also, by the use of the particle, S intends to convey that the unresolvedness of the Q holds not only for S but also for A. More precisely, by the use of it, S is publicly committed to act upon Q, one of the conspicuous discourse effects of which is to increase the trustworthiness of the Q's unresolvedness.

f. Thus, by using *yo*, S intends A to hold the same Q.

By using *yo*, S indicates that A is involved in the inquiry. Even though the relevant commitment is not made explicit, the presuppositional status of *yo* results from the fact that the Q to which it

attaches is presupposed. The Q implicates S's relevant commitment, and since it is not explicitly cancelled, what is encoded in *yo* is also presupposed subsequently. The pragmatic reasoning in (133) is a familiar one, based upon the fact that the Q is asked despite the fact that the answer to it has already been proposed. The present proposal thus neatly explains the semantics and pragmatics of *yo*↓ in a polar interrogative.

Notice that the present account does not specify the exact discourse effect associated with *yo*↓. I take this as a virtue, as such an effect is very much dependent on C. For instance, if it is uttered as a reaction to the remark by A "Ritchie said he will fire Ronnie, so you've lost this game and have to pay $1000 as you promised," then the sense of unbelievability and so forth is directed towards A in a rather straightforward manner. In contrast, if S utters it as a reply to A's report that Ian, who is a well-known habitual liar, stupidly said that Ritchie will fire Ronnie, then the sense of anger is directed towards Ian, and what S intends to do *via* the use of *yo*↓ is to share this emotion with A. To capture this (pseudo-)polysemy of *yo*↓, I claim that it just indicates that S has already been committed to A to act upon Q and by doing so S tries to increase persuasiveness of their opinion and emotion to A, which results from the SFP's effect of semanticising the public commitment by S in C.

Our explanation of the behaviour of *yo* in a polar interrogative sentence does not end here. Recall a bare polar interrogative with *ka* in (107) can be associated with ↑ as well. However, this does not hold for *yo*:

(136) *Ritchie-ga Ronnie-o kaiko-sur-u *ka yo*↑
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *yo*↑
Intended. 'Will Ritchie fire Ronnie?'

Assuming that this assumption is correct, we are left with one issue. Why is it the case that *yo* is not able to be associated with ↑? Since its bare polar interrogative counterpart can, it is expected that (136) would also be grammatical, contrary to fact.

To explain this, we need to look at two other particles that can be used in the same context. The particles are *sira* and *i*, which to the best of my knowledge have hitherto escaped theoretical

attention (but see Miyagawa 2022 for a brief discussion). See (137).[12]

(137) Ritchie-ga Ronnie-o kaiko-sur-u *ka sira/i*↑
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *sira/i*↑
'Will Ritchie fire Ronnie *sira/i*↑'

Interestingly, (137) is grammatical only in the presence of A, and solicits a response from A that answers *Q*. In contrast, (107) is fine as a question to ask oneself: in that case, it is an expression of wonder. This contrast eloquently speaks to the assumption that *sira/i* involves S's public commitment to act upon *Q*, which is precisely what we expect from *yo*.

Based upon this observation, I propose that when the *S*-head above ⊢ is associated with ↑ in a polar interrogative with *ka*, it is realised as *sira/i* in the post-syntactic process of VI:

(138) $S \rightarrow$ *sira* or *i* / *ka* INTER ⊢ ___ ↑

The fact that *yo* is unable to be associated with the rising contour in a polar interrogative with *ka* thus follows from the idea that *S* should be realised as *sira/i* in the relevant morphosyntactic environment.

It should be noted that both *yo* and *sira/i* are also available with ↓, and it can be used with the past tense:

(139) Ritchie-ga Ronnie-o kaiko-si-ta *ka yo/sira/i*↓
Ritchie-NOM Ronnie-ACC fire-do-PST Q *sira/i*↓
'Did Ritchie fire Ronnie *sira/i*↓'

(140) Ritchie-ga Ronnie-o kaiko-sur-u *ka yo/sira/i*↓
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *yo/sira/i*↓
'Ritchie won't fire Ronnie *sira/i*↓'

Thus, the particles can embed a TP, and it is also available in the environment where *yo* is as well.

Summing up this subsection, the behaviour of *yo*↓ in polar interrogatives with *ka* is neatly explained under the present account. The impossibility of the association of *yo* with ↑ follows from

[12]There is a (loose) gender condition upon the use of either of these variants of *yo*: *sira* is generally used by women, while *i* by men. However, the condition is not inviolable. There are many people with *she/her/hers* as their preferred pronouns using *i*, and *vice versa*. Indeed, in many dialects spoken in the Hokuriku region of Japan, women quite naturally use *i*.

the DM-style morphosyntactic requirement that ↑ in interrogatives makes the *S*-head realised as *sira/i*.

2.4.2.2 *Wh* interrogative with *yo*

The next interrogative type I discuss is *wh Q ka*. The example is illustrated in (59), repeated here as (141).

(141) Dare-ga Ronnie-o kaiko-sur-u *ka yo*↓
who-NOM Ronnie-ACC fire-do-PRS Q *yo*↓
'Who will fire Ronnie *yo*↓ (No one!)'

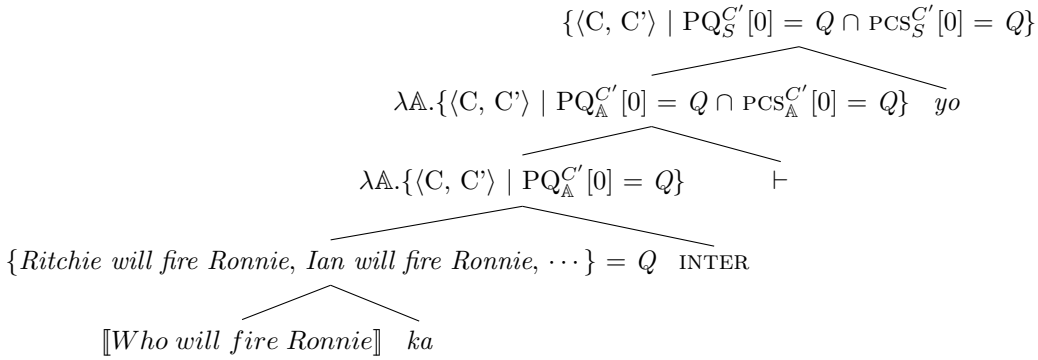
As we have seen, *wh Q ka* obligatorily yields a rhetorical interpretation, and it is only associated with ↓. Both of these characteristics are observed in (141) along with (142), which shows the infelicity of ↑ in *wh Q ka yo*.

(142) *Dare-ga Ronnie-o kaiko-sur-u *ka yo*↑
who-NOM Ronnie-ACC fire-do-PRS Q *yo*↑
Intended. 'Who will fire Ronnie *yo*↑ (No one!)'

As for the discourse effect of *wh Q ka yo* in comparison with *wh Q ka*, it requires not only the prior context which provides an answer to the *Q* just like *wh Q ka* but also the presence of A. As Davis (2011) observes, *yo*↓ has a function of correcting A's assumption regarding the answer to the QUD and other related commitments, while such a connotation is absent in *wh Q ka*.

This semantics of *yo*↓ in this interrogative type immediately follows from the semantics of *yo* as a particle that encodes S's public commitment to act upon *Q*. Therefore, A's involvedness in question is what *yo* is responsible for. The use of ↓ despite the fact that S's relevant commitment has not been made explicit also follows from the presuppositional status of the QUD if it is already in C. If the *Q* is new to the discourse, it evokes the reading of "the answer should have been provided already" *via* the now-familiar reasoning. The LF structure of (141) is depicted below:

(143) The LF structure of (141):



Just as in its bare interrogative counterpart, this sentence can also be uttered both with and without a presupposition. The reasoning that yields the correct reading is identical *modulo* the discourse effect specialised for *yo*. Basically, the utterance of a presupposed QUD might turn out to be that of a non-presupposed Q, as we have seen in (120) and (121).

Before moving on to the next interrogative type, it should be noted that *sira/i* is also available in the same environment:

(144) Dare-ga Ronnie-o kaiko-sur-u *ka sira/i*↓
who-NOM Ronnie-ACC fire-do-PRS Q *sira/i*↓
'Who will fire Ronnie *sira/i*↓ (No one!)'

This echoes the observation in (140). These particles can optionally realise S in lieu of *yo*.

↑ is unavailable in *wh Q ka i* as well, as in

(145) *Dare-ga Ronnie-o kaiko-sur-u *ka i*↑
who-NOM Ronnie-ACC fire-do-PRS Q *i*↑
Intended. 'Who will fire Ronnie *i*↑'

However, *sira* makes the rising contour felicitous in this interrogative type.

(146) Dare-ga Ronnie-o kaiko-sur-u *ka sira*↑
who-NOM Ronnie-ACC fire-do-PRS Q *i*↑
'Who will fire Ronnie *sira*↑'

From these observations, I assume that the incompatibility of ↑ with *yo* and *i* in *wh Q ka* is due to a morphophonological contingency of the Japanese language.

Summing up, *wh Q ka yo/i* adds the involvedness of A to *wh Q ka*, which is what we expect from the semantics of *yo* (and *sira/i*). The fact that this type of interrogative is unable to be

associated with the rising SFC follows from the fact that the underlying *wh Q ka* is incompatible with this SFC+*sira/i*.

2.4.2.3 *No ka* polar interrogative with *yo*

No ka polar interrogative with *yo*, which is exemplified in (62) and repeated here as (147), basically behaves in the same way as its bare interrogative counterpart in (123) in terms of its discourse function.

(147) Ritchie-ga Ronnie-o kaiko-sur-u *no ka yo*↓
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *yo*↓
'Will Ritchie fire Ronnie *yo*↓ (I'm surprised!)'

Yo is compatible with the past tense in this construction as well:

(148) Ritchie-ga Ronnie-o kaiko-si-ta *no ka yo*↓
Ritchie-NOM Ronnie-ACC fire-do-PST *no* Q *yo*↓
'Did Ritchie fire Ronnie *yo*↓ (I'm surprised!)'

Expectedly, however, the use of *yo* evokes the presence of A while its absence implies that the utterance can be made as a self-talk, expressing S's own reaction to p. This is readily explained by the semantics of *yo* as a grammatical encoding of the information that p is a member of $\text{PCS}^{\text{C}}_{S}$.

The use of the falling contour further indicates that S intends to mean that S's commitment to A to act upon Q should have been presupposed along with the QUD. By means of this, S indicates that the answer should have been already present. The important point is again that *no* encodes the existence of objective evidence for the truthfulness of p, and hence the reading that Ritchie will/did not fire Ronnie is unavailable in these examples, just like we have seen in Section 2.4.1.3.

It is worth briefly noting here that while *yo* is only compatible with ↓ as in (149), *sira/i* can host both ↑ and ↓ as in (150).

(149) *Ritchie-ga Ronnie-o kaiko-sur-u *no ka yo*↑
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *yo*↑
'I'm surprised that Ritchie fires Ronnie. (Lit. Will Ritchie fire Ronnie *yo*↑)'

(150) Ritchie-ga Ronnie-o kaiko-sur-u *no ka sira/i*↑/↓
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *sira/i*↑/↓

'Will Ritchie fire Ronnie *sira/i*↑/↓'

This shows that the unavailability of *yo* in a polar *no ka* interrogative with ↑ is a morphosyntactic contingency: in such a morphosyntactic environment, the *S*-head is realised as *sira/i*. When the sentence is associated with ↓, either *yo*, *sira* or *i* will do.

Before moving on, let us discuss an interesting example brought to my attention by Ryoichiro Kobayashi (p.c.):

(151) Context: After losing the lottery in A's presence, S utters

Mata hazure *ka yo*↓
again blank Q *yo*↓

'Did I draw a blank *yo*↓.'

In this example, S reports the fact that S has lost the lottery. The fact that S has lost the lottery is contextually presupposed/Given. The utterance as a whole connotes S's unbelievability, anger, discomfiture and so on. What is interesting about this example is that despite the absence of *no*, (151) has the same basic discourse function as *no ka* polar interrogatives discussed here. Why?

Notice that (151) is a copula sentence, in which *da* is dropped, just like the examples discussed in this subsection. Notice also that in a copula sentence, the in-situ focus *no da* construction has the form of [$\cdots$ *na no da*]. In the case at hand, its in-situ focus form is *Mata hazure na no da yo*. Notice already that the utterance is made in the presence of apparent objective evidence in favour of *p*'s truthfulness.

Given the assumption that the unbelievability and such results from an interrogative with *no ka yo*↓, the underlying construction of which is the in-situ focus construction, I claim that (151) results from the in-situ focus *Q Mata hazure na no ka yo* with the post-syntactic Ø insertion to what would have been realised as *na* and *no*. Though this is admittedly speculative, it is at least initially plausible given the fact that *Mata hazure na no ka yo* also yields the same basic discourse effect. I would like to thank Ryoichiro Kobayashi for bringing my attention to the data.

2.4.2.4 *No da wh* interrogative with *yo*

The final interrogative type to be discussed is *no da wh* interrogative. This type of interrogative is also compatible with *yo*↓, as shown in (63) (repeated here as (152) for convenience).

(152) Dare-ga Ronnie-o kaiko-sur-u *no da yo*↓
who-NOM Ronnie-ACC fire-do-PRS *no da yo*↓
'Who will fire Ronnie *no da yo*↓'

The particle is also available in the past tense, as in

(153) Dare-ga Ronnie-o kaiko-si-ta *no da yo*↓
who-NOM Ronnie-ACC fire-do-PST *no da yo*↓
'Who fired Ronnie *no da yo*↓'

Again, these utterances are felicitous in the presence of evidence that someone indeed will/did fire Ronnie. This indicates that the *Q* is presupposed in the same fashion as its bare interrogative counterpart, along with S's relevant commitment due to the pragmatic implicature that the *Q* induces. What differentiates (152) and (153) from (127) is the discourse effect induced by *yo*: the SFP indicates that the utterance is directed towards A (and other DPs). Thus, by the utterance of (153), S invites A to the following reasoning.

(154) The inference that S intends A to execute *via* (153):

a. S used the *Q* with ↓ despite the fact that neither the *Q* nor S's relevant commitment is presupposed.

b. There must be a reason for the use of the falling SFC.

c. By using this SFC, S intends to mean that it should have been presupposed.

d. That the *Q* should have been presupposed means either that the answer to it should have been provided already or that at least the candidates of the person who fired Ronnie should have been specified, given the entailment relation between two *Q*s in (110).

e. Since neither of them are fulfilled, S intends to express their anger, surprise and so forth at the fact that someone fired Ronnie by the utterance of (153).

f. By using *yo*, such emotions are meant to be expressed to A.

The crucial point is the use of ↓, despite the unpresupposed status of the *Q*. By using this contour, S intends A to infer that S expresses a certain kind of emotion evoked by the fact that Ronnie was fired, and that such an emotion is meant to be expressed to A.

S's exact emotion and how it is related to A are underspecified. This kind of underspecification is again a virtue of the present analysis, as the exact discourse effect that *no da wh* interrogative sentences evoke depends on various socio-psychological factors (among others). For instance, in the following example S's expression of anger by the use of *yo*↓ is meant to blame A:

(155) Context: A tells S that someone fired Ronnie, S's favourite friend. But A never tells who exactly is the person that fired him despite the fact that A knows who did.

Dare-ga Ronnie-o kaiko-si-ta *no da yo*↓
who-NOM Ronnie-ACC fire-do-PST *no da yo*↓

'Who fired Ronnie *no da yo*↓'

In this discourse, the most natural reading of S's intention of making the utterance is to express their anger at A for not providing S with the answer to the QUD.

In contrast, the following discourse context invites A to a different interpretation of the same utterance:

(156) Context: Ronnie has been known for his excellence at his job. One day, A heard that Ronnie was fired despite his impeccability, and tells S so with a facial expression of unbelievability. S reacts

Dare-ga Ronnie-o kaiko-si-ta *no da yo*↓
who-NOM Ronnie-ACC fire-do-PST *no da yo*↓

'Who fired Ronnie *no da yo*↓'

In this case, S's expression of surprise, anger and so on is, though expressed to A, not meant to blame the same DP. Rather, it is directed towards the unspecified person who fired Ronnie. The comparison between (155) and (165) speaks to our underspecified approach to the exact discourse effect of *yo*↓: it should be defined by referring to how C is formed between/among the DPs.

Recall that there is a Q-morpheme in the syntax of a *no da wh* interrogative sentence. This morpheme cannot be realised as *ka* in the presence of *yo*, *sira* and *i*:

(157) *Dare-ga Ronnie-o kaiko-si-ta *no da ka yo* or *sira* or *i*.
who-NOM Ronnie-ACC fire-do-PST *no da* Q *yo*/*sira*/*i*.
Intended 'Who fired Ronnie *no da yo*/*sira*/*i*.'

Thus, we obtain the following rule for the process of VI at the syntax-morphology interface in the case of a *wh no da* interrogative sentence:

(158) The VI of a Q-morpheme in a non-honorific *wh no da* interrogative:

Q-morpheme → Ø / *no da* ___ *yo*/*sira*/*i*

Interestingly, only *sira* allows the *ka sira* sequence, as in

(159) Dare-ga Ronnie-o kaiko-si-ta *no ka sira*/**yo*/**i*.
who-NOM Ronnie-ACC fire-do-PST *no ka sira*/**yo*/**i*
'Who fired Ronnie *ka sira*/**yo*/**i*.'

This indicates that the following VI rule is operative at the syntax-morphology interface.

(160) The VI of a *S* in a non-honorific *wh no ka* interrogative:

S → *sira* / *no ka* ___

Furthermore, *da sira* is not allowed, as in (161), which indicates that there is another post-syntactic VI rule depicted in (162).

(161) *Dare-ga Ronnie-o kaiko-si-ta *no da sira*.
who-NOM Ronnie-ACC fire-do-PST *no da sira*
Intended. 'Who fired Ronnie *da sira*.'

(162) *S* → *yo* or *i* / *no da* ___

When there is no SFP, the Q-morpheme can be optionally realised as *ka* only if it is associated with ↓, as we have seen

(163) a. *Dare-ga Ronnie-o kaiko-si-ta *no da ka*↑
who-NOM Ronnie-ACC fire-do-PST *no da* Q↑
Intended 'Who fired Ronnie *no da*↑.'

b. Dare-ga Ronnie-o kaiko-si-ta *no da ka*↓
who-NOM Ronnie-ACC fire-do-PST *no da* Q↓
'Who fired Ronnie *no da*↓.'

This is consistent with what we have seen above.

2.4.2.5 Summary

Summarising this section, I have shown that the behaviour of *yo* in various types of interrogative sentences is readily explained by the present account, where the SFP encodes the information that $Q \in \text{PCS}_S^{\text{C}}$. As the particle expresses S's public commitment to act upon what is expressed in the sentence radical, when it is used in interrogatives it expresses A's involvedness. The discourse effects of the utterances with *yo* are tied with the falling SFC associated with the particle, and the unavailability of ↑ in the relevant constructions are accounted for in terms of a post-syntactic morphological analysis *a lá* Halle and Marantz's (1993) Distributed Morphology. The resulting picture of the distribution of *yo* is illustrated in Table 2.6 (below, [+Ev] indicates that there is objective evidence in favour of *p*).

Table 2.6: The distribution of *yo* in interrogatives (final version)

INTERROGATIVE TYPE	DISCOURSE FUNCTION
Polar INTER	Provision of a presupposed *polar* $Q \in \text{PCS}_S^{\text{C}}$
Wh INTER	Provision of a presupposed *wh* $Q \in \text{PCS}_S^{\text{C}}$
No ka polar INTER	Provision of a presupposed *polar* $Q_{[+Ev]} \in \text{PCS}_S^{\text{C}}$
No da wh INTER	Provision of a presupposed *wh* $Q_{[+Ev]} \in \text{PCS}_S^{\text{C}}$

Of particular note is that *yo* in interrogatives always provides a presupposed QUD (or a Q which S wants A to think of as presupposed). This is because the particle is only compatible with ↓, which is the hallmark of the presuppositional status of a given expression. When S's commitment to A to act upon Q is semanticised with a non-presupposed QUD, the *S*-head is realised as *i* or *sira* in interrogatives.

As for the function of *yo* in terms of the discourse update, it facilitates Q to be added to what I call the *Common Question* (CQ) to make its contrast with the CG and the CI explicit, which is equivalent to the QUD.

(164) The process of the CQ enrichment:

a. a publicises their Q (i.e., a publicises $a\vdash^{\mathrm{C}}_{a} Q$),

b. b concurs with (accepts) it and thus adds Q to their self commitment set (i.e., $b\vdash^{\mathrm{C}}_{b} Q$),

c. b publicises this intention, and by this, Q is added to the $\mathrm{CQ}^{\mathrm{C}}_{a,b}$.

What *yo* does in interrogatives is thus to facilitate the DPs (other than S) to accept Q and add it to the PQ = QUD.

2.5 General Implications

2.5.1 Conceptual implications

The present proposal claims that *yo* semanticises S's relevant public commitment in a particular context C. The definition of an agent a's PCS is provided in (42), repeated here as (165) below with modification.

(165) $\textsc{pcs}^{\mathrm{C}}_{a} := \{p/Q \mid \forall x \in \mathbb{A}-\{\mathrm{a}\} : a\vdash^{\mathrm{C}}_{x} p/Q\}$

Thus, *yo* semantically denotes that p is a member of $\textsc{pcs}^{\mathrm{C}}_{S}$, where $\textsc{pcs}^{\mathrm{C}}_{S}$ is defined as

(166) $\textsc{pcs}^{\mathrm{C}}_{S} := \{p/Q \mid \forall x \in \mathbb{A}-\{\mathrm{S}\} : S\vdash^{\mathrm{C}}_{x} p/Q\}$

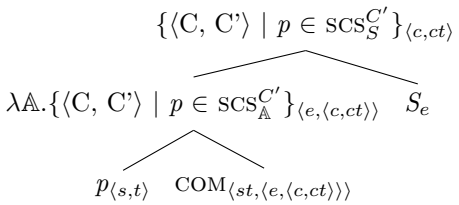
which translates "the set of ps and Qs to act upon which S is committed to all of the DPs except S-self. One question regarding this definition of public commitment is: Why is the specification that the relevant commitment is made by a/S to the DPs *except for a/S themselves* necessary?

Recall here that $[\![\textsc{decl}]\!]$, $[\![\textsc{imp}]\!]$ and $[\![\textsc{inter}]\!]$ are relevant to the introduction of a's PB, PI and PQ, respectively. Recall also that what precisely is introduced by these three is determined on the basis of the content of a sentence radical. If it denotes a tensed proposition, then p is about a's PB. If p is tenseless, then it is about a's PI. Finally, if it denotes a set of propositions, which corresponds to a partition over possible worlds, then it is about a's PQ. Therefore, the distinctions among these operators are redundant.

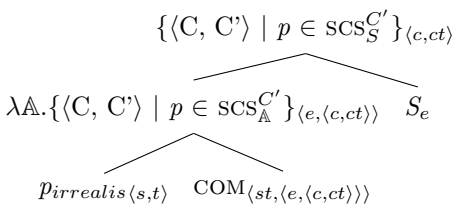
It is suggestive to note here that *a*'s belief and intention are nothing but *a*'s commitment to *a*-self to act in accordance with *p*. Whether it is about a belief or an intention follows from the semantic content of *p*. Thus, the DECL and IMP-operators collapse to a single notion of *self commitment*. As an extension of this idea, we can also propose that the INTER-operator is nothing but one's *self commitment* to act upon *Q*. The publicisation effect of these operators naturally follows as the effect of an utterance, which by definition externalises those beliefs, intentions and questions.

Now we have an answer to the question that why public commitment should be defined in the way depicted in (165). It is because the *self commitment set* (SCS) defined in Chapter 1 already provides the information that *a* is committed to *a*-self to act upon *p/Q*. Thus, calling the relevant operator COM(mitment), the basic LF structures of $[\![p \text{ DECL } S]\!]$, $[\![p \text{ IMP } S]\!]$ and $[\![p \text{ INTER } S]\!]$ are refined as (167), (168) and (169) below, respectively.[13]

(167) Declarative:



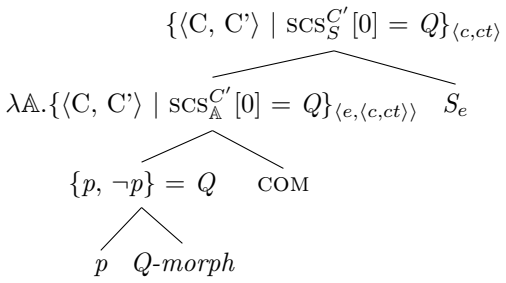
(168) Imperative:



(169) Interrogative (in the case of polar interrogative):[14]

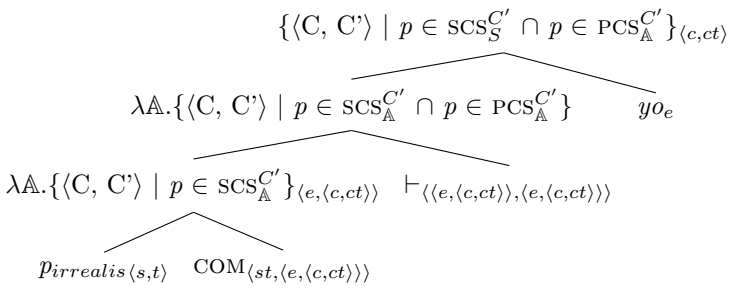
[13] Technically speaking, *a*'s SCS and PCS in C are always in *a*'s mind since its inception (as far as *a* remembers the (content of the) beliefs and public commitments). Thus, the information that *p* is a member of both SCS$_a^{C'}$ and PCS$_a^{C'}$ does not update C. What updates the context is its publicisation, which is concomitant with the utterance. Thus, precisely speaking, COM and $\vdash$ form a *publicised* commitment by *a* to *a*-self and others to act upon *p/Q*. To implement this more strictly, one can assume that there is UtteranceP at the topmost syntactic projection responsible for the externalisation of a sentence and the *Utterance*-head corresponds to our COM. But since the same effect can be derived as an ancillary corollary of externalisation, I do not assume that there is the UtteranP in the treetop. See Chapter 8, Section 3 for more on this issue.

[14] A remark is in order. Strictly speaking, there should be two types of the COM-head. One is of type $\langle st, \langle e, \langle c, ct\rangle\rangle\rangle$, which realises either a declarative sentence or an imperative sentence, depending on the (ir)realis status of the sentence radical. The other embeds a set of propositions and expresses the commitment to act upon the

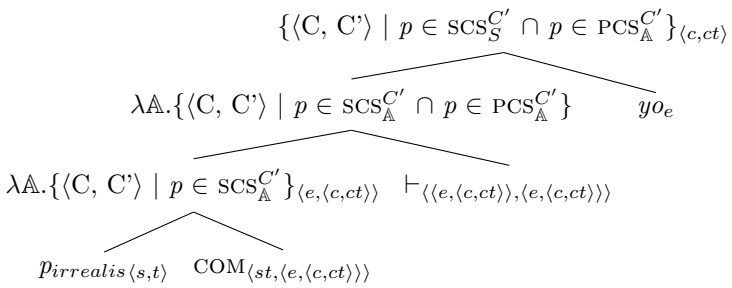


Given this conception of force operators, what $\vdash$ does amounts to modifying COM in such a way that an agent's commitment set includes not just self commitments but also public ones. Thus, my analysis construes $\vdash$ as a modifier of COM. This is illustrated in the following three LF structures:

(170) Declarative with *yo*:

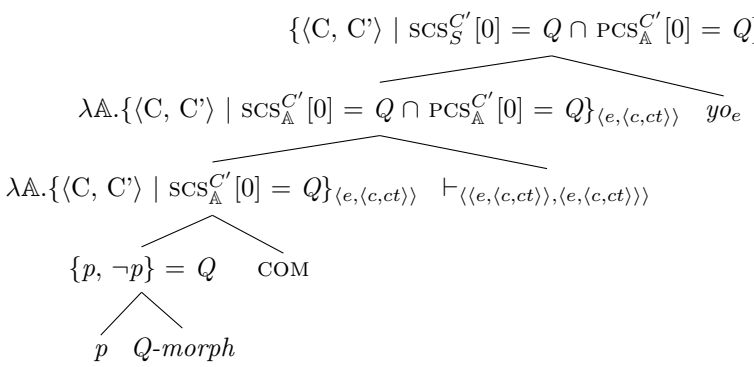


(171) Imperative with *yo*:



(172) Interrogative with *yo* (in the case of polar interrogative):

partition over possible worlds. The semantic type of the latter remains unclear at this point under the framework of truth conditional semantics. With this conceptual issue in mind, however, I assume that the two can be subsumed under the single notion of *commitment*, leaving the exact formalisation and examination for future research. See again citetGroenendijk2009,Ciardelli2009,CiardelliRoelofsen2009,Ciardellietal2019 and others for recent theories of meaning which integrate the basic semantics of declaratives and interrogatives by assuming that both are of type $\langle\langle s,t\rangle t\rangle$. See Pietroski (2018) for a non-truth conditional semantics under Chomsky's 2000b persuasion.



By proposing a single operator COM, the present proposal succeeds in the unification of the three distinct force operators DECL, IMP and INTER. Furthermore, the conception of $\vdash$ as a commitment modifier is straightforward under this account: it makes an agent a's commitment not only just self/private, but also public. This further results in the amplification of a's relevant commitment, as it not only makes a responsible for p/Q but also disables the cancellation of a's commitment to the other DPs. In the case of *yo*, the SFP strengthens S's commitment. Thus, the present account provides a genuine explanation for Miyagawa's (2022) intuition that *yo* is responsible for the amplification of commitment. See Chapter 6 for more on this issue.

As we have seen, the $\vdash$-head serves the function of amplifying S's commitment to A to act upon p/Q. By means of this, *yo* has been argued to semanticise S's relevant public commitment. This means that what would have been treated in the realm of pragmatics comes to be a part of semantics. What is more, the element that is treated so (a's public commitment) has an intimate relationship with force. Notice that force is refined as an agent a's self commitment. Thus, *commitment* connects semantics and pragmatics. $\vdash$ is, then, an element that modifies the way these two are connected. See Chapter 8, Section 3 for more on this.

2.5.2 In comparison with Davis (2011)

So many references have been made to the illuminating work by Christopher Davis (Davis 2010, 2011) in this chapter. Indeed, many of Davis's (2009, 2011) ideas are adopted to the present work as its very foundation, including CCP, semantic treatment of declarative, imperative and interrogative sentences, and *yo*'s requirement that A be involved in CCP.

However, there are some notable departures from Davis's original proposal in my account. In this subsection, I will briefly note them and show that such departures should be considered a virtue of the present account.

First, as noted briefly in this chapter, Davis (2011) treats ↓ in bare sentences and sentences with *yo* differently. According to him, the SFC in bare sentences assigns S to $\lambda.\mathbb{A}[\![p \text{ FORCE}]\!]$, whereas the same contour yields the discourse effect that corrects A's some prior assumptions if *yo* is Merged. The data discussed by Davis overlaps with what is discussed in this chapter: indeed, we have seen that *yo*↓ does oftentimes have a corrective flavour, as Davis observes. The difference between my analysis and Davis's is that while the latter encodes this function directly into the semantics of ↓ associated with *yo*, the former derive it from a more fundamental notion of presupposition/Givenness.

There are two reasons to favour my approach. First, it treats the same SFC in the same language uniformly: ↓ in both bare declaratives and declaratives with *yo* marks the presuppositional status of a given expression. In the absence of concrete evidence to the contrary, this should be conceptually desired.

Secondly, even though the corrective flavour is frequently observed in *yo*↓, it is not what we always see. In (78d), for instance, there is no corrective connotation conveyed by Frank's remark, apart from the sense that Frank wants Steve to stop asking the same question. Even though it might be possible to extend the notion of *correction* so that it covers cases like this, the result of such an extension is obtainable from the presuppositional status of *yo* and the pragmatic reasoning, both of which are independently motivated.

The present account also differs from Davis's pioneering work in how it treats the semantics of *yo* in general. According to Davis, the SFP *suggests* or *requests* that all of the DPs' PB/PI/PQ contain *p*/*Q*. For instance, if Hikaru utters (49c), it is *semantically* suggested that C be updated to a context where all of the DPs hold the belief that Mateus came to Kyoto. However, the following example undermines such a direct encoding of A's PB, PI and PQ.

(173) Sinzi-nak-ute-mo i-i-kedo, Mateus-ga Kyoto-ni ki-ta *yo*.
believe-NEG-INFINITE-also good-PRS-but Mateus-NOM Kyoto-to come-PST *yo*
'You don't have to believe it/Believe it or not, Mateus came to Kyoto *yo*.'

If the suggestion that the belief that Mateus came to Kyoto be held by all the DPs were semantically encoded by *yo*, *Sinzi-nak-ute-mo i-i-kedo* should not be felicitous in (173), as it directly contradicts such a suggestion.

In contrast, the present account does not directly assign such a meaning to *yo*: the particle merely encodes S's relevant public commitment, and the function of suggestion may (but not necessarily) be reached by A as a result of a certain pragmatic reasoning. Since it is part of an implicature, it is cancellable, which is precisely what (173) is telling us.

Furthermore, Davis (2011) introduces a special operator RHET to yield a rhetorical reading in imperatives. My account, on the other hand, makes no recourse to such an operator: instead, it yields the relevant reading from the pragmatic reasoning evoked partly *via* the SFC. Since there is no independent motivation for introducing this operator, specialised only for rhetoricalisation, the present analysis gains further conceptual support.

Finally, even though Davis's original proposal treats *yo*→ and *yo*↑ as essentially the same, the present analysis has shown in detail that they are licensed by different contextual conditions, and thus they exhibit different discourse effects. The function of → has been shown to be equivalent in sentences with and without *yo*, and the effect of *yo*↑ is derived from how the sentence is constructed with respect to its information structure in a fairly straightforward manner with reference to detailed work in the literature on Japanese prosody.

All these things being considered, it is safe to conclude that the present account provides a legitimate update to Davis's illuminating work. It should be emphasised that the analysis proposed in this chapter is not meant to be a counterargument to Davis (2010, 2011): it should be considered a conceptual and empirical refinement of the proposal made by Davis, so that the data that has hitherto unnoticed can be formally analysed in a unified fashion without losing Davis's original insight.

2.6 Summary

In this section, it was proposed that *yo* encodes the information that $p/Q \in \text{PCS}^{\text{C}}_{S}$. The conditions imposed upon the use of the SFP and the specific SFCs it is associated with are neatly expounded from the perspective of information structure. In the course of detailing the explanation, several novel observations were made, including those that (i) bare declaratives only pragmatically implicate S's public commitment in C, and (ii) that *sira* or *i* replaces *yo* in interrogatives with ↑. Furthermore, it was shown that the present proposal unifies the three force operators under the single heading of COM.

In the next chapter, the present analysis is extended to explain the behaviour of another particle *ne* and its variants.

Chapter 3

Commitment and *Ne*

This chapter examines the semantics and pragmatics of *ne*. It will be shown that the idea of public commitment provides us with a straightforward tool for the formal explication of how the particle is used. Specifically, it will be argued that *ne* is the Addressee-counterpart to *yo* in the sense that it is a grammatical encoding of A's public commitment to act upon p/Q in C, while *yo* is a particle that expresses S's relevant public commitment in the same context.

3.1 The distribution of *ne*

Ne is another particle that has been exposed to intensive discussions in the previous literature (see Koyama 1997; Takubo and Kinsui 1997; Saito and Haraguchi 2012; Saito 2015; Oshima 2016; McCready and Davis 2020 among others). However, the exact semantics and pragmatics of this SFP have not been pinned down in a formal manner, as McCready and Davis (2020) point out. The aim of this chapter is to provide a formal semantic and pragmatic treatment of this particle from the perspective of the proposal laid out in the last two chapters.

To do this job, I will overview the distribution of *ne* in the three clause types (i.e., declarative, imperative and interrogative) in this section, along with the interaction of the particle with SFCs. It should be noted before delving into this job, however, that there is another particle *na* that

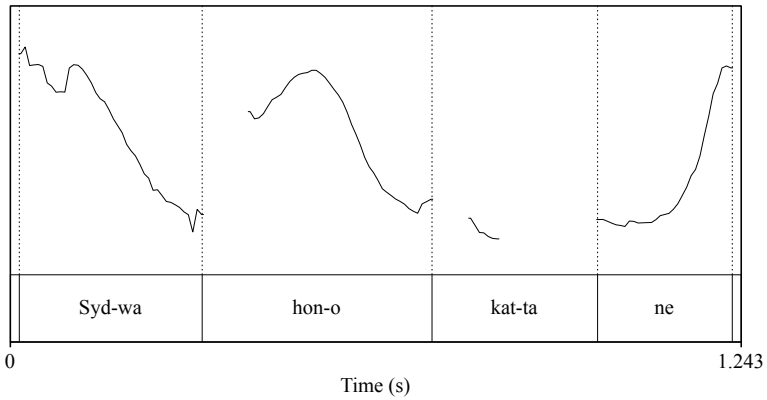


Figure 3.1: The pitch track of (174)

largely shares the same function and distribution with *ne* (Miyazaki et al. 2002, 281-283). In this dissertation, I will treat *na* as a stylistic variant of the particle and assume that the analysis to be proposed in this chapter can be extended to cover its use condition as well, unless it is explicitly stated that *ne* or *na* is preferred to the other in a particular linguistic context.

3.1.1 Declarative

When *ne* is used in a declarative sentence, it is compatible with ↑, → and ↓. When it is associated with ↑ in this clause type, it gives the utterance a sense of *request for confirmation*, the sense that has been widely claimed as "the" character of the particle in the literature (Saito and Haraguchi 2012; Saito 2015 and Miyagawa 2022). (174) shows an example:

(174) Syd-wa hon-o kat-ta *ne*↑
Syd-TOP book-ACC buy-PST *ne*↑
'Syd bought a book *ne*↑'

(174) yields the impression that S asks for confirmation of the truthfulness of p = "Syd bought a book". It is, thus, essentially equivalent to the English *reversed tag question* of the form "Syd bought a book, didn't he?"

However, as McCready and Davis (2020) point out, it is not quite correct to claim from such use of *ne* that the particle is the same as the reversed tag question. See the following example

from Oshima (2016, 10):

(175) Context: S is at the airport, and says the following to a friend who gave her a ride.

Arigatoo. Omiyage kat-te kuru *ne*↑
thank.you gift buy-GER come *ne*↑

'Thanks. I'll buy you a gift *ne*↑'

Clearly, "I'll buy you a gift, won't I?" is not the correct translation of (175). As Oshima points out, the sentence rather has a commissive flavour in the sense of Searle (1979): *ne* in this example signals S's intention of asking for *permission*, not *confirmation* to buy A a gift.

The next SFC which can be associated with *ne* in declaratives is ↓:

(176) a. Roger:

Syd, kono syorui matome-te.
Syd this document complie-IMP

'Syd, compile the documents.'

b. Syd:

Boku-wa iya-des-u.
I-TOP bad-POL-PRS

'I don't like doing it.'

c. Roger:

Ii-kara yar-e *yo*.
good-because do-IMP *yo*

'Do it anyway.'

d. Syd:

Boku-wa iya-des-u *ne*↓
I-TOP bad-POL-PRS *ne*↓

'I don't like doing it *ne*↓'

(176d) shows that the SFP can be associated with the falling contour. It should be noted that this sentence also resists the reading of the reversed tag question. By (176b), Syd intends to decline the request made by Roger in (176a). To this rejection by Syd, Roger further reacts with (176c) and requests it again. And Syd refuses the request again, this time with *ne* in (176d). It

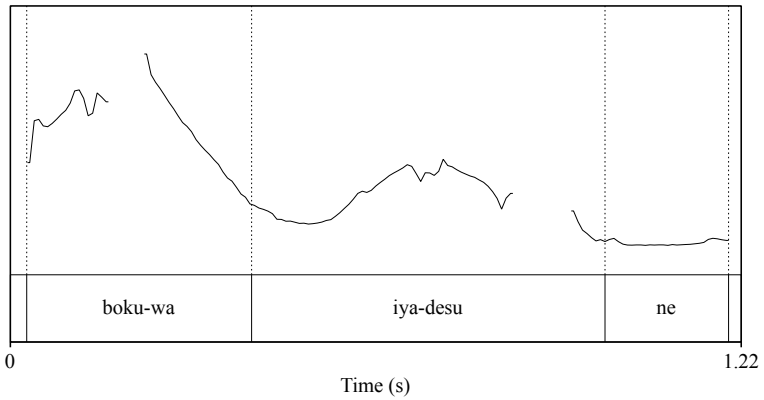


Figure 3.2: The pitch track of (176d)

is clear that Syd's utterance in this example is quite awkward to be translated as "I don't like doing it, do I?" Thus, it should be obvious from this example that *ne* cannot be equated with the reversed tag question even when associated with the falling SFC.

Of note here is that Syd's utterance in (176b) has a sense of the declaration that Syd does not feel like compiling the documents, whereas (176d) yields the impression that Syd wants it to be *accepted* by Roger. This reminds us of the function of *yo* in Hikaru's utterance in (49c): there, it was shown that by using *yo* Hikaru intends to make Haruomi believe that Mateus came to Kyoto, while a bare declarative does not yield such a discourse effect, at least directly. The same holds true for the contrast in (176b) and (176d) here. It should also be noted that it is awkward, if not impossible, to use *ne* in (176b) as a direct response to Roger's first request (176a). Such use of *ne* in (176b) is possible only under those circumstances where Roger habitually makes the same or similar requests again and again despite Syd's constant declines, and so on.

Another example of *ne*↓ is given in (177) below.[1]

(177) Samu-i *ne*↓
cold-PRS *ne*↓
'It's cold *ne*↓'

[1]Sugito (2001) discusses that the falling *ne* is not always falling: it is sometimes realised with a slight rise at the end of the contour. However, she argues, even if such a rise occurs it is perceived as falling. Thus, the SFC associated with *ne* is defined perceptually. I will follow this conception of the SFC that *ne* bears henceforth. See (179) and Figure 3.5 for such a slight rise at the end of the sentence in *ne*↓.

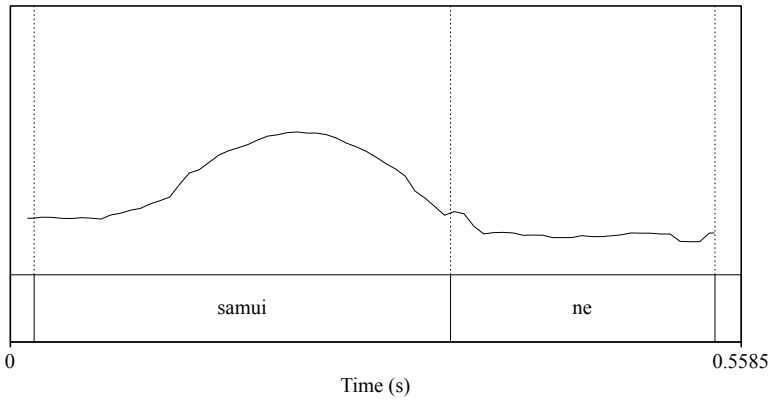


Figure 3.3: The pitch track of (177)

(177) is only felicitous in the presence of A. In addition, there is a strong sense of sharing *old* information in (177). The context of an utterance C should be such that it is cold and (S thinks that) the coldness is obvious to A as well. In this sense, the propositional content of the utterance is *old*, or *Given/presupposed*. The same is true for (176d): that S does not like to compile the documents should be *presupposed* at the timing of the utterance of the sentence. It might be possible to assume that *ne* in this particular example is more or less equivalent to the reversed tag question in English. Thus, the function of *request for confirmation* is available in both ↑ and ↓ in some cases, while the same function is unavailable in other cases, which means that the function should be directly associated with neither *ne* nor a particular SFC it bears.

Finally, → is also able to be associated with *ne* in declaratives:

(178) Context: mother says to her children

Kaimono-ni it-te kur-u *ne*→
shopping-to go-GER come-PRS *ne*→

'I'll be out shopping *ne*→'

Although there is a pitch fall from *kuru* to *ne* in this example as Figure 3.4 shows, its effect is significantly smaller than what is observed in (179) and Figure 3.5.

(179) Kaimono-ni it-te kur-u *ne*↓
shopping-to go-GER come-PRS *ne*↓

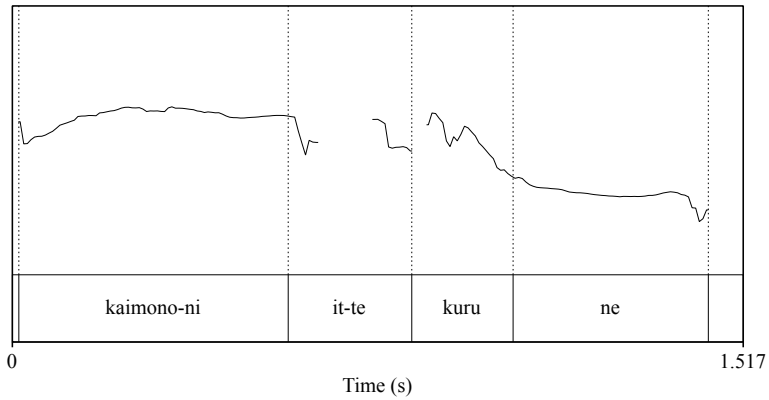


Figure 3.4: The pitch track of (178)

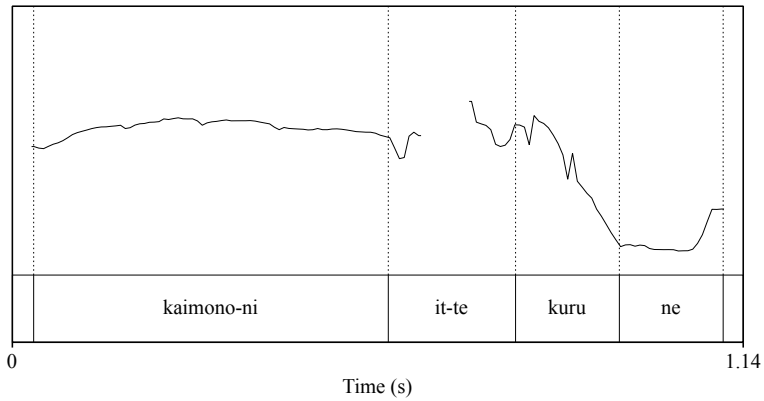


Figure 3.5: The pitch track of (179)

'I'll be out shopping *ne*↓'

The comparison between Figure 3.4 and Figure 3.5 makes the point clear: *ne*↓ exhibits a steeper fall than *ne*→ does.

As for the discourse function of *ne* with the flat contour, it is felicitous only when uttered out of the blue: (175), for instance, is natural as an utterance directed to the children whom S (mother) does not think have in mind that S will be out shopping. In contrast, (179) is natural as an utterance that expresses the information which is (assumed to be) shared across the DPs: the utterance is felicitous in such a context where the information that S or some other people will go

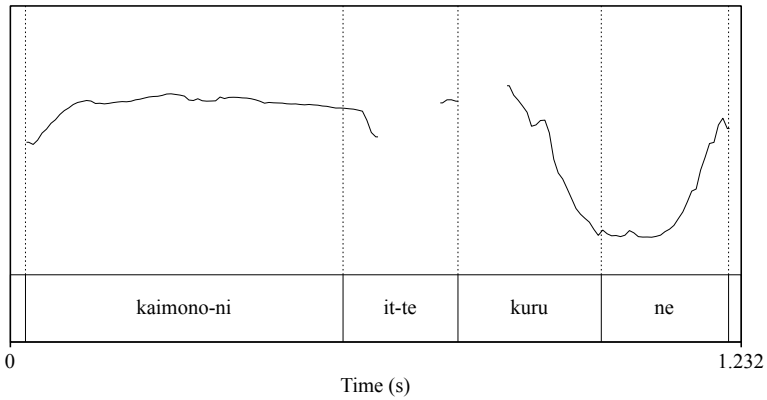


Figure 3.6: The pitch track of (180)

out is part of the CG, or S intends A to think so.

Compare (175) and Figure 3.4 further with (180) and Figure 3.6, in which *ne* is associated with the rising contour.

(180) Kaimono-ni it-te kur-u *ne*↑
shopping-to go-GER come-PRS *ne*↑
'I'll be out shopping *ne*↑'

(180) is felicitous as an utterance that requests for permission to go out shopping. In contrast, no such discourse effect is salient in (175): it is in a sense a *declaration* to go out shopping, and S is not in a position to be required to get permission for doing so.

Summarising the distribution of *ne* in declaratives, we get Table 3.1.

Table 3.1: The distribution of *ne* in declaratives (to be revised)

SFC	Discourse Function
↑	??? (*request for confirmation*, *ask for permission* and so on)
↓	Provision of presupposed information
→	Provision of new information

In Section 3.2, I will show that the distribution of *ne* in this clause type is straightforwardly explained in terms of the present account.

3.1.2 Imperative

Ne also appears in imperatives, but it should be noted at this outset that it is far less frequent in imperatives than it is in other clause types. Instead of it, *na* is usually used in imperative sentences. However, it is not entirely absent in this clause type: actually, some dialects in the Japanese language, including the ones spoken in Fukui, Ishikawa, Hiroshima and Okayama frequently use *ne* in imperatives, and it essentially yields the same discourse effect with its *na* counterpart in other dialects.[2] This is shown in (181) below.

(181) Hayo shi *ne*!
quick do *ne*
'Do it quick!'

Given this fact, I assume that *ne* and *na* are indeed the same in imperatives as well, and the fact that the former is not observed in many dialects is just a whim of history of the Japanese language.

With this proviso in mind, I concentrate on *na* in this section. When it is used in this clause type, it marks the presence of A to whom the imperative sentence is uttered. A further discourse effect of this particle is, however, determined on the basis of the SFC it is associated with.

When it bears ↑, *na* gives the entire expression a sense of *ascertainment*, which can be translated as "okay?" or "you got it?" in English. See the example below.

(182) Context: A mother finds two of her children, Tony and Pete, fighting with each other. After hearing that it was Pete who initiated the fight by punching Tony, she says to Pete

Ayamar-i *na*↑
apologise-IMP *na*↑
'Apologise (to him) *na*↑'

The pitch track of this example is given in Figure 3.7. The entire expression has an ascertaining flavour in the sense that the mother makes sure that Pete will apologise to Tony for his punch that initiated the fight.

[2] I thank Ryoichiro Kobayashi for letting me know that this type of *ne* is observed in the Hiroshima dialect of Japanese.

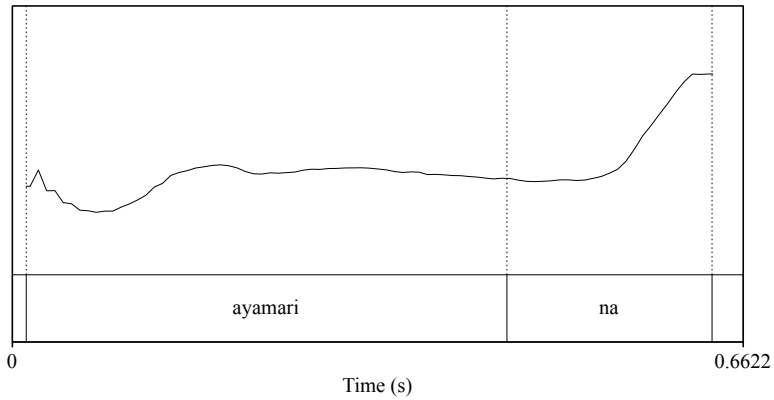


Figure 3.7: The pitch track of (182)

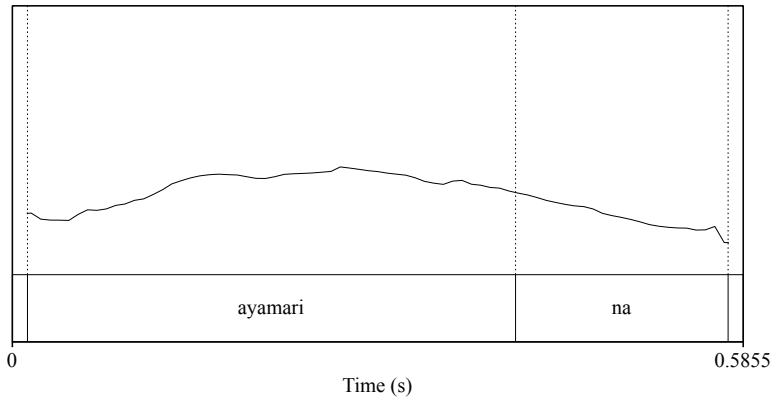


Figure 3.8: The pitch track of (183)

Let us stick to the context in (182) and imagine further that Pete refuses to say sorry to his brother Tony despite his demeanour. In such a case, ↓ is the most natural contour to be associated with *na*. See (183) below.

(183) Context: Pete still refuses to apologise to Tony for punching him. The mother scolds Pete for his refusal by saying

Ayamar-i *na*↓
apologise-IMP *na*↓

'Apologise (to him) *na*↓'

As shown in Figure 3.8, *na* in this example bears ↓. In fact, ↑ is infelicitous in this context, where

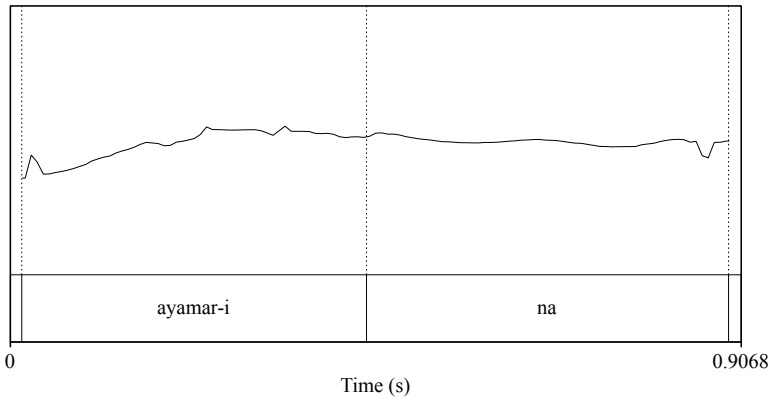


Figure 3.9: The pitch track of (184)

the mother's suggestion to apologise to Tony has already been made to Pete. Just like *yo*↓, *na*↓ is oftentimes associated with a preaching or demanding discourse effect.

Finally, it is also possible for *na* to be tied with →. Expectedly, contexts which make the contour licit differ from the ones which license ↑ and ↓. Examine the following example, which is identical to (182) and (183) except the SFC. The pitch track of this example is given in Table 3.9.

(184) Context: Pete and his brother Tony are fighting with each other in the bathroom. From the noise they make it is obvious to their mother that Pete is to blame. While making dinner, their mother says to Pete without even looking at them from the kitchen

(Pete,) Ayamar-i *na*→
(Pete) apologise-IMP *na*→

'(Pete,) apologise (to him) *na*→'

(184), in which → is used, is felicitous in this context. The context is specified in such a way that the mother's utterance serves as a *suggestion* to Pete to apologise to Tony. This indicates that the utterance should be made as an all-new sentence. Crucially, (184) is infelicitous in the contexts specified in (182) and (183). The contexts in the latter provide the background in which the mother's suggestion or request that Pete apologise to Tony is fairly predictable. Thus, these contexts make the mother's imperative sentence radical *presupposed*, in the sense defined in the last chapter.

Before summarising this subsection, it should be noted that an imperative with *na* obligatorily assigns A to the subject of the irrealis *p*. In (182), (183) and (184), the person who is expected to hold the property of apologising (to Tony) is the one to whom the utterance is directed, *viz.* Pete. Recall that this is not a necessary condition on imperatives in general, as (85), repeated here as (185), shows.

(185) Context: Tim is talking to Cory about how furious he is at Plini, and says

(Nande ore-ga aitu-ni ayam-aranak-ereba ikena-i *no da.*) Aitu-ga ore-ni ayamar-e!
(why I-NOM he-DAT apologise-NEG-if bad-PRS *no da*) he-NOM I-DAT apologise-IMP

'(Why do I have to apologise to him?) He apologise to me!'

In this example, *aitu* refers to Plini, who is not present in the discourse. Nonetheless, the directive speech act, conventionally associated with the imperative clause type, is directed towards him, not A = Cory. The same is true for the following example, in which *yo* is added to (185).

(186) Context: Tim is talking to Cory about how furious he is at Plini, and says

(Nande ore-ga aitu-ni ayam-aranak-ereba ikena-i *no da.*) Aitu-ga ore-ni ayamar-e
(why I-NOM he-DAT apologise-NEG-if bad-PRS *no da*) he-NOM I-DAT apologise-IMP
yo↓
yo↓

'(Why do I have to apologise to him?) He apologise to me *yo*↓'

On the other hand, the use of *na* is infelicitous in this example:

(187) Context: Tim is talking to Cory about how furious he is at Plini, and says

(Nande ore-ga aitu-ni ayam-aranak-ereba ikena-i *no da.*)*Aitu-ga ore-ni ayamar-i
(why I-NOM he-DAT apologise-NEG-if bad-PRS *no da*) he-NOM I-DAT apologise-IMP
na.
na

'(Why do I have to apologise to him?) He apologise to me *na.*'

This indicates that an imperative sentence with *na* involves A as the subject of the sentence, to whom the speech act is directed.

(188) makes this point clearer. In this example, the subject is overtly realised. When it is overt, the imperative sentence obligatorily yields the reading in which the subject denotes A. Thus, in (188), it must be the case that Plini = A.

(188) Plini-ga ayamar-i *na*.
Plini-NOM apologise-IMP *na*
'Plini, apologise *na*.'

Compare this example to (189).

(189) Plini-ga ayamar-e.
Plini-NOM apologise-IMP
'Plini, apologise.'

This sentence is ambiguous as to whether Plini refers to A or not. The same ambiguity is observed in the following example as well, where *yo* is attached to (189), although the third person reading of the subject is preferred in this case:

(190) Plini-ga ayamar-e *yo*↓
Plini-NOM apologise-IMP *yo*↓
'Plini, apologise *yo*↓'

As for the second-person reading of such an overt proper noun, it is safe to assume that it is derived from the frequent use of a proper noun to refer to A, an example of which is provided in (191).

(191) Context: Rachel and Mamiko are discussing which one of them should buy the ticket.

a. Rachel:

Mamiko-ga ka-u?
Mamiko-NOM buy-PRS
'Will you buy the tickets?'

b. Mamiko:

Watashi, kai-kata wakar-ana-i kara, Rachel-ga kat-te kure-na-i?
I buy-way know-NEG-PRS because Rachel-NOM buy-GER BEN-NEG-PRS
'I don't know how to so could you buy them instead?'

In (191a, b), the proper nouns *Mamiko* and *Rachel* are used to refer to A. This use of a proper noun is fairly common in the ordinary use of language in Japanese.

Based upon this fact, I submit that the second-person reading of the subject in (189) and (190) are derived from the use of a proper noun depicted in this example. The important point is that this reading is optional in these examples whilst it is obligatory in (190). The reason for this obligatory second-person reading of the subject in imperatives with *ne* will be discussed in the next section.

Summing up the observations made in this subsection, the distribution of *na* in imperatives can be illustrated as the following table.

Table 3.2: The distribution of *ne* in imperatives (to be revised)

SFC	Discourse Function
↑	Suggestion of an action *for A* that is expected in C
↓	Suggestion of an action *for A* that has been already provided in C
→	Suggestion of a new action *for A* in C

3.1.3 Interrogative

Finally, I discuss the distribution of *ne* in interrogatives. Like declaratives and unlike imperatives, interrogatives are open to both *ne* and *na* in general. But here I focus on *na*, the reason of which will be clear immediately.

3.1.3.1 Polar interrogative

First, polar interrogatives are compatible with *ne*, as in (192). *Ne* in this interrogative type can be associated with ↓ and ↑.[3]

(192) Ritchie-ga Ronnie-o kaiko-sur-u *ka ne*↑/↓
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *ne*↑/↓
'Will Ritchie fire Ronnie *ne*↑/↓'

An intriguing character of *ne* used in this type of interrogative sentences pertains to the presence of A in C. If the particle is used, the utterance presupposes the active participation of A in the

[3]As in Figure 10, the rise of the contour is very small in the case of interrogatives with *ne*; Nonetheless, it is still perceived as a rise for native Japanese speakers. Hence, I take it as ↑ in what follows.

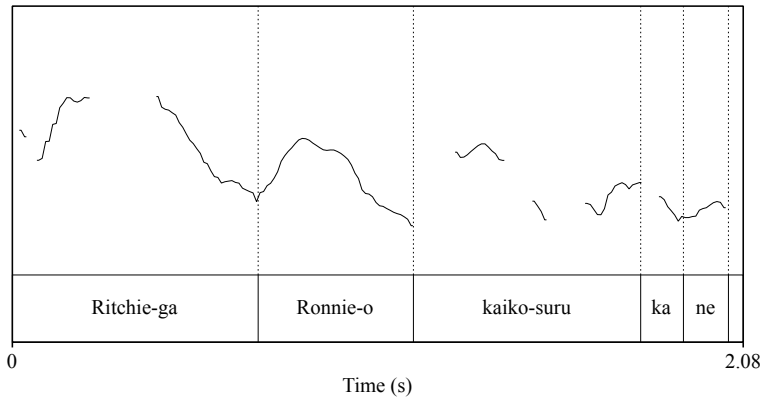


Figure 3.10: The pitch track of (192) with ↑

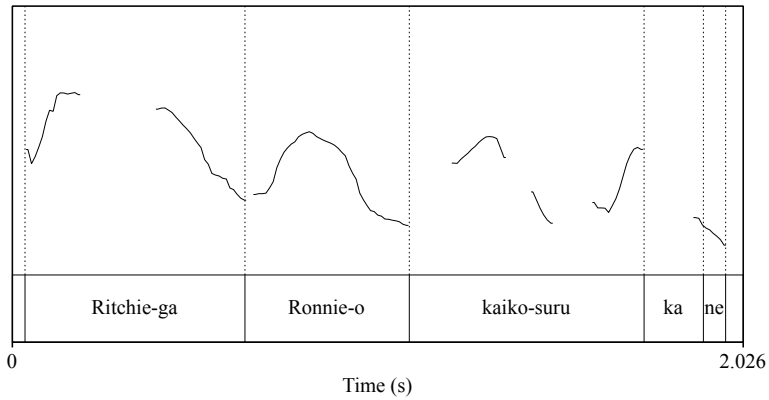


Figure 3.11: The pitch track of (192) with ↓

discourse, while a bare interrogative sentence can be uttered without the presence of A. For example, if S eavesdropped on someone saying that Ritchie will fire Ronnie, the use of *ne* sounds quite awkward, whereas a bare interrogative counterpart is perfectly natural in this context. In contrast, if S and A are talking about who will fire who, then the use of *ne* is fairly acceptable, or even preferred, at least in those contexts where S wants to solicit a response from A. Succinctly put, *ne* signals the presence of A as an active participant of the discourse, to whom the utterance is directed.

It should be noted before moving on to the next interrogative type that there is a difference in the discourse effects that *ne*↓ and *ne*↑ have. ↑ is licit as a pure interrogative which asks a certain question embedded by *ne*, but with one twist: It strongly connotes that A does not know the answer, just like S doesn't. Thus, it is in a sense an interrogative sentence, with the utterance of which S intends to initiate the inquiry together. In contrast, (192) with ↓ is generally interpreted as a rhetorical question which denotes that Ritchie won't fire Ronnie.

As for the discourse functions of these utterances, (192) with ↑ serves as a pure interrogative sentence, but importantly, there is a strong sense of absence of the answer to the question raised by the utterance in A's mind. Crucially, when the sentence is uttered with the rising SFC, it expresses S's assumption that A does not know the answer and S's desire to initiate the inquiry with A.

It should be noted before moving on to the next interrogative type that there is a difference in the discourse effects that *ne*↓ and *ne*↑ have. ↑ is licit as a pure interrogative which asks a certain question (*Q*, henceforth) embedded by *ne*, but with one twist: It strongly connotes that A does not know the answer, just like S doesn't. Thus, it is in a sense an interrogative sentence, with the utterance of which S intends to initiate the inquiry together. In contrast, (192) with ↓ is generally interpreted as a rhetorical question which denotes that Ritchie won't fire Ronnie.

Turning to its interaction with tense, this type of interrogative with *na* is compatible with the past tense, as in (193).

(193) Ritchie-ga Ronnie-o kaiko-si-ta *ka ne*↑/↓
Ritchie-NOM Ronnie-ACC fire-do-PST Q *ne*↑/↓
'Did Ritchie fire Ronnie *ne*↑/↓'

This is an indication that the TP projects within the narrow syntax and the entire question asks about one's belief. The important difference from its bare counterpart, however, is that a polar interrogative with *ne* requires the presence of A. While a bare polar interrogative is licit as a self-talk, a polar interrogative sentence with *ne* is not. Thus, *ne* marks the presence of A.

Recall that *yo* also indicates the presence of A, just like *na* does. However, these two are different in that *yo*, which according to our account is a grammatical particle that encodes the information that $p/Q \in \text{PCS}^{\text{C}}_{S}$, expresses S's strong emotion towards p/Q, whereas *ne* is meant to solicit A's response. In this sense, *ne* is *A-oriented* in a polar interrogative sentence while *yo* is *S-oriented*.

It should be noted before moving on to the next interrogative type that there is a difference in the contexts which legitimise *ne*↓ and *ne*↑. ↑ is illicit when the Q embedded by *ne* has already been asked in C, while such a context is suitable for asking (192) with either the falling contour. This indicates that ↓ is licit when the relevant Q is presupposed while ↑ is felicitous when associated with a new Q in C.

3.1.3.2 *Wh* interrogative

The next interrogative type is *wh* interrogative. *Ne* is compatible with both ↑ and ↓ in this interrogative type as well:

(194) Dare-ga Ronnie-o kaiko-sur-u *ka ne*↑/↓
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *ne*↑/↓
'Who will fire Ronnie *ne*↑/↓'

Again, *ne* in these cases involves A to whom the question is directed, almost obligatorily.

As for the difference in the contexts that make these sentences licit, (194) with ↑ is acceptable as a new question while the same utterance with the falling SFC requires someone's, especially A's assertion that someone will fire Ronnie. For instance, if no supposed answer has been made

in C about Ronnie's status at his workplace prior to the utterance of (194), ↑ is the natural SFC to be associated with the SFP, and the entire utterance serves as an interrogative sentence which raises Q as an issue to be addressed by (S and) A. However, if A asserts that someone will fire Ronnie prior to the utterance of (194) by S, then ↓ becomes felicitous. The crucial point about *ne* with the falling SFC is that it makes the question rhetorical: That is, when this intonation is associated with the SFP, then the interpretation of the utterance is "no one will fire Ronnie".

3.1.3.3 *No ka* polar interrogative

The next interrogative type to be discussed is *no ka* interrogative, an example of which is provided in (195) below.

(195) Ritchie-ga Ronnie-o kaiko-sur-u *no ka ne*↑/↓
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *ne*↑/↓
'Will Ritchie fire Ronnie *ka ne*↑/↓'

(195) is a pure interrogative which asks whether p = "Ritchie will fire Ronnie" is true or not. But crucially, the use of *ne* in (195) presupposes the presence of A in C. For instance, if S just found the report saying that Ritchie will fire Ronnie and reacts to it without the audience, the use of *ne* is infelicitous. In contrast, if A tells S that (A heard that) Ritchie will fire Ronnie, then the use of *ne* becomes perfectly natural.

As for the intonational tunings, ↑ is acceptable when the utterance is made to ask Q in C, and in so doing S initiates the inquiry with A, who is assumed not to know the answer to Q. Interestingly. if ↓ is associated with the SFP, then the entire utterance expresses that S cannot believe that Ritchie will fire Ronnie, and S further seeks to share the same impression of unbelievability about p = "Ritchie will fire Ronnie" with A. That is, it yields a different rhetorical reading than what we have seen in (192).

It should also be noted that *wh Q ka ne* is compatible with the past tense, which indicates that the embedded sentence radical is not limited to $p_{irrealis}$.

(196) Dare-ga Ronnie-o kaiko-si-ta *ka ne*↑
who-NOM Ronnie-ACC fire-do-PST Q *ne*↑

'Who fired Ronnie *ne*↑ (I wonder who fired Ronnie.)'

In short, the entire sentence involves the TP-projection just like declaratives (and unlike imperatives).

The same holds true for (197): when ↓ is associated with *na* in a *wh Q ka ne* sentence, the past tense is still felicitous:

(197) Dare-ga Ronnie-o kaiko-si-ta *ka ne*↓
Ritchie-NOM Ronnie-ACC fire-do-PST Q *ne*↓
'Who fired Ronnie *ne*↓ (No one!)'

The reading is rhetorical in (197) in many cases, as indicated in the translation. But it is not limited to this type of interpretation; for instance, (197) can be interpreted as a pure interrogative, with which S intends to share the same impression about the fact that someone fired Ronnie with A.

As for the difference in the contexts that make these sentences licit, (194) and (196) are acceptable as a new QUD while (197) requires (S's intention to make A think that there is) a prior piece of information that makes the QUD presupposed in the sense defined in the last chapter. For instance, both (194) and (197) are licit when it is known that someone fired Ronnie but unknown who did. However, if the same QUD is asked prior to the utterance of these sentences, only (197) is felicitous since the context is specified in such a way that the relevant QUD in question is presupposed.

3.1.3.4 *No da wh* interrogative

Finally, *ne* is available in *no da wh* interrogative sentences. Intriguingly, this time the particle can be associated only with ↓. In other words, ↑ is infelicitous in a *no da wh* interrogative sentence with *ne*. This is shown in (198) and (199).

(198) *Dare-ga Ronnie-o kaiko-sur-u *no da ne*↑
who-NOM Ronnie-ACC fire-do-PRS *no da ne*↑
Intended. 'Who will fire Ronnie *no da ne*↑'

(199) Dare-ga Ronnie-o kaiko-sur-u *no da ne*↓
who-NOM Ronnie-ACC fire-do-PRS *no da ne*↓
'Who will fire Ronnie *no da ne*↓'

Recall that the present dissertation assumes that the underlying structure of *no da wh* interrogative sentences includes a Q-morpheme. In the case of *no da wh* interrogatives with *yo*/*sira*/*i*, this Q-morpheme is post-syntactically realised as Ø *via* VI. In this connection, it is suggestive to observe the following example, in which the Q-morpheme is realised as *ka* while *da* is deleted:

(200) Dare-ga Ronnie-o kaiko-sur-u *no* (**da*) *ka ne*↑
who-NOM Ronnie-ACC fire-do-PRS *no* (**da*) Q *ne*↑
'Who will fire Ronnie *no* (**da*) *ka ne*↑'

This suggests that in the case of a *no da wh* interrogative sentence with *na*↑, it is not the Q-morpheme but *da* that must be realised as Ø in the post-syntactic process of VI. Based upon this, I claim that the following VI-rule to realise a *no da wh* interrogative with *na*↑:

(201) The VI of *da* and the Q-morpheme in a non-honorific *no da wh* interrogative with *ne*↑:

a. *da* → Ø / *no* ___ *Q-morpheme ne*↑

b. *Q-morpheme* → *ka* / *no* Ø ___ *ne*↑

The sentence in (200) serves as a regular *wh* interrogative with an additional twist: as expected, the presence of *ne* signals that A is present in C as an active participant in the conversation. Furthermore, ↑ is associated with the sentence if *Q* is asked as a pure question that is going to be addressed between S and A in the discourse, both of whom do not (seem to) know the answer. In stark contrast, ↓ indicates that S is surprised at the fact someone will fire Ronnie and S further intends to share the same emotion with A. Again, *ne*↓ in this sentence yields a different type of rhetorical reading from what we saw in another *wh* interrogative in (194).

3.1.3.5 Summary

As a summary of the distribution of *na* in interrogative sentences, we get the following table:

Table 3.3: The distribution of *na* in interrogatives (to be revised)

Interrogative Type	Discourse Function
Polar Inter with ↑	Provision of a non-presupposed polar Q
Polar Inter with ↓	Provision of a presupposed polar Q
Wh Inter with ↑	Provision of a non-presupposed *wh* Q
Wh Inter with ↓	Provision of a presupposed *wh* Q
No ka polar Inter with ↑	Provision of a non-presupposed polar Q
No ka polar Inter with ↓	Provision of a presupposed polar Q
No ka wh Inter with ↑	Provision of a non-presupposed *wh* Q
No da wh Inter with ↓	Provision of a presupposed *wh* Q

3.2 Proposal

In this section, I propose a formal account for the meaning of *ne*. To initiate this, let us observe the following contrast between a bare declarative and a declarative with *ne*:

(202) a. Anomalie-ga sin-kyoku-o das-ita. Sinzi-nak-ute-mo i-i-kedo.
Anomalie-NOM new-song-ACC release-PST believe-NEG-INF-also good-PRS-but
'Anomalie released a new song. You don't have to believe it, though.'

b. Anomalie-ga sin-kyoku-o das-ita *ne*. # Sinzi-nak-ute-mo i-i-kedo.
Anomalie-NOM new-song-ACC release-PST *ne* # believe-NEG-INF-also good-PRS-but
'Anomalie released a new song *ne*. # You don't have to believe it, though.'

As we saw in (173b), a declarative sentence with *yo* can be followed (or preceded) by an expression like *sinzi-nak-ute-mo i-i-kedo*, which cancels a possible implicature that S wants A to believe that p is true. The same holds true for a bare declarative (202a). This cancellation is possible because in both of these examples the effect of suggesting A to believe the truthfulness of p is essentially pragmatic. Intriguingly, the same cancellation is not allowed when *ne* is used: the same expression is infelicitous when it follows an utterance with *ne*, which is shown in (202b).

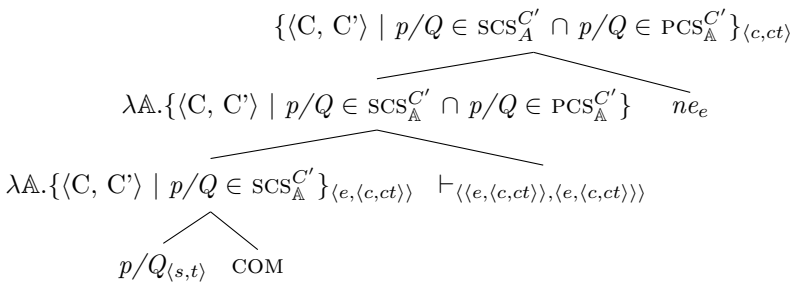
This indicates that *ne semantically encodes* A's belief that p is true. From the perspective of the present dissertation, this further means that A's relevant self commitment is semantically encoded when *ne* is used. Thus, in contrast to *yo* and a bare declarative sentence, the agent whose PB is pertinent to the CCP should be A in lieu of S.

In addition, I have shown that *ne* has functions of *request for confirmation*, *provision of shared information*, *making a promise* and so forth. All of these intuitive functions clearly involve not

just A, but also S. More precisely, *ne* involves not just A, but also all other DPs.

The most straightforward way to model this property of *ne* is to propose that the SFP encodes A's public commitment to act upon *p/Q*. Specifically, *ne* can be assumed to be a post syntactic realisation of the *A(ddressee)*-head *via* VI when it embeds $\vdash$: i.e., it is an A-counterpart to *yo*. This claim thus assigns the following LF structure to the utterance which involves *ne*:

(203)



According to (203), *ne* grammatically encodes a CCP from C to C' in which A is committed to the other DPs to act upon *p/Q*. The prediction of this modeling of the particle is obvious: the discourse effect should be derived from various pragmatic reasoning induced by *ne*'s function of expressing A's self and public commitments and the specific SFCs associated with the particle in a particular context c. In the rest of this chapter, I argue for this proposal and show that the discourse effects observed in this section tied with the particle are indeed what it naturally predicts.

3.2.1 Declarative

In Chapter 2, it was proposed that which specific SFC should be associated with *yo* is determined by the information structural status of the sentence radical that *yo* embeds. ↑ was shown to be the SFC to be associated with the particle when the sentence radical is not all-new: i.e., if the sentence radical contains a presuppositional part, *yo* bears ↑. It was also shown that → is the SFC which is associated with an all-new sentence. Finally, ↓ is borne by *yo* when the relevant public commitment by S is presupposed (or assumed to be presupposed by S) in c. In the same chapter, I argued for the hypothesis that these SFCs are not distinct in utterances with and without *yo*: how the SFC is realised is dependent solely upon the information structural status of a given expression,

and hence there is no need for the assumption that a particular contour has a particular semantic function. It is thus natural to predict that the analysis given in the last chapter is applicable to the SFCs associated with *ne* as well. I will show that this prediction is valid.

3.2.1.1 *Ne*↑

Given my treatment of ↑ to be associated with a SFP, the present proposal expects that *ne*↑ is felicitous in a declarative sentence when the propositional content of the sentence contains a presuppositional part. This is precisely what *ne* as *request for confirmation* requires. For S to request the confirmation that p is true, p has to be presupposed; otherwise, p's truth asserted by A is just a novel piece of information and hence it is not subject to confirmation. For instance, (174), in which ↑ is associated with *ne* and the particle is thought to encode S's request for confirmation to A, is felicitous when the utterance is made in the presence of QUDs like "Who bought a book?," 'What did Syd buy?" and so on. As I have shown, these QUDs presuppose $\exists x.[x$ bought a book], $\exists x.$[Syd bought x] and so forth. Thus, they make a part of the sentence radical in (174) presuppositional in the sense of (66). Notice that A's commitment to S to act upon p's truth has not been presupposed yet. Thus, what *ne* encodes is new information and should be associated with a rising pitch. This causes ↑ to be associated with the particle.

Then, how does the function of *request for confirmation* result in (174)? I propose that the reading results again from a series of pragmatic inferences. In the case at hand, the reading is derived *via* the following reasoning:

(204) The inference that S intends A to execute *via* (174):

a. S suggests a context update from C to C' in which $p \in \textsc{pcs}_A^{C'}$ and $p \in \textsc{scs}_A^{C'}$.

b. Since $\textsc{pcs}_A^{C'} \subseteq \textsc{scs}_A^{C'}$, S suggests a CCP from C to C', in the latter of which A believes that p is true and publicises it.

c. By suggesting this update, S suggests that A confirms that p is true.

The crucial point is that the context update is suggested in such a way that $p \in \textsc{pcs}_A^{C'}$. From this, (204c) is derived, where the function of *request for confirmation* is successfully inferred. Therefore,

we do not need an independent assumption to capture this fact. In short, (174) is a way to reach an answer to a(n implicit) QUD by initiating the context update from C to C', in the latter of which a possible answer p is an element of $\text{PCS}_A^{C'}$. If A accepts this update, then p is added to the CG.

Notice that it is natural for S to utter (174) with the expectation/belief that p is true. After all, this is a prerequisite for *ne* to function as request for *confirmation*. This requirement naturally comes from the factual assumption that a suggestion for a certain CCP that S makes should be consistent with S's own beliefs and expectations. Crucially, however, S's such belief or expectation is not directly encoded in the utterance. Indeed, there is an obvious virtue of not directly encoding this information and instead deriving it from pragmatics. If it is not encoded semantically, then the current proposal expects it to be the case that sometimes *ne*↑ is indeed available even without S's belief that p is true. The following example from Suzuki Kose (1997) validates this prediction:

(205) a. Sister:

Mari-chan kumo-no ue-ni nor-er-u mon.
Mari-DIM cloud-GEN top-on ride-can-PRS PT
'Mari (I) can ride on clouds.'

b. Brother:

Mari-chan kumo-no ue-ni nor-er-u *ne*↑ Soo dat-ta-ra kumo-wa
Mari-DIM cloud-GEN top-on ride-can-PRS *ne*↑ so COP-PST-COND cloud-TOP
Mari-chan-ga nor-er-u kurai kata-i *ne*↑
Mari-DIM-NOM ride-can-PRS as.much solid-PRS *ne*↑
'Mari (you) can ride on the clouds, huh? If that's so, then the clouds must be solid enough for you to stand on, right?'

Obviously, Mari's (older) brother does not have to (irrationally) believe that clouds are indeed solid enough for Mari to stand on. Despite this, he can felicitously use *ne*↑. His utterance in (205b) suggests a CCP from C to C' in which p = "Mari can ride on the clouds and they are solid enough for her to stand on" is an element of $\text{PCS}_A^{C'}$. The discourse effect of this suggestion varies from context to context: in this particular case, Mari's brother might be impertinent enough to try to fool Mari by making her become committed to herself (and him) to act upon p's truth. This

humiliation effect in this example results from the function of *ne*↑ in declaratives as provision of a new commitment $\mathrm{A} \vdash^{\mathrm{C}}_{S} p$ to reach the answers to the QUDs "Can Mari ride on clouds?" and "Are the clouds solid enough for her to stand on?" S (Mari's brother) knows that the answers to these QUDs are negative. Despite the fact that he knows the answers, S initiates the CG enrichment with Mari, with the expectation that she will commit herself to the false propositions(' truth). If Mari becomes publicly committed to act upon it, then she'll be punished (humiliated). In this way, the present proposal successfully explains the discourse effect of this peculiar type of the use of *ne*↑.

(176) is likewise expounded by the present proposal. The discourse function of *ne* cannot be subsumed into *request for confirmation*, as we have seen. The present proposal derives its function as *ask for permission* as follows:

(206) The inference that S intends A to execute *via* (174):

a. S suggests a context update from C to C' in which $p \in \textsc{pcs}^{C'}_{A}$.

b. For A to become committed to act upon p = "S will buy A a gift" means that A lets S buy A a gift.

c. Therefore, S suggests a context update from C to C' in which A permits S to buy a gift for A.

Notice here that there seems nothing explicitly presuppositional in p = "S will buy A a gift" in this example. Given the proposal that ↑ be associated with a presuppositional status of (a part of) p, this might undermine the present account at first glance.

Fortunately, there is a way to circumvent this problem. Notice already that the context is specified in such a way that A (S's friend) gave S a ride to the airport. Thanks to this help from A, S could make her way to the airport and punctually start her trip. It is plausible, to say the least, for A to expect a souvenir from S considering the contribution that A made. It is equally plausible to assume that S knows that A expects so. The same holds true for that A knows that S knows that A expects so$\cdots$ and so on. I claim that this mutual expectation makes the (implicit)

QUD "Should S buy A a gift?" presupposed. Because of this, *ne* is associated with ↑ in (176). Thus, the implicit QUD in this example is a decision problem, to which S suggests a positive answer to A by asking A a permission.

In sum, the present proposal neatly explains the behaviour of *ne* in declaratives when associated with the rising contour. The discourse function of *ne*↑ in declaratives is provision of a new public commitment $p \in \textsc{pcs}^{\textsc{c}}_{A}$ to reach an answer to a particular QUD.

3.2.1.2 *Ne*↓

The present proposal predicts that unlike ↑, ↓ can be associated with *ne* either when $p \in \textsc{pcs}^{\textsc{c}}_{A}$ is presupposed in C, or when S intends mean that its presuppositional status is/should be obvious in that context.

The use of *ne*↓ in (177d) is what this proposal precisely predicts: in this example, Syd expresses that he does not want to compile the documents, which is presupposed due to his prior utterance of (177b). As discussed in the last chapter, a bare declarative sentence pragmatically implicates S's public commitment to act upon *p*'s truth. Recall that this serves as facilitation of the CG enrichment in this case: S's relevant commitment makes S-self liable to the truth of *p*, and by virtue of this S suggests A believe the truth of the same proposition and intends to make it part of the CG. Since this implicature is not canceled, that $p \in \textsc{pcs}^{\textsc{c}}_{S}$ is conveyed by (177b). What Roger does with (177c) amounts to the denial to this suggestion: by this utterance, he states that he will not become publicly committed to act upon *p*, and tries to change Syd's mind coercively and pompously. Thus, A = Roger's commitment to S to act upon *p*'s truth is not presupposed. Syd's use of *ne*↓ in (177d) thus violates the condition imposed upon the use of the falling contour. I claim that this intentional violation evokes the following reasoning in Roger's mind:

(207) The inference that S (Syd) intends A (Roger) to execute *via* (177d):

a. Syd uses *ne*↓ despite Roger's utterance in (176c).

b. There must be a reason for this violation of the condition on the use of ↓.

c. By using *ne*↓, Syd intends to mean that Roger's relevant commitment should have

been presupposed.

d. Thus, Syd intends to convey that Roger should have accepted his rejection of the request already.

As (207) shows, Syd's use of *ne*↓ has the function of amplifying his rejection of the request implicating that Roger should have publicly accepted it already. Thus, (177d) provides the QUD "Will Syd compile the documents?" with its answer "No he won't". The persuasiveness of the answer is amplified by the (intentional) marking of the presuppositional status of A's relevant commitment to act upon its truth.

Recall that this kind of amplification was observed in the use of *yo*↓ as well. However, there is a crucial difference between *ne* and *yo* in terms of how this effect is induced. In the last chapter, I argued that *yo* yields this effect by inviting A to the reasoning that *S's own relevant commitment* should have been presupposed. In contrast, *ne* produces the same discourse effect by evoking the reasoning in A's mind that it is *A's relevant commitment* that should have been presupposed. There seem to be some practical differences between these two types of amplification. Generally, the suggestion to accommodate that S's relevant commitment should have been presupposed is more difficult for A to reject than the suggestion to accommodate A's relevant commitment. This is because it is easier for an agent a to judge the status of a's own commitment than to judge someone else's. Therefore, it is expected that *ne*↓ is a more *softened* way of amplifying the rejection than *yo*↓ in the same context C. At an intuitive level this seems correct: if Syd uses *yo* instead of *ne* in (177d), the tone of rejection gets much stronger. I leave further elaboration of this idea for future research.

Turning to (175), the present account provides a straightforward explanation for the meaning of *ne*↓. Note that the utterance should be made in the context where it is obvious for both S and A that it is cold. Such a context makes p = "it is cold" presuppositional. The relevant pragmatic reasoning that S intends A to execute *via* uttering (175) in such a context is depicted below:

(208) The inference that S intends A to execute *via* (175):

a. S uses *ne*↓ despite the fact that A's relevant commitment is not presupposed.

b. There must be a reason for this violation of the use of ↓.

c. By using *ne*↓, S intends to mean that A's relevant commitment should have been presupposed.

d. The context C makes p('s truthfulness) presuppositional.

e. Thus, S intends to convey that S thinks it is fairly obvious that $p \in \text{PCS}_A^C$ in C.

(208e) results from an interplay between the use of *ne*↓ and the presuppositional status of p('s truth): succinctly put, it is cold enough for S to think that A's relevant public commitment is obvious.

Note that the present account does not encode this specific discourse function directly in *ne*↓, and instead assumes that *ne*'s semantics in declaratives is solely a CCP from C to C', in the latter of which $p \in \text{PCS}_A^{C'}$. A more elaborated function results from the interplay of this meaning of the particle, the SFC associated with it, and under which circumstances the utterance is made.

Thus, the utterance in (175) can be understood in a completely different way, if the context C forces it to be so. This is indeed the case, as the following example illustrates:

(209) Context: Chihei and Jiro live together. On an extremely hot day, Jiro turned on the AC. He set the AC at 19°C. When Chihei came back home, he found that the room was so cold that he felt like he could get sick.

a. Chihei:

Ondo, hiku-sugi-na-i?
temperature low-too.much-NEG-PRS
'The temperature is too low, isn't it.'

b. Jiro:

Iya, sonna-koto-wa nai. Atu-i *yo.*
no that-thing NEG hot-PRS *yo*
'Nah, it isn't. It's hot *yo.*'

c. Chihei:

Iya, samu-i *ne*↓
No cold-PRS *ne*↓

'No. It's cold *ne*↓'

(209c), which is identical to (175), is uttered despite the presuppositional status of $\neg p \in \text{PCS}_A^{\text{C}}$ from (209b). Therefore, the ultimate discourse effect of the utterance is not that it is fairly obvious that $p \in \text{PCS}_A^{\text{C}}$ in C, unlike what we have seen in (175). Rather, the discourse effect of (209c) is similar to (207d): Chihei intends to persuade Jiro to acknowledge that the AC is set at an extremely low temperature by intentionally marking $p \in \text{PCS}_A^{\text{C}}$ in C as presupposed despite the fact that it is not. The contrast between (209c) and (175) thus states that the specific discourse function of *ne*↓ should be left unspecified at the level of syntax/semantics. What is common between these two examples is that both serve as an answer to the QUD "Is it cold?" In the case of (175), the QUD is implicit, while it is overt in (209).

All in all, the present proposal successfully accounts for the distribution and semantics of *ne*↓ as well, along with its discourse effects in particular contexts. The use of *ne*↓ marks provision of a presupposed commitment $p \in \text{PCS}_A^{\text{C}}$ in C as an answer to a QUD.

3.2.1.3 *Ne*→

Finally, the behaviour of *ne*→ finds its straightforward explanation under the present account. This SFC marks the all-new-ness of the entire information that the sentence conveys. (178) is, as we have seen, felicitous when uttered out of the blue. This is the very indication that it conveys all-new information. The use of *ne* in such a context thus suggests a CCP that essentially says that A becomes publicly committed to act upon p = "the mother will be out shopping". There is no QUD to be resolved by this utterance in C. By suggesting that the children be publicly committed to the the positive answer to this question, the mother intends to declare that she will make it true.

3.2.1.4 Summary

Summarising the present subsection, we obtain Table 3.4. The function of *ne* echoes that of *yo*. The difference between these SFPs lies in the fact that while *yo* encodes the information that p

Table 3.4: The distribution of *ne* in declaratives (final version)

SFC	Discourse Function
↑	Provision of a new $p \in \text{PCS}^{\text{C}}_{A}$ to facilitate the resolution of a QUD
↓	Provision of a presupposed $p \in \text{PCS}^{\text{C}}_{A}$ to facilitate the resolution of a QUD
→	Provision of a new $p \in \text{PCS}^{\text{C}}_{A}$ with no relevant QUD

$\in \text{PCS}^{\text{C}}_{S}$, *ne* expresses the information that $p \in \text{PCS}^{\text{C}}_{A}$. Due to this difference, they exhibit a slight but significant difference in the process of the CG enrichment.

3.2.2 Imperative

The next clause type is imperative. Recall that in the last chapter I assumed that the sentence radical of an imperative sentence is an irrealis proposition. Syntactically, it is a CP that lacks the projection of a TP. We also saw that an imperative sentence allows the subject to denote someone other than A. However, this is not what is observed in the case of an imperative sentence with *na*: the last section showed in detail that when *na* appears, the subject must denote A regardless of its (c)overt status.

This type of imperative in which the relevant subject obligatorily denotes A can be straightforwardly captured by the claim made by Portner (2004) and adopted by Davis (2011). These scholars claim that the basic semantics of $[\![\text{IMP } P_{\langle e,st\rangle}]\!]$ is the following:

(210) $[\![\text{IMP } P_{\langle e,st\rangle}]\!] = \lambda\mathbb{A}.\ \{\langle \text{C, C'}\rangle \mid [\![P]\!](\text{A}) \in \text{PI}^{C'}_{\mathbb{A}}\}$

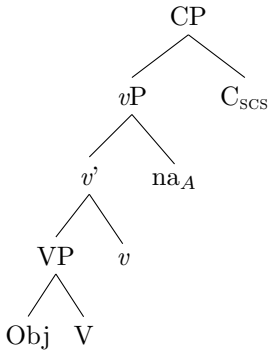
(210) specifies that this type of imperative lacks a syntactic subject and is interpreted in such a way that A is assigned to the open argument position of the v-head.

Based upon this earlier proposal, I claim that there are basically two types of imperatives in human language. One is exemplified in (85), in which there is an overt subject that does not denote A, and the other that has the type of semantics illustrated in (210). I further modify (210) and hypothesise that the latter type of imperative is exemplified by an imperative sentence with *na*, which has the following semantics:

(211) $[\![P_{\langle e,st\rangle}\ na_{e}\ \text{COM}]\!] = \lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid [\![P]\!](\text{A}) \in \text{SCS}^{C'}_{\mathbb{A}}\}$

That is, the latter type of an imperative sentence has the following syntactic structure:

(212)



Na is of type *e*, which introduces A as an argument to ⟨*e, st*⟩. The resulting semantics is of type ⟨*s, t*⟩, which precisely corresponds to an irrealis *p*. In short, *na* is the head that is Merged above *v* optionally: if it is Merged here, it feeds A to the *v*P as its external argument. The COM-head corresponds to the IMP-operator, as shown in the last chapter. It should be noted that *na* here is a kind of allomorph of the phonetically identical morpheme observed in declaratives and interrogatives. *Na* used in the latter two clause types are the post-syntactic realisation of the *A*-head that dominates ⊢. *Na* in imperatives, which is under discussion, embeds not the ⊢-head but a *v*'. Both realise the same functional head *A*, but the conditions imposed upon the realisation of these heads are different.

This proposal thus assumes that *na* linearly *precedes* the head that encodes the imperative clause type. Thus, although *i* is glossed as IMP in (182), (183), (185) and (187), the present proposal claims that this is not quite correct. I assume that the *i*-ending of the verbal complex realises the *v*-head that is not embedded within T. The following example provides an argument in favour of this assumption:

(213) Louis-ga Nate-ni ayamar-i taosi-ta.
Louis-NOM Nate-to apologise-*do* beat-PST
'Louis apologised to Nate again and again.'

In this example, the complex verb *ayamar-i taosi-ta* expresses that the subject of the phrase (Louis) apologised (to Nate) over and over. There is no sense of imperativity in (213), and *i* only marks the infinitival status of the verb *ayamar-* "apologise".

Thus, it is initially plausible to assume that *i* in the imperative sentence with *na* also realises *v*, which is glossed as *do* in (213). Based upon this, I simply claim that the COM-head is post-syntactically realised as Ø.

Now, the stage is set. *Na* in this type of imperative encodes A. Thus, in (182), in which *ne* is associated with ↑, A must be new information with respect to the rest of the sentence. What does this mean? Notice that in this example, the context is specified in such a way that who should make an apology is under discussion. Thus, the QUD in (182) is "Who should apologise (to whom)?" To this QUD, the mother answers with (182). The answer provided by the mother is "it is Pete who should make an apology," and hence *Pete(-ga)* bears focus. As already shown in the previous chapter, a focused element is boosted in pitch in the Japanese language (cf. Ishihara 2003 and Sugahara 2003). Thus, the element that encodes "Pete" in (182) should be boosted in pitch, while the rest of the sentence radical is prosodically weakened due to its presupposed/Given status. Notice already that it is the *A*-head that encodes "Pete," as the utterance is obligatorily directed to Pete. Based upon this, I argue that $A = na$ is associated with ↑ as a bearer of focus. The utterance is thus meant to resolve the QUD. It should be borne in mind that *na* in this case does not express a CCP from C to C' in the latter of which $p_{irrealis} \in \text{PCS}_A^{\text{C'}}$. It is the particle that encodes the information that it is A who is requested or suggested to make the irrealis proposition true. The relevant commitment is rather made by S in lieu of A by the utterance, as I assumed in the discussion of bare imperatives: i.e., the argument to $\lambda\mathbb{A}.\{\langle \text{C, C'}\rangle \mid P(\text{A}) \in \text{SCS}_{\mathbb{A}}^{C'}\}$ in (213) is not A, but S in this case. Simply put, an imperative sentence with *na* is a bare imperative.

This explanation can be directly expanded so as to account for why the particle is associated with ↓ in (183). The utterance is made in such a context that the entire expression "Pete should make an apology to Tony" is presupposed by the prior utterance/suggestion made by the mother. The mother's utterance here is thus redundant. This redundancy is precisely what makes ↓ licit in (183). The entire utterance evokes the following reasoning in Pete's mind:

(214) The inference that the mother intends Pete to execute *via* (183):

a. The mother utters (183) despite its presuppositional status.

b. There must be a reason for this.

c. By making an utterance of entirely presupposed information, the mother emphasises that $p_{irrealis}$ should be made true (or should have been made so), despite Pete's denial of doing so.

d. Thus, the mother urges Pete to apologise Tony for initiating the fight, with the intention of connoting that he should have done so already.

The utterance in question hence evokes the reasoning in Pete's mind that she is angry at his prior refusal or/and urging him to make an apology to Tony. This neatly captures the *preaching* effect of the utterance in (183). Again, *na* in this example does not encode a CCP from C to C' in the latter of which $p_{irrealis} \in \text{PCS}_A^{\text{C'}}$. It just encodes that it is A who is involved in p. Again, this example is equivalent to a bare imperative. The entire utterance provides a presupposed $p_{irrealis}$ as an answer to the QUD that should have been resolved earlier.

The combination of *na* and $\rightarrow$ finds a fairly straightforward explanation as well. (184) is uttered in the context where there is no prior conversation between S (mother) and A (Pete). This means that there is no QUD waiting for its resolution in the stack. Thus, the utterance the mother makes is necessarily all-new in terms of its information structure. The present proposal expects that in this context the utterance is associated with $\rightarrow$. This is borne out, as (184) shows. The *na*-particle in this instance is again a grammatical encoding of A as an agent of $p_{irrealis}$.

3.2.2.1 Summary

In sum, the distribution of *na* in imperatives is illustrated in Table 3.5. The point is that this particle does not encode a CCP with $p_{irrealis} \in \text{PCS}_A^{\text{C'}}$. It rather realises A as an external argument of a *v*P.

Table 3.5: The distribution of *ne* in imperatives (final version)

SFC	Discourse Function
$\uparrow$	Provision of $p_{irrealis}$ as a new answer to a QUD
$\downarrow$	Provision of $p_{irrealis}$ as a presupposed answer to a QUD
$\rightarrow$	Provision of new $p_{irrealis}$ with no relevant QUD

In this subsection, I have shown that when *ne* alone is used in an imperative sentence, it does not encode A's public commitment to act upon (the truth of) an irrealis proposition. Then do we not really find an example of *na* which encodes $p_{irrealis} \in \text{PCS}_A^{\text{C'}}$ in imperatives? In the next chapter, I will argue that there are cases of this type of *na* observed in imperatives when it is preceded by another SFP *yo*. More specifically, I will propose and show that in imperatives, the *yo na* sequence marks $p_{irrealis} \in \text{PCS}_{S,A}^{\text{C'}}$ while the *na yo* sequence only marks the information that $p_{irrealis} \in \text{PCS}_S^{\text{C'}}$, in the latter of which A's relevant commitment is not specified. *Na* in the latter sequence is thus the post-syntactic realisation of the same type of the *A*-head discussed in this subsection.

3.2.3 Interrogative

The final clause type I examine is polar interrogative. It will be shown in this subsection that the behaviour of *ne/na* is successfully explained under the present proposal with no *ad hoc* assumption. Again, I will concentrate on the *na* variant in what follows.

3.2.3.1 Polar interrogative

(192) exemplifies the use of *ne* in interrogative sentences. These examples show that this particle can be associated with either ↑ or ↓. When it is associated with the rising contour, then it serves as a pure interrogative sentence that asks whether p = "Ritchie will fire Ronnie" is true or not. When it is associated with ↓, in contrast, the entire utterance should be interpreted rhetorically. Particularly, the rhetorical interpretation can be either the one in which $\neg p$ (such as "Ritchie will not fire Ronnie") is asserted or the other one in which S intends to share with A the wonder, awe and some other impressions about the question. (192) requires the presence of A to whom the utterances are directed.

The present account explains the contrast in question as follows. ↑ is the default SFC associated with an interrogative sentence. The basic semantics of (192) with ↑ as a pure interrogative immediately follows from this fact, and hence no additional account is required. The only fact left

unexplained is its requirement that A be present in C as an agent (or agents) who is/are assumed not to be familiar to the answer to Q.

This requirement is readily expected by the present account. If we simply assume that *ne* in interrogatives realises the A-head above $\vdash$, then the requirement in question follows immediately from the semantics of the particle. The interrogative sentence in (192) is semantically a CCP from C to C', in the latter of which $Q \in \text{PCS}_A^{C'}$: i.e., it suggests a context update from one to another, in which A is committed to S and the other DPs to act upon Q. Notice that A's commitment to act upon Q indicates that A does not know the answer to it. Since the utterance of an interrogative sentence with *ne*↑ indicates that in the updated context, A is suggested to become (publicly) committed to act upon Q for the first time, the fact that A is assumed not to be familiar to the answer to Q follows.

(192) with *ne*↓ requires an additional explanation. What is required has already been proposed. *Ne*↓ marks the information that $Q \in \text{PCS}_A^{\text{C}}$ is presupposed in C. This means that that QUD, which is presuppositional, is left unresolved. This in turn means that it should have been resolved earlier: particularly, A should have provided the answer to the QUD since A has already been committed to act upon Q. This unresolvedness of the *old* QUD to which A has already been committed to is what causes (192) with the falling intonation to convey a *preaching* effect.

The same effect of *ne*↓ may result even if A's relevant commitment is not presupposed in C. How this happens is reminiscent of what has been shown throughout the last two chapters: that is, it is derived *via* the reasoning in (215), which is expected to be evoked in A's mind.

(215) The inference that S intends A to execute *via* (192) with ↓:

a. S uses *ne*↓ despite its non-presuppositional status.

b. There must be a reason for this.

c. By marking the particle with the falling contour, S intends to mean that A's relevant commitment should have been made beforehand.

d. A's being committed to act upon Q means that the Q remains unresolved for A.

e. Despite this, A has not yet succeeded in the provision of an answer.

f. Thus, by the use of *ne*↓, S intends to mean that A should have already answered the *Q*.

The specific effect such as preachment, mansplaining and so forth results from this reasoning supplanted with various sociological and psychological factors such as the relation between S and A. For instance, for the inferential steps in (215e, f) to be valid with the derogatory flavour of the utterance, S is expected to be in a higher position than A in terms of the socio-political hierarchy; otherwise, A should not be obligated to provide an answer to the *Q* for A. If, on the other hand, the relevant relation between the two individuals is equal and the question is presupposed, then (215f) will be absent (along with (215a)) in the inference and instead something like "by the use of *na*↓, S intends to express the unknown-ness of the answer to the *Q*, and by doing so the same agent intends to share the wonder and some such impression with A about the *Q*" will replace it.

What is important here is that the present account provides a straightforward explanation for the semantics of *na*↓ in a polar interrogative: the combination of the SFP and the SFC provides a presupposed *Q* and its status as a member of $\text{PCS}^{\text{C}}_{A}$ in C.

3.2.3.2 *Wh* interrogative

The use of *ne*↑/↓ in (194) with ↓ is explained under the present account in the same way. Indeed, the only difference between (194) and (192) is that the former is a *wh* interrogative sentence while the latter is a polar interrogative. Since this difference does not affect the semantics of *ne*↑, the explanation given to (192) is directly applicable to (194). The utterance provides a new QUD to the context and suggests that A be committed to the other DPs to act upon the inquiry.

The use of *ne*↓ is accounted for in the same way as what I have discussed in Section 3.2.3.1, to which I refer the reader. In short, (194) with the falling contour provides a presupposed QUD or a QUD intentionally marked so, which is an element of A's PCS.

3.2.3.3 *No ka* interrogative

In the last chapter, a *no ka* interrogative sentence was argued to be an interrogative about p, the objective evidence in favour of the truth of which is contextually accessible. Thus, (195) asks whether p = "Ritchie will fire Ronnie" is true or not with a bias in favour of its truth, and it additionally suggests a CCP from C to C', in the latter of which $Q \in \text{PCS}_A^{C'}$. Thus, (195) requires the presence of A and typically solicits a response from A. This is precisely what we observe.

(195) with ↓ also requires the presence of A, whom S thinks does not know the answer to Q, and it solicits a response from this DP. The difference between (195) with ↑ and (195) with ↓ is, as we have seen, that the latter requires the information conveyed by the entire utterance to be presupposed in C or to be intentionally marked as so by S. This requirement, which is absent in (195) with the rising contour, is readily expected by the semantics of *ne*↓: it expresses that A's relevant public commitment is presupposed, and by virtue of it, S can urge A to provide an answer as soon as possible, express the anger at the fact that the answer has not yet been provided by A, and so forth: see (215). In general, an interrogative with *no ka ne*↓ oftentimes sounds pretentious, authoritative or bossy especially under those circumstances where A's commitment to S to act upon the (resolution of the) QUD is not obvious. I claim that this is due to the fact that to suggest a context update where A's public commitment is specified in a certain way is something to be done forcefully, in many cases. It is reasonable to assume that this sort of suggestion is more easily done by an agent a who (thinks of a-self as a person who) has the right/power to do so than by another agent b who is not in such a position.

All in all, this type of interrogative with *na* provides $Q \in \text{PCS}_A^{C'}$ as either a new or a presupposed QUD.

3.2.3.4 *No da wh* interrogative

Finally, the behaviour of *ne* in *no da wh* interrogatives is also explicable in the same fashion. (200), in which *na* is associated with ↑, is an interrogative sentence that (canonically) asks who will fire Ronnie with the additional specification of A's public commitment to this QUD.

In the case of (199), ↓ specifies that the information encoded by the utterance including A's relevant public commitment is presupposed in C, or that it is intentionally marked so by S. In both cases, the utterance marks that A is involved in the inquiry and is meant to solicit a response from A. In addition, it often connotes S's anger, surprise, urgency and so on about the fact that A has not yet provided an answer to the QUD. In other cases, S intends to share the impression about the Q with A, in which no negative connotation is conveyed towards A. The specific discourse effect that *na*↓ yields should be specified on the basis of various factors that constitute C, and it is derived *via* the pragmatic reasoning of the sort in (215).

3.2.3.5 Summary

Summarising this subsection, we get Table 3.6, which is the updated version of Table 3.3. The

Table 3.6: The distribution of *ne* in interrogatives (final version)

Interrogative Type	Discourse Function
Polar Inter with ↑	Provision of *polar* $Q \in \text{PCS}^{\text{C}}_A$ as a non-presupposed question
Polar Inter with ↓	Provision of *polar* $Q \in \text{PCS}^{\text{C}}_A$ as a presupposed question
Wh Inter with ↑	Provision of *wh* $Q \in \text{PCS}^{\text{C}}_A$ as a non-presupposed question
Wh Inter with ↓	Provision of *wh* $Q \in \text{PCS}^{\text{C}}_A$ a presupposed question
No ka polar Inter with ↑	Provision of *polar* $Q \in \text{PCS}^{\text{C}}_A$ as a non-presupposed question
No ka polar Inter with ↓	Provision of *polar* $Q \in \text{PCS}^{\text{C}}_A$ as a presupposed question
No ka wh Inter with ↑	Provision of *wh* $Q \in \text{PCS}^{\text{C}}_A$ as a non-presupposed question
No da wh Inter with ↓	Provision of *wh* $Q \in \text{PCS}^{\text{C}}_A$ as a presupposed question

use of *na* in interrogatives in general serves as a facilitator of the enrichment/update of the CQ = QUD, just like that of *yo*. The difference between these two SFPs lies in the fact that *yo* suggests the update from the angle of S's commitment, while *na* does this from the viewpoint of A's commitment. This difference yields various slight but significant pragmatic differences between interrogatives with *yo* and *na*.

3.3 Summary

In this chapter, I have shown that *ne* is a particle that encodes the information that $p \in \text{PCS}^{\text{C}}_A$ in C in declaratives and interrogatives. An utterance of a sentence of these types with *ne* thus suggests

a context update in which A is publicly committed to act upon *p/Q*. In the case of imperatives, *na* was discussed to feed A to a *v*P as its external argument. In the next chapter, I will show that there is also another type of *na* that encodes A's public commitment to act upon $p_{irrealis}$ in imperatives. It will be argued that this type of *na* obligatorily appears just above *yo*, while the same particle appearing below *yo* is the one discussed in this chapter in detail.

Chapter 4

Commitment and *Yo Ne*

The discussion in the previous chapters gives us the observation that *yo* and *ne* are the particles that encode S's and A's public commitments to act upon p/Q in C, respectively (saving the case of *ne* in imperatives, of course).

These particles can, and do often co-occur in a single sentence. In this chapter, I will discuss that when this happens, they together encode $p/Q \in \text{PCS}^{\text{C}}_{S,A}$ when they form the sequence of *yo ne*. It will also be argued that *na yo*, which is only observed in imperatives, only expresses S's public commitment to act upon $p_{irrealis}$, and *na* only plays a role of assigning A to the open argument of a *v*P. Furthermore, it will be discussed that the certain semantico-pragmatic restriction imposed upon the use of *yo ne* follows immediately from the prosodic character it exhibits.

4.1 The distribution of *yo ne*

Yo and *ne* can co-occur in the sequence of *yo ne* (cf. Oshima 2016 and McCready and Davis 2020). This section makes an observation of the distribution of this *yo ne* sequence, and further shows that despite the widely shared observation that these SFPs only co-occur in this order, they can also exhibit the reversed *na yo* order only in imperatives. Why this is so will be explained in the next section.

4.1.1 Declarative

Most of the observations of *yo ne* are made in declarative sentences in the literature (Saito and Haraguchi 2012; Saito 2015; Oshima 2016; McCready and Davis 2020 and Miyagawa 2022). See the example (216).

(216) a. Sono kyoku ii-des-u *yo ne*.
that song good-POL-PRS *yo ne*
'That song is nice *yo ne*.'

b. *Sono kyoku ii-des-u *ne yo*.

The contrast between (216a) and (216b) speaks to the widely-held assumption that only *yo ne* is allowed at least in a declarative sentence. The utterance in (216a) solicits a response of confirmation from A. In this sense, it is similar to the following example, in which only *ne* is used.

(217) Sono kyoku ii-des-u *ne*.

However, there is a striking difference between (216a) and (217) in terms of the context that makes the use of the particle(s) licit. Crucially, (217) sounds awkward if it is S who recommended the song to A. In contrast, (216a) sounds odd while (217) is perfectly felicitous if A recommended S to have a listen to the song. Obviously, *yo ne* is pertinent to S's *prior* commitment to the truth of $p =$ "this song is good," while *ne* is not. Interestingly still, the relevant commitment by S should be a *prior* commitment in the sense that it must have already been presupposed. Indeed, S can become committed to the truth of p even with the utterance of (217). But this commitment is new, and only pragmatically implicated by the utterance. In stark contrast, S's relevant commitment must have already been publicised in C in order for *yo ne* in (216) to be felicitous.

As for A's relevant commitment, it can be either new or old. For instance, (216) can be licitly uttered in the following context:

(218) Context: S was listening to the song called "Chimera's Wreck" a while ago. A, who is a friend of S, asked S what S was listening to. S answered this question and said it was a fantastic song that deserved A's listen. A said "okay, I'll have a go at that song with the

strange title," and started listening to the song. After A finished listening to the song, S says to A.

Sono kyoku ii-des-u *yo ne*↑
that song good-POL-PRS *yo ne*↑

'That song is nice *yo ne*↑'

In (218), A's commitment to p's truth is not made explicit prior to the utterance, and hence it is information structurally new. The fact that (218) allows the use of *yo ne* indicates that A's relevant commitment can be new in C for the sequence of the particles to be felicitous.

The example in (219) further shows that the same sequence can be uttered in a context where A's commitment in question is old as well.

(219) a. A:

Sono kyoku-wa hontoo-ni subarasii-des-u (*yo*).
that song-TOP really excellent-POL-PRS (*yo*)

'That song is excellent (*yo*).'

b. S:

Kono kyoku ii-des-u *yo ne*↓
this song good-POL-PRS *yo ne*↓

'This song is nice *yo ne*↓'

(218a) makes A's relevant commitment presupposed at the timing of S's utterance in (218b). Thus, *yo ne* is felicitous in this type of context as well, where A's commitment is presupposed.

Indeed, for A's commitment to the excellence of the song in question to be presupposed in C, utterances of the sort in (219a) is not even necessary: the very fact that A is listening to the song speaks to the commitment, at least pragmatically. That is, the pragmatic reasoning that an agent a would not listen to a song which a does not consider to be a good one (unless it is the first time a is listening to it, as in (218)) makes it possible for the DPs to assume that the act of listening to the song itself serves as a public sign of the relevant commitment, *ceteris paribus*.

In this connection, it is suggestive to examine the prosodic characters of (218) and (219b). (218), in which the information that $p \in \text{PCS}_A^C$ is not presupposed at the timing of the utterance,

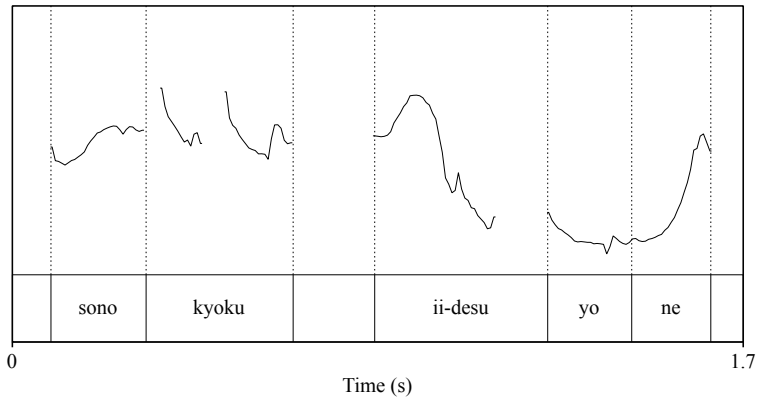


Figure 4.1: The pitch track of (218)

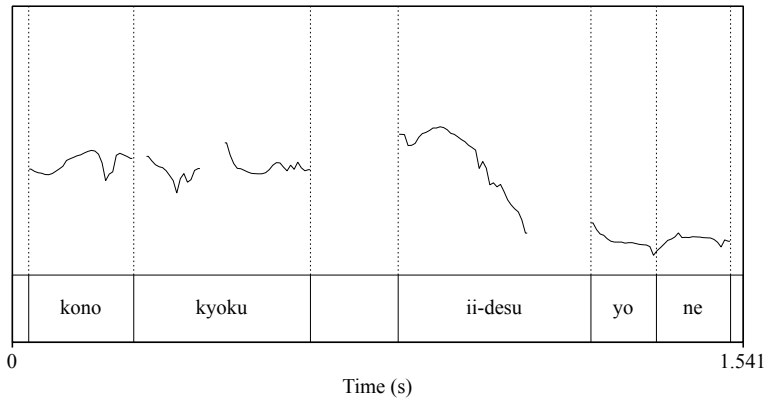


Figure 4.2: The pitch track of (219b)

assigns ↑ to *ne* while *yo* is pitch-reduced. The pitch track of the sentence is given in Figure 4.1. In Figure 4.1, the fall that starts in *ii-des-u* continues until the end of *yo*, and *ne* is associated with ↑.

In contrast, in (219b) *ne* is associated with ↓ along with *yo*, which is shown in Figure 4.2. In this pitch track, *ne* is clearly deaccented compared to the same particle in Figure 4.1. This indicates that the information conveyed by *ne* in (219b) is presupposed. Conversely, the rising contour associated with *ne* in Figure 4.1 is indicative of the non-presuppositional status of $p \in \textsc{pcs}_A^C$ in the context of utterance C.

Oshima (2016) provides another example in which *ne* is licit while *yo ne* is not. See (220)

below, which is from Oshima (2014) with modification.

(220) a. Byrne:

Sin-joohoo des-u. Ashita-wa Maeda-san-ga k-imas-u.
New-information be-PRS tomorrow-TOP Maeda-POL-NOM come-POL-PRS

'Here is new information. Maeda will come tomorrow.'

b. Bowie:

Maeda-san-ga kur-u *no da ne/#yo ne*↑
Maeda-POL-NOM come-PRS *no da ne/#yo ne*↑

'Maeda will come *no da ne/#yo ne*↑'

In this example, Byrne provides the information that Maeda will come tomorrow. To this, Bowie reacts with (220b). The context specifies that the information Byrne provides is new to Bowie. In this case, *yo ne* is infelicitous in Bowie's utterance.

Suppose, however, the conversation between Byrne and Bowie continues in the following way:

(221) a. Byrne:

Soo des-u. Maeda-san des-u.
so be-PRS Maeda-san be-PRS

'Yes. It's Maeda.'

b. Bowie:

Wakat-ta.
know-PST

'I see.'

(A few hours later)

c. Bowie:

Maeda-san-ga kur-u *no da #ne/yo ne*↑
Maeda-POL-NOM come-PRS *no da #ne/yo ne*↑

'Maeda will come *no da #ne/yo ne*↑'

d. Byrne:

Hai.
yes

'Yes.'

Interestingly, in (221c), *ne* is infelicitous while *yo ne* becomes perfectly natural. Furthermore, in this case, it is not ↓ but ↑ that should be associated with *ne* in the *yo ne* sequence. The difference between (220b) and (221c) is that S's commitment to the truth of p = "Maeda will come" is presupposed in the latter while not in the former. This contrast thus evidences that *yo ne* is available if that p is a member of $\text{PCS}^{\text{C}}_{S}$ is presupposed in C.[1]

In sum, *yo ne* is usable in a declarative sentence in C where that $p \in \text{PCS}^{\text{C}}_{S}$ is presupposed. Furthermore, if the information that $p \in \text{PCS}^{\text{C}}_{A}$ is new, *ne* in *yo ne* is associated with ↑, while if it is presupposed, then the particle bears ↓ along with *yo*.

4.1.2 Imperative

4.1.2.1 *Yo ne*

Yo ne is observed in imperatives as well. In imperatives, however, *yo na* is more frequently used than *yo ne*. See the following example:

(222) Ayamar-e *yo na*.
apologise-IMP *yo na*
'Apologise *yo na*.'

A particularly interesting fact regarding the use of *yo na* in (222) is that the command, request and so forth expressed by the utterance (speech act) are oftentimes directed towards either an

[1] Note that *ne* is associated with ↑ despite the fact that A's public commitment to the truth of p has already been pragmatically implicated by (220a). I claim that this is because what is at issue in (220b) is not just whether A is committed to the truth of p but whether A is committed to the truth of the same proposition *with evidence*, which is marked by *no*. Since the evidentiality in question is absent in (220a), A's relevant commitment is not presupposed in C at the timing of the utterance of (220b).

Interestingly in this connection, if *no da* is absent, (220b) becomes infelicitous:

(i) a. Byrne:
Sin-joohoo des-u. Ashita-wa Maeda-san-ga k-imas-u.
New-information be-PRS tomorrow-TOP Maeda-POL-NOM come-POL-PRS
'Here is new information. Maeda will come tomorrow.'

b. Bowie:
Maeda-san-ga kur-u #*ne*↑
Maeda-POL-NOM come-PRS #*ne*↑
'Maeda will come #*ne*↑'

This infelicity is expected: (ib) with *ne* ↑ is awkward since (ia) makes A's relevant commitment presuppositional.

agent or agents other than A, but not both at the same time. For instance, the following sentence, in which the external subject is overtly realised as *omae-ga* "you-NOM," is fine, which indicates that the agent specified by *na* can be the same one to whom the imperative sentence is directed.

(223) Omae-ga ayamar-e *yo na*. # Omae-mo soo omo-u daro?
you-NOM apologise-IMP *yo na* # you-also so think-PRS seem
'You apologise *yo na*. # You think so as well, right?'

The awkwardness of *omae-mo soo omo-u daro?* in this example indicates that what is encoded in *na* is the same as the subject of the imperative sentence; otherwise, S can intend to share the same opinion about whether A should make an apology with A. In contrast, if the subject denotes other agents than A, the agent encoded by *na* should be distinct from the one denoted by the subject of the sentence, as in

(224) Aitu-ga ayamar-e *yo na*. Omae-mo soo omo-u daro?
he-NOM apologise-IMP *yo na* you-also so think-PRS right
'He apologise *yo na*. You think so as well, right?'

In this sentence, the expression, with which S intends to share the same opinion with A about what is described in the imperative sentence, is perfectly felicitous. This indicates that A, to whom the intention of sharing the opinion is directed, can be a different agent than the person denoted by the subject of the sentence. If the subject is a proper noun, it almost obligatorily refers to an agent other than A as well. See (225) below.

(225) Ozzy-ga ayamar-e *yo na*. Omae-mo soo omo-u daro?
Ozzy-NOM apologise-IMP *yo na* you-also so think-PRS right
'Ozzy apologise *yo na*. You think so as well, right?'

Interestingly, if *omae-mo soo omo-u daro?* follows the declarative sentence with a third-person subject, then the person denoted by the subject and A should be different.

These examples evidence that when *yo na* is used in an imperative sentence, the agent encoded by *na* can be the same as or distinct from the one denoted by the subject of the sentence. In both cases, A must be present in C for the use of the sequence to be felicitous. Furthermore, for *yo ne* to be felicitous in imperatives, A's commitment to act upon making the irrealis proposition true

must be presupposed at least pragmatically. To see more on this point, examine the following example.

(226) Allan is wondering whether he should vote for a candidate from LDP or JCP. He is currently considering voting for an LDP candidate, and asks Pat and Jeff about their opinions, although he does not know much about their political viewpoints. Pat and Jeff have never talked about politics to each other before.

a. Allan:

Doo si-tara i-i *ka na*. Senkyo toka yoku wakar-ana-i kara
how do-if good-PRS Q *na* election and.so.on well know-NEG-PRS because
Jimintoo-no hito-ni toohyoo-sur-u tumori *da* kedo.
LDP-GEN person-to vote-do-PRS plan *da* but

'What do you think I should do? I don't know about election well so I'm planning to vote for the LDP candidate but···'

b. Pat:

Kyoosantoo-no kouhosya-ni toohyoo-s-iro *yo na*. # Jeff-mo soo omo-u daro?
JCP-GEN candidate-to vote-do-IMP *yo na* # Jeff-also so think-PRS seem

'Vote for the candidate from JCP *yo na*. # Jeff, you think so as well, right?'

In (226), the discourse is specified in such a way that Pat and Jeff do not publicly share their politics. In such a context, Pat's expression of soliciting Jeff's agreement sounds awkward, for obvious reasons. In this context, the use of *yo na* is felicitous, and the utterance is directed towards not only Allan but also Jeff: if *yo na* is used, then there is a strong sense in this utterance that Pat suggests not just Allan, but also Jeff vote for the JCP candidate. Compare this example with (227), where it is contextually specified that Pat and Jeff share the political views.

(227) Allan is wondering whether he should vote for a candidate from LDP or JCP. He is currently considering voting for a LDP candidate, and asks Pat and Jeff about their opinions, although he does not know much about their political viewpoints.. Pat and Jeff both support JCP and both know that the other does.

a. Allan:

Doo si-tara i-i *ka na*. Senkyo toka yoku wakar-ana-i kara
how do-if good-PRS Q *na* election and.so.on well know-NEG-PRS because
Jimintoo-no hito-ni toohyoo-sur-u tumori *da* kedo.
LDP-GEN person-to vote-do-PRS plan *da* but

'What do you think I should do? I don't know about election well so I'm planning to vote for the LDP candidate but···'

b. Pat:

Kyoosantoo-no kouhosya-ni toohyoos-iro *yo na*. Jeff-mo soo omo-u daro?
JCP-GEN candidate-to vote-do-IMP *yo na* Jeff-also so think-PRS seem

'Vote for the candidate from JCP *yo na*. Jeff, you think so as well, right?'

The use of *yo na* is licit in this context as well. In (227), the context is specified in such a way that Pat (S) knows that Jeff (A) also thinks that Allan should vote for a candidate from JCP. The point here is that (227b) is only primarily directed towards Allan, and *na* seems to ask for Jeff's concurrence. This is partially evidenced by the fact that *Jeff-mo soo omo-u daro* can felicitously follow the imperative sentence. The contrast between these two examples illustrate that *yo na* in imperatives is both in cases where the utterance is meant to be directed towards a DP other than the person(s) encoded by the subject of the sentence, and in other cases where the subject denotes the same person(s) as A. Note that though the utterance is directed to Allan in both of these examples, A refers to Jeff rather than Allan.

Let us turn to the prosodic character of *yo na* in imperatives. The sequence of the SFPs in this clause type is obligatorily associated with ↓. The pitch track of (222) is shown in Figure 4.3.[2] This shows that the irrealis proposition must be in S's and A's PCS prior to the utterance. Thus, that $p_{irrealis} \in \text{PCS}^{\text{C}}_{S,A}$ must be presupposed or intentionally marked so in order for *yo na* to be felicitously used in an imperative sentence.

[2] *Na* can be associated with ↑ if there is a comma break (i.e., the ι-boundary in the sense of Itō and Mester 2012; Selkirk 2009, 2011 and others) between *yo* and *na*:

(i) Ayamar-e *yo*, *na*↑
apologise-IMP *yo*.ι-boundary *na*↑
'Apologise *yo*, *na*↑'

Na in this example functions as a marker of S's *suggestion* of making the content of the sentence radical (making an apology, in this particular case) true. The subject must be understood as A, just like an imperative with *na*. The obligatory ι-boundary indicates that *na* in this example is out of the core prosodic domain: i.e., it is prosodically separated from the main clausal spine. Though it is intuitively obvious that *na* in this example has much in common with the same particle under discussion in this dissertation, its exact nature remains poorly understood at this point, and its relation with the ι-boundary is unclear. I leave the investigation for future research.

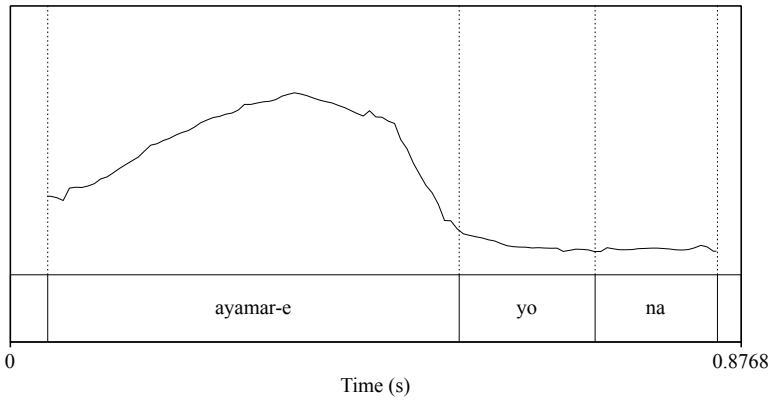


Figure 4.3: The pitch track of (222)

4.1.2.2 *Na yo*

There is, however, another type of imperative in which both *yo* and *na* occur but in the reversed *na yo* order:

(228) Mongen-made ni kaer-i *na yo.*
curfew-until by go.home-IMP *na yo*
'Go home before the curfew *na yo.*'

There are some notable characteristics of *na yo* in comparison with *yo na*. First, *na yo* only allows the missing subject to denote A. This is evidenced by the fact that if the subject is overtly realised as a third person pronoun, then the sentence is ungrammatical:

(229) *Aitu-ga kaer-i *na yo.*
he-NOM go.home-IMP *na yo*
'He go home *na yo.*'

In addition, if the subject position is occupied by a proper noun, it must be interpreted as a referential expression to A. See (230) below.

(230) Ozzy-ga kaer-i *na yo.*
Ozzy-NOM go.home-IMP *na yo*
'Ozzy (you) go home *na yo.*'

These illustrate that *na yo* is licit only when the subject is understood as A.

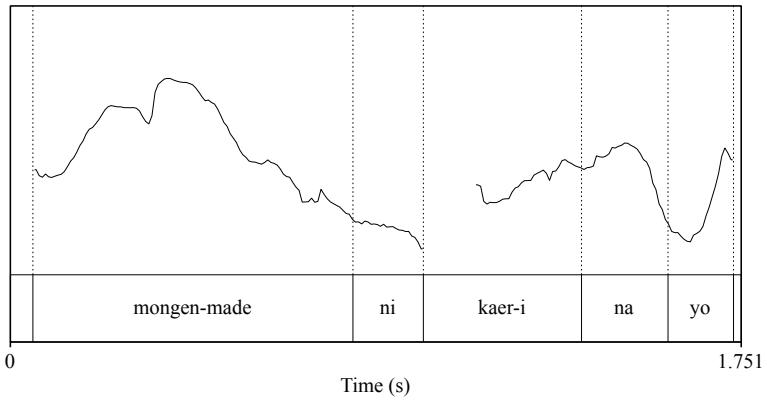


Figure 4.4: The pitch track of (231a)

Second, *na yo* exhibits a different character than *yo na* in prosodic regard. While *yo* in *na yo* imperatives can be associated only with ↓, *na yo* is compatible with all of the three contour types:

(231) a. Mongen-made ni kaer-i *na yo*↑
curfew-until by go.home-IMP *na yo*↑
'Go home before the curfew *na yo*↑'

b. Mongen-made ni kaer-i *na yo*↓
curfew-until by go.home-IMP *na yo*↓
'Go home before the curfew *na yo*↓'

c. Mongen-made ni kaer-i *na yo*→
curfew-until by go.home-IMP *na yo*→
'Go home before the curfew *na yo*→'

The pitch tracks of each of the examples in (231) are illustrated in Figures 4.4, 4.5 and 4.6. Unsurprisingly, the contexts that make the utterances (231a), (231b) and (231c) felicitous are the same as the ones in (54), (56) and (57), respectively: i.e., they are mutually interchangeable. This means the following: (231a) is fine as an utterance that provides a new answer to the QUD "When should the students go home?," (231b) provides an old/presupposed answer to the same QUD which should have been resolved earlier, and (231c) is an all-new sentence that resolves no QUD.

Figure 4.5: The pitch track of (231b)

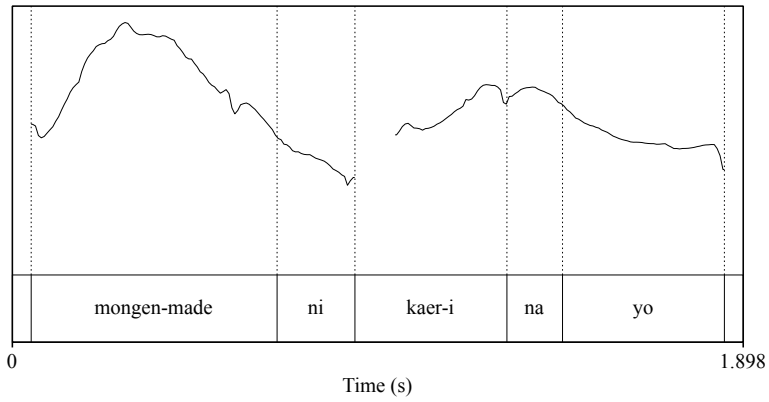


Figure 4.6: The pitch track of (231c)

4.1.3 Interrogative

Finally, I briefly overview the distribution of *yo ne* and similar expressions in interrogatives. Before moving on, it should be noted in passing that *na yo* is utterly unavailable in this clause type.

4.1.3.1 Polar interrogative

First, *yo ne* is grammatical in a polar interrogative sentence with *ka* if the SFC is realised as ↓; in contrast, ↑ is unavailable in this interrogative type with *yo ne*

(232) Ritchie-ga Ronnie-o kaiko-sur-u *ka yo ne*↓/*↑
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *yo ne*↓/*↑
'Will Ritchie fire Ronnie *yo ne*↓/*↑'

Ne can be altered to *na*, but unlike what we saw in the last chapter, ↑ is unable to be associated with *na*.

(233) Ritchie-ga Ronnie-o kaiko-sur-u *ka yo na*↓/*↑
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *yo na*↓/*↑
'Will Ritchie fire Ronnie *yo na*↓/*↑'

Furthermore, *yo* can be replaced with *sira*/*i* in some speeches as well. If *i* is used, either *ne* or *na* can surface, while *sira* is only compatible with *ne* for many speakers. Interestingly, only *i ne/na* and *sira ne* allow ↑ to surface. These are shown below.

(234) a. Ritchie-ga Ronnie-o kaiko-sur-u *ka i na*↓/↑
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *i na*↓/↑
'Will Ritchie fire Ronnie *i na*↓/↑'

b. Ritchie-ga Ronnie-o kaiko-sur-u *ka i ne*↓/↑
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *i ne*↓/↑
'Will Ritchie fire Ronnie *i ne*↓/↑'

c. Ritchie-ga Ronnie-o kaiko-sur-u *ka sira* **na/ne*↓/↑
Ritchie-NOM Ronnie-ACC fire-do-PRS Q *sira* **na/ne*↓/↑
'Will Ritchie fire Ronnie *sira* **na/ne*↓/↑'

The interpretation of these examples except for those with the ↑ SFC is essentially rhetorical, as expected. Furthermore, they require the presence of DP(s) other than A: the utterance and

the emotions such as unbelievability, bewilderment and so forth associated with it are directed towards this DP, but it also has the function of sharing with A those emotions induced *via* the rhetorical reading of the sentence. Just like (227), they are felicitous only when S knows or expects that A shares the same impression about p = "Ritchie will fire Ronnie".

Just like a polar interrogative with *yo* and *ne*, *yo ne* in a polar interrogative is compatible with the past tense:[3]

(235) Ritchie-ga Ronnie-o kaiko-si-ta *ka yo/i/sira na/ne*↓
Ritchie-NOM Ronnie-ACC fire-do-PST Q *yo/i/sira na/ne*↓
'Did Ritchie fire Ronnie *yo/i/sira na/ne*↓'

4.1.3.2 *Wh* interrogative

The next type is *wh* interrogative. As shown in (236), *yo ne* is fine in this type. Again, ↓ is the only SFC that is felicitous in this interrogative type.

(236) Dare-ga Ronnie-o kaiko-sur-u *ka yo ne*↓/*↑
who-NOM Ronnie-ACC fire-do-PRS Q *yo ne*↓/*↑
'Who will fire Ronnie *ka yo ne*↓/*↑'

In addition, using *na* in lieu of *ne* is allowed, and *i* or *sira* can replace *yo*. Expectedly, only *i ne/na* and *sira ne* are fine with ↑.

(237) Dare-ga Ronnie-o kaiko-sur-u *ka yo na*↓/*↑
who-NOM Ronnie-ACC fire-do-PRS Q *yo na*↓/*↑
'Who will fire Ronnie *ka yo na*↓/*↑'

(238) Dare-ga Ronnie-o kaiko-sur-u *ka i na*↓/↑
who-NOM Ronnie-ACC fire-do-PRS Q *i na*↓/↑
'Who will fire Ronnie *ka i na*↓/↑'

(239) Dare-ga Ronnie-o kaiko-sur-u *ka i ne*↓/↑
who-NOM Ronnie-ACC fire-do-PRS Q *i ne*↓/↑
'Who will fire Ronnie *ka i ne*↓/*↑'

(240) Dare-ga Ronnie-o kaiko-sur-u *ka sira* **na/ne*↓/↑
who-NOM Ronnie-ACC fire-do-PRS Q *sira* **na/ne*↓/↑

[3] Again, *sira* is only compatible with *ne*, and ↑ is only compatible with *i na*, both of which are not explicitly marked in (235).

'Who will fire Ronnie *ka sira* **na*/*ne*↓/↑'

The interpretation of the sentences except for those sentences with ↑ is essentially rhetorical: they express that S does not believe that anybody will fire Ronnie, and S further intends to share the same belief with A. As for those sentences with ↑, they serve as interrogative sentences with which S initiates an inquiry about Q with A, who S thinks does not know the answer to the question.

Finally, similarly to (235), *ka yo ne* is valid with the past tense in this interrogative type. The same holds true for other variants of the particles.

(241) Dare-ga Ronnie-o kaiko-si-ta *ka yo ne*↓
who-NOM Ronnie-ACC fire-do-PST Q *yo ne*↓
'Who will fire Ronnie *ka yo ne*↓'

4.1.3.3 *No ka* polar interrogative

The next interrogative type I discuss is *no ka* interrogative. As shown in (242), this interrogative type allows *yo ne* to occur as well. Also, the SFC should be obligatorily realised as ↓.

(242) Ritchie-ga Ronnie-o kaiko-sur-u *no ka yo ne*↓/*↑
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *yo ne*↓/*↑
'Ritchie will fire Ronnie *no ka yo ne*↓/*↑'

Again, *na* can be used instead of *ne*↓:

(243) Ritchie-ga Ronnie-o kaiko-sur-u *no ka yo na*↓/*↑
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *yo na*↓/*↑
'Ritchie will fire Ronnie *no ka yo na*↓/*↑'

Furthermore, *ka i ne*↓ in this interrogative type is perfectly natural in some speeches:

(244) Ritchie-ga Ronnie-o kaiko-sur-u *no ka i ne*↓/↑
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *i ne*↓/↑
'Ritchie will fire Ronnie *no ka i ne*↓/↑'

Ka i na is the only particle sequence compatible with ↑, as in

(245) Ritchie-ga Ronnie-o kaiko-sur-u *no ka i na*↓/↑
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *i na*↓/↑

'Ritchie will fire Ronnie *no ka i na*↓/↑'

Ka sira ne fares with this interrogative type, and this particle sequence is allowed to be associated with ↑ and ↓, as in

(246) Ritchie-ga Ronnie-o kaiko-sur-u *no ka sira ne*↓/↑
Ritchie-NOM Ronnie-ACC fire-do-PRS *no* Q *sira ne*↓/↑
'Ritchie will fire Ronnie *no ka sira ne*↓/↑'

These sentences primarily express S's surprise, unbelievability etc. about the fact that Ritchie will fire Ronnie. Furthermore, it also presupposes the presence of A, with whom S believes to share such emotions. Only (244), (245) and (246) with ↑ serve as a pure interrogative sentence, with the effect that S intends to initiate the relevant inquiry with A, who S does not think knows the answer to the question.

As for tense, they are compatible with the past tense, with no change in the SFCs which can be associated with the sequence.

(247) a. Ritchie-ga Ronnie-o kaiko-si-ta *no ka yo na*↓/*↑
Ritchie-NOM Ronnie-ACC fire-do-PST *no* Q *yo na*↓/*↑
'Ritchie fired Ronnie *no ka yo na*↓/*↑'

b. Ritchie-ga Ronnie-o kaiko-si-ta *no ka i ne*↓/↑
Ritchie-NOM Ronnie-ACC fire-do-PST *no* Q *i ne*↓/↑
'Ritchie fired Ronnie *no ka i ne*↓/↑'

c. Ritchie-ga Ronnie-o kaiko-si-ta *no ka i na*↓/↑
Ritchie-NOM Ronnie-ACC fire-do-PST *no* Q *i na*↓/↑
'Ritchie fired Ronnie *no ka i na*↓/↑'

d. Ritchie-ga Ronnie-o kaiko-si-ta *no ka sira ne*↓/↑
Ritchie-NOM Ronnie-ACC fire-do-PST *no* Q *sira ne*↓/↑
'Ritchie fired Ronnie *no ka sira ne*↓/↑'

4.1.3.4 *No da wh* interrogative

The final interrogative type to be discussed is *no da wh* interrogative, which I have analysed to have the *no da Q-morpheme* as its base. This clause type is compatible only with *yo ne* or *yo na* with ↑.

(248) Dare-ga Ronnie-o kaiko-{sur-u/si-ta} *no da yo/*i/*sira ne/na*↓/*↑
who-NOM Ronnie-ACC fire-{do-PRS/do-PST} *no da yo/*i/*sira ne/na*↓/*↑
'Who will fire/fired Ronnie *no da yo/*i/*sira ne/na*↓/*↑'

The unavailability of *i* and *sira* is expected from the discussion in Chapter 2. These particles surface only when preceded by *ka*. Therefore, the fact observed in (248) is natural.

This explanation is buttressed by the following observations, where the overt realisation of *ka* with the deletion of *da* licenses *sira* and *i*.

(249) a. Dare-ga Ronnie-o kaiko-{sur-u/si-ta} *no ka i ne*↓/↑
who-NOM Ronnie-ACC fire-{do/do-PST} *no* Q *i ne*↓/↑
'Who will fire/fired Ronnie *no ka i ne*↓/↑'

b. Dare-ga Ronnie-o kaiko-{sur-u/si-ta} *no ka i na*↓/↑
who-NOM Ronnie-ACC fire-{do/do-PST} *no* Q *i na*↓/↑
'Who will fire/fired Ronnie *no ka i na*↓/↑'

c. Ritchie-ga Ronnie-o kaiko-{sur-u/si-ta} *no ka sira ne*↓/↑
Ritchie-NOM Ronnie-ACC fire-{do-PRS/do-PST} *no* Q *sira ne*↓/↑
'Ritchie will fire/fired Ronnie *no ka sira ne*↓/↑'

It is not allowed to realise both *da* and *ka*:

(250) *Dare-ga Ronnie-i kaiko-sur-u *no da ka yo/i/sira ne/na*.

Again, ↑ is only compatible with *ka i na*, *ka i ne* and *ka sira ne*. All of the legitimate sentences observed here can be interpreted either as a pure interrogative or a rhetorical question, which is consistent with what we saw in the previous chapters. The important point is that these sentences with ↑ are valid only in the presence of A, with whom S initiates an inquiry about *Q*. When the same sentences are associated with ↓, they are used by S as a way to share the impression with A about the fact that someone will/did fire Ronnie.

4.1.3.5 Summary

Summarising this subsection, *yo ne* in interrogatives should be realised *yo ne*, *yo na*, *sira ne*, *i na* or *i ne*. They all can be associated with ↓, but only *i na/ne* and *sira ne* compatible with ↑. The use of the sequence indicates the presence of A, and it further implies that S's rhetorically expressed

impressions about the sentence radical are meant to be shared with A when the SFP sequence is associated with ↓. In contrast, if the same sentence is realised with ↑, the entire utterance is meant to initiate an inquiry on Q, the answer of which is assumed to be unknown to both S and A.

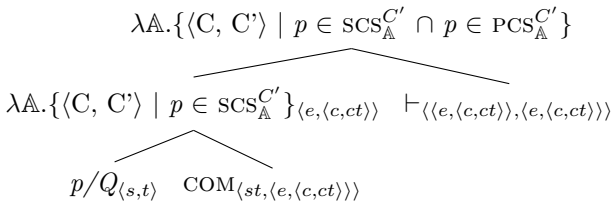
In the next section, I will show that all of these characteristics of *yo ne* and its analogs in interrogatives are neatly explained under the present account, along with their distributions and semantics in other clause types as well.

4.2 Proposal

In the last two chapters, I argued for a CCP-based theory in which *yo* and *ne* are analysed as the post-syntactic realisations of the *S*- and *A*-heads that embed the ⊢-head. ⊢ is a head that (pre-theoretically) serves as an utterance modifier, and specifies a CCP update as one in which p/Q is a member of an agent's PCS in the updated context (set). PCS is a set of ps and Qs to act upon which the agent is publicly committed to the other DPs. (42), repeated here as (251) with modification so that it incorporates Qs as well, is the formal definition of PCS.

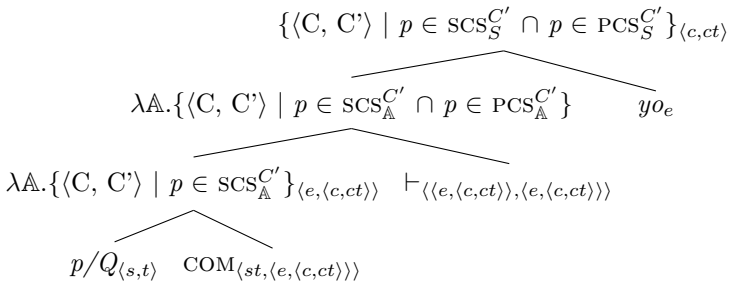
(251) $\text{PCS}^{\text{C}}_{a} := \{p/Q \mid \forall x \in \mathbb{A}-\{\text{a}\} : a\vdash^{\text{C}}_{x} p/Q\}$

This ⊢-head Merges above COM, the head that encodes an agent's *self commitment*. This head corresponds to what have been traditionally called DECL, IMP and INTER. Thus, the LF structure which involves these two heads is to be

(252)


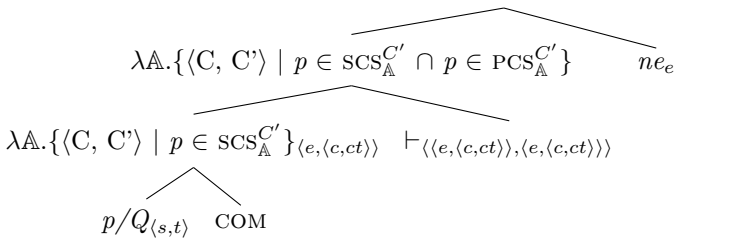
If S Merges with this structure, it will be realised as *yo*:

(253)



If A is Merged, in contrast, then it will be realised as *ne*:

(254)



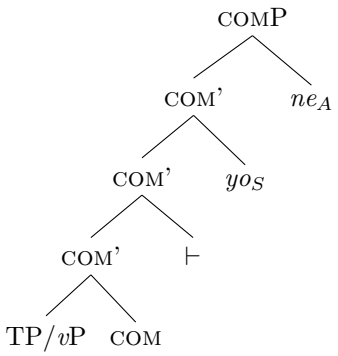
If we base our analysis of *yo ne* upon this idea, it is natural to hypothesise that *yo ne* are the post-syntactic realisations of both S and A in the treetop, above $\vdash$. Specifically, these heads encode the agents committed to act upon the content of the sentence radical, just like what was proposed in the previous chapters. Thus, they together provide a *set* consisting of S and A = {S, A}.[4] This means that *yo ne* semantically encodes the information that $p/Q \in \text{PCS}_{S,A}^{\text{C}}$ in C. This is formally described below:

(255) *Yo ne*'s semantics:

$$\text{PCS}_{S,A}^{\text{C}} := \{p/Q \mid \forall x \in \mathbb{A}-\{\text{S,A}\}\text{: S,A} \vdash_x^{\text{C}} p/Q\}$$

Thus, the syntactic structure of a sentence involving *yo ne* is:

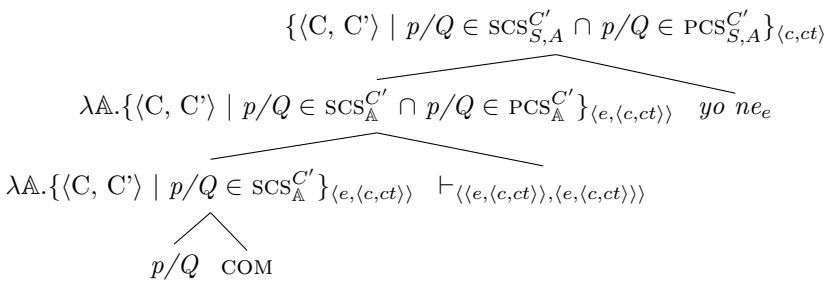
(256)



[4]Likewise, to be precise, S and A alone introduce the singleton set {S} and {A}, respectively.

and this is converted to the following LF structure at the CI interface.

(257)



Yo and *ne* are incorporated into a single head at the LF structure (257) despite their syntactic status as distinct heads. This is because they contribute to the CCP semantics as one.

In the rest of this section, I will show that this analysis neatly explains the distribution and function of *yo ne* and its analogs in the three clause types under consideration.

4.2.1 Declarative

One of the central claims of the present account is that the specific contour associated with an SFP is determined by its information structural status. If the relevant commitment is new, then it will be realised with ↑ or →, depending on whether the utterance is meant to resolve a QUD or not. If it is old/presupposed, in contrast, then it will be associated with ↓.

(218) and (219b) confirm that the same analysis holds for *yo ne* as well. In (218), where A's relevant commitment is not presupposed, *ne* should be realised with the rising contour. In contrast, (219b) realises the same particle with ↓ since the same commitment by A is presupposed in this context. In both of the contexts, S's commitment to A regarding the excellence of the song has been presupposed by the fact that it is S who recommended the song to A.

The contrast in (221) and (222), repeated here as (258) and (259), finds its natural explanation in this account.

(258) a. Byrne:

Sin-joohoo des-u. Ashita-wa Maeda-san-ga k-imas-u.
New-information be-PRS tomorrow-TOP Maeda-POL-NOM comePOL-PRS

'Here is new information. Maeda will come tomorrow.'

b. Bowie:

Maeda-san-ga kur-u *no da ne/#yo ne*↑
Maeda-POL-NOM come-PRS *no da ne/#yo ne*↑

'Maeda will come *no da ne/#yo ne*↑'

(259) a. Byrne:

Soo des-u. Maeda-san des-u.
so be-PRS Maeda-san be-PRS

'Yes. It's Maeda.'

b. Bowie:

Wakat-ta.
know-PST

'I see.'

(A few hours later)

c. Bowie:

Maeda-san-ga kur-u *no da #ne/yo ne*↑
Maeda-POL-NOM come-PRS *no da #ne/yo ne*↑

'Maeda will come *no da #ne/yo ne*↑'

d. Byrne:

Hai.
yes

'Yes.'

(258b) is uttered by Bowie right after Byrne's assertion. Bowie's utterance contains *no*, which indicates that he suggests a CCP where Byrne is committed to the truth of *p with positive evidentiality*. This evidentiality is lacking in (258a), and in this sense Byrne's relevant commitment is not presupposed. Thus, *ne* is associated with the rising contour in this example. Furthermore, since Bowie is not committed to the truth of *p*, *yo*, which must be associated with ↓, is not usable in this context. On the other hand, Bowie's remark in (259c) is made after his acceptance of Byrne's commitment. This indicates that both of them acknowledged *p*'s truth, and hence the proposition is in the CG and $\text{PCS}_{S,A}$ at the timing of the utterance. Thus, *yo ne* must be realised with ↓ according to my analysis, which is what is observed.

In sum, *yo ne* requires S's relevant commitment to be presupposed, while A's does not have to be so specified. The use of the sequence with ↑ serves to facilitate the enrichment of the CG by suggesting A to become committed to the truth of a proposition, to which S has already been committed. If it is associated with the falling contour, then it functions as *re*-affirmation of the truth of *p*, to which both S and A have already been publicly committed.

4.2.2 Imperative

4.2.2.1 *Yo na*

Let us start with *yo na* in imperatives. As shown in (226) and (227), repeated here as (260) and (261), *yo na* is felicitous in imperatives only if the relevant commitments by S and A are presupposed among these two DPs. The speech act with the utterance, typically a directive one, is directed towards other DP(s) than A in many cases, but not necessarily so.

(260) Allan is wondering whether he should vote for a candidate from LDP or JCP. He is currently considering voting for a LDP candidate, and asks Pat and Jeff about their opinions, although he does not know much about their political viewpoints. Pat and Jeff have never talked about politics to each other before.

a. Allan:

Doo si-tara i-i *ka na*. Senkyo toka yoku wakar-ana-i kara
how do-if good-PRS Q *na* election and.so.on well know-NEG-PRS because
Zimintoo-no hito-ni toohyoo-sur-u tumori *da* kedo.
LDP-GEN person-to vote-do-PRS plan *da* but

'What do you think I should do? I don't know about election well so I'm planning to vote for the LDP candidate but···'

b. Pat:

Kyoosantoo-no kouhosya-ni toohyoo-s-iro *yo na*. # Jeff-mo soo omo-u daro?
JCP-GEN candidate-to vote-do-IMP *yo na* # Jeff-also so think-PRS seem

'Vote for the candidate from JCP *yo na*. # Jeff, you think so as well, right?'

(261) Allan is wondering whether he should vote for a candidate from LDP or JCP. He is cur-

rently considering voting for a LDP candidate, and asks Pat and Jeff about their opinions, although he does not know much about their political viewpoints. Pat and Jeff both support JCP and both know that they do.

a. Allan:

Doo si-tara i-i *ka na*. Senkyo toka yoku wakar-ana-i kara
how do-if good-PRS Q *na* election and.so.on well know-NEG-PRS because
Zimintoo-no hito-ni toohyoo-sur-u tumori *da* kedo.
LDP-GEN person-to vote-do-PRS plan *da* but

'What do you think I should do? I don't know about election well so I'm planning to vote for the LDP candidate but···'

b. Pat:

Kyoosantoo-no kouhosya-ni toohyoos-iro *yo na*. Jeff-mo soo omo-u daro?
JCP-GEN candidate-to vote-do-IMP *yo na* Jeff-also so think-PRS seem

'Vote for the candidate from JCP *yo na*. Jeff, you think so as well, right?'

This requirement is what the present account expects from the SFC obligatorily associated with *yo na*: the sequence of the SFPs must be realised with ↓. This indicates that both S's and A's commitments to the content of the sentence radical should be presuppositional. As the contrast between (260) and (261) shows, *yo na* is available when not just S's, but also A's relevant commitment are (assumed to be) presupposed.

If there is only two DPs, namely, S and A in the discourse, then *yo na* in imperatives serve to make a strong command/suggestion/request etc. towards A. This is due to the association of *na* with ↓. Specifically, if Allan and Pat are the only DPs in (261), then Allan has not yet become committed to act upon making p = "Allan votes for a JCP candidate" true. In spite of this, Pat's utterance is made in such a way that the commitment in question is presupposed. This violation of Grice's Maxims is meant to evoke the now-familiar pattern of pragmatic reasoning in Allan's mind, in which he as A concludes that Pat (S) intended to convey that he should have become committed to him to act upon making the proposition true.

In this way, the present account neatly explains the semantics and pragmatics of *yo na* in imperatives.

4.2.2.2 *Na yo*

As shown in (231), repeated here as (262), *na yo* is also felicitous in imperatives, and it can be associated with either of the three SFCs.

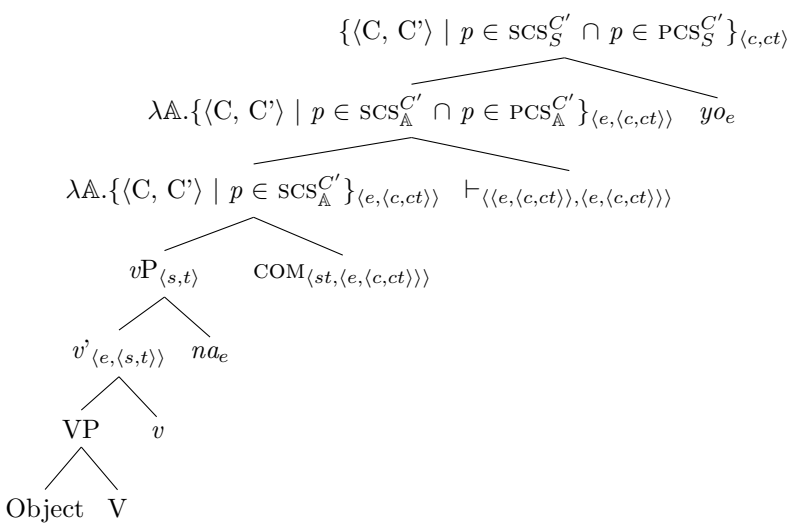
(262) a. Mongen-made ni kaer-i *na yo*↑
curfew-until by go.home-IMP *na yo*↑
'Go home before the curfew *na yo*↑'

b. Mongen-made ni kaer-i *na yo*↓
curfew-until by go.home-IMP *na yo*↓
'Go home before the curfew *na yo*↓'

c. Mongen-made ni kaer-i *na yo*→
curfew-until by go.home-IMP *na yo*→
'Go home before the curfew *na yo*→'

As I showed above, the subject of the sentence radical must denote A in imperatives with *na yo*. In terms of the proposal made in Chapter 3, this indicates that *na* in the *na yo* sequence is the post-syntactic realisation of the *A*-head Merged just above a *v*' so as to introduce A as the external argument to the *v*P. Thus, *na* in this case does not encode A's relevant public commitment in C, and it Merges below COM. In other words, the examples in (262) have the following LF structure:

(263)



In (263), only *yo* serves as a *true* SFP which embeds ⊢: i.e., only S's relevant public commitment is at issue. In this sense, imperatives with *na yo* is equivalent to imperatives with *yo* in which the subject denotes A. Hence, it is natural to expect that *na yo* in imperatives can be associated with

either of the three contours, as imperatives with *yo* are compatible with them. This is borne out in (262).

4.2.3 Interrogative

Finally, the distribution of *yo ne* and its analogs in interrogatives are neatly explained under the present account as well. *Yo ne* in a polar interrogative suggests a CCP in which $Q \in \textsc{pcs}^{\text{C}}_{S,A}$. Thus, *yo ne*↓ indicates that the relevant commitment by S and A is presupposed in the context. If the utterance is made in the presence of the proposal of an answer to the QUD, then it evokes the following reasoning in A's mind, assuming that the DPs only consist of S and A:

(264) The inference that S intends A to execute *via* (232):

a. S uses *yo ne*↓ to express that the commitment by S and A to Q is presupposed, or at least S intends A to think so.

b. There must be a reason for this.

c. The utterance is made in the presence of the proposed answer to the Q.

d. A's commitment to act upon Q means that A is committed to the partition of possible worlds between the ones in which Ritchie will fire/fired Ronnie and the other ones in which Ritchie will/did not fire Ronnie.

e. An agent's commitment to act upon Q normally indicates that the agent is willing to seek the answer to the Q.

f. Thus, by uttering (232) with the explicitly marked presuppositional information that $Q \in \textsc{pcs}_{S,A}$ despite what is described in (264d), S intends to mean that the presuppositional QUD to which S and A have been committed has not yet been resolved.

From this reasoning A can further infer the conclusion that S intends to express anger, unbelievability and so forth, just like as I showed in the last two chapters. The same holds true for the other variants.

Its function in a *wh* interrogative reflects the functions of *yo* and *ne* in the same interrogative type: the utterance of a *wh* interrogative with *yo ne* expresses a CCP, where $[\![wh\ Q]\!] \in \text{PCS}_{S,A}$ in the updated context. The use of *yo ne*↓ is tantamount to asking the QUD with the proviso that the relevant commitment to act upon the inquiry for the answer to the QUD by S and A is presupposed. In short, it asks the QUD that should have been resolved earlier. The rhetorical reading of (236) results from the same type of reasoning depicted in (264).

No ka interrogatives with *yo ne* behave in the same way as polar interrogatives with the same particle sequence, with one crucial twist: they further restrict the QUD in such a way that there is objective bias in favour of *p*'s truthfulness. This positive evidentiality is marked by *no*, and the rest of the semantics of *no ka* interrogatives with *yo ne* is the same as polar interrogatives with *yo ne*. Thus, *yo ne*↓ in this interrogative type provides $[\![polar\ Q_{+Ev}]\!] \in \text{PCS}_{S,A}$ as a restriction imposed upon the set of updated contexts. Therefore, (242) provides $polar\ Q_{+Ev} \in \text{PCS}_{S,A}$ in the presence of the proposed answer to the QUD, which evokes a series of inferences in the hearer's mind. If the utterance is directed towards A, then the surprise, bewilderment, unbelievability and other emotions about *p*'s truth that S holds are directed towards A; if it is directed towards the other DP(s), then such emotions are meant to be shared by A.

Wh no da (ka) interrogatives with *yo/i/sira ne/na* are analysed as a CCP in which it is suggested/requested that $[\![polar\ Q_{+Ev}]\!] \in \text{PCS}_{S,A}$. If ↓ is associated with (248), for instance, then it provides the presupposed information that $wh\ Q_{+Ev}$ is an element of the set $\text{PCS}_{S,A}$, the potential discourse effects of which include the expression of S's assertion that no one will fire Ronnie directed towards A, that of S's intention to confirm that A shares the same belief, and so on, depending on the context it is uttered.

Summing up, *yo/i/sira ne/na* in interrogatives exhibits the function that can be said to be a combination of the two particles: it encodes the semantics of *yo/i/sira* and *ne/na* in a joint fashion. The net effect of the sequence of the particles in a particular discourse context C is that it suggests a context update in such a way that the updated context contain the information that $Q \in \text{PCS}_{S,A}$.

Before summarising the chapter, let me demonstrate that the present DM-based account provides a straightforward explanation for the fact that only *ka i ne*, *ka i na* and *ka sira ne* can be associated with ↑. Recall that *yo* is not compatible with the rising contour in general. This fact was captured *via* the post-syntactic process of VI in the last two chapters. Therefore, we immediately account for the incompatibility of *yo ne* with ↑. Ergo, the present DM-based account explains the fact that *ka i na*, *ka i na* and *ka sira ne* are the only particle sequence that is compatible with ↑.

4.3 Summary

This chapter argued for the analysis that the behaviours of *yo ne* in various clause types can be explained in a straightforward way by directly adapting the proposals made in the last two chapters. It suggests that the updated context C' contain the information that $p/Q \in \text{PCS}^{\text{C'}}_{S,A}$. $p/Q \in \text{PCS}^{\text{C'}}_{S,A}$ informally means the set of all of the propositions and Qs to act upon which S and A are publicly committed.

Before leaving this chapter, let me note in passing that the above description of $\text{PCS}^{\text{C}}_{S,A}$ excludes S and A's mutual commitment: it does not specify that S and A are committed to each other to act upon the relevant *p*s and *Q*s. However, it is obvious from the actual use of *yo ne* and its analogs that they are mutually committed to act upon *p/Q*. How can the present analysis capture this fact?

The straightforward answer to this question is that the relevant information is encoded not in the PCS in question but $\text{SCS}^{\text{C}}_{S,A}$: i.e., it is encoded in S and A's self commitment set. This set is introduced to the semantic computation by COM, which subsumes the clause type operators DECL, IMP and INTER. The *S*- and *A*-heads feed S and A as the holders of the elements in this self commitment set in (257), and by means of this S and A are mutually committed to act upon their own self commitments. Ergo, the present proposal neatly captures the fact that in the use of *yo/i/sira ne/na*, S and A are mutually committed to the same propositions and *Q*s.

Finally, the fact that *yo ne* is also usable only when S's relevant public commitment is pre-

supposed can be explained by assuming that the use of *yo ne* with S's public commitment non-presupposed is preempted by that of *ne*, *yo*↑/→ and so on, which essentially provide the same information with regard to S's commitment.

Chapter 5

Commitment and *Sa*

This chapter examines the semantics of *sa*. It will be shown that this particle is only compatible with a declarative sentence. The proposal to be made is that *sa* is the post-syntactic realisation of S, which embeds what will be later called $\nVdash$. $\nVdash$ expresses the information that $p \notin \text{PCS}_a^{\text{C}}$ for an agent a and the context C. Thus, *sa*'s semantics amounts to that S is not publicly committed to the other DPs as for the truth of the proposition. In other words, it is the particle that cancels the implicature derived from S's publicised self commitment.

5.1 *Sa* as the neutraliser of S's public commitment

First of all, to the best of my knowledge, *sa* has received little (if any) serious attention in the previous literature. Recently, I have paid closer attention to the particle in Matsumoto (forthcominga). There, I have argued that *sa* can be used in declaratives with an intriguing semantico-pragmatic function. See the following example.

(265) a. S:

Julian-ga atarasii arubamu-o das-u *sa*.
Julian-NOM new album-ACC release-PRS *sa*

'Julian will release a new album *sa*.'

(It turned out Julian will not release a new album)

b. A:

#Julian-ga atarasii arubamu-o das-u *sa* tte it-ta zyan! Usotuki!
Julian-NOM new album-ACC release-PRS *sa* that say-PST right liar
'You said "Julian will release a new album *sa*"! You such a liar!'

In (265a), S's utterance of a declarative sentence contains *sa*. Interestingly, even after it turned out that p = "Julian will release a new album" is false, A cannot blame S on making a false assertion, which is evidenced by the infelicity of (265b). *Sa* is also usable with the past tense, as the following example shows:

(266) Context: Avishai and Bill are worrying about the result of the entrance exams that their mutual friend Chet took a few months ago. The result has already been made public, but Avishai and Bill both decided not to look at it until Chet notifies them of the result directly. Before hearing from Chet, they are talking about whether Chet passed or not.

a. Avishai:

Chet, ukat-ta *ka na*↑
Chet pass-PST Q *na*↑
'Did Chet pass *na*?'

b. Bill:

Ukat-ta *sa*.
pass-PST *sa*
'He passed *sa*.'

In this dialog, Bill publicises his opinion about the result of Chet's exams with *sa*. Crucially, he made the utterance despite the fact that he does not know the actual result. This indicates that *sa* is available in the absence of concrete evidence for the truth of p. Again, even if it turned out that Chet failed to pass, Avishai cannot felicitously blame Bill for making a false claim.

This exhibits a stark contrast between *sa* and another particle *yo*: as shown in Chapter 2, if S makes an utterance of a declarative sentence with *yo*, S takes the liability for the truth of p. Recall that *yo*'s such effect was due to its character as the grammatical morpheme that encodes the information $p \in \text{PCS}_S^C$. The absence of liability in the use of *sa* thus indicates that it does not

encode this information.

To scrutinise the semantics of *sa* further, it should be noted that it does not involve A's commitment to the other DPs either. For instance, expressions like "you don't have to believe it" can be felicitously used with *sa*, while it is not the case for *ne*:

(267) a. Sinzi-nak-ute-mo i-i-kedo, Julian-wa atarasii arubamu-o das-u
believe-NEG-INFINITE-also good-PRS-but Julian-TOP new album-ACC release-PRS
sa.
sa
'You don't have to believe it but Julian will release a new album *sa*.'

b#Sinzi-nak-ute-mo i-i-kedo, Julian-wa atarasii arubamu-o das-u *ne*.

Ne is not compatible with such an expression apparently because it encodes the contradictory information $p \in \text{SCS}^{\text{C}}_{A}$. Thus, *sa* is irrelevant to A's commitment.

Another fact that should be mentioned regarding *sa* is that there is a strong sense of S's opinion in the use of *sa*. See (268) below.

(268) a#Watashi-wa sinzitei-na-i kedo, Julian-wa atarasii arubamu-o das-u *sa*.
I-TOP believe-NEG-PRS but Julian-TOP new album-ACC release-PRS *sa*
'I don't believe it but Julian will release a new album *sa*.'

b. Kimi-wa sinzitei-nasa-soo *da* kedo, Julian-wa atarasii arubamu-o das-u *sa*.
you-TOP believe-NEG-seem *da* but Julian-TOP new album-ACC release-PRS *sa*
'You don't seem to believe it but Julian will release a new album *sa*.'

The awkwardness of (268a) shows that *sa* involves S's belief about p's truthfulness. Therefore, *sa* pertains to S's self commitment. The fact that (268b) is felicitous further illustrates that *sa* does not say anything about A's belief = A's self commitment regarding the truth of p. Hence, *sa* only involves S's self commitment.

These observations indicate that there must be the *S*-head and COM in the syntax for *sa* to be realised, while bare $\vdash$ should be absent. Note that this does not mean that *sa* is the post-syntactic realisation of S which directly embeds COM, since such a structure results in a bare declarative sentence, in which the information that $p \in \text{PCS}^{\text{C}}_{S}$ is canonically derived from a pragmatic implicature. The conspicuous discourse effect of *sa* is that it *nullifies* such an implicature: i.e., it does not make the proposition to be an element of S's *public* commitment set.

Of note here is that *sa* exhibits another interesting behaviour pertaining to the sentence radical it embeds in this clause type. See (269) below.

(269) Context: Bud and Thelonious are planning to go to the concert of their favourite musician, and they are discussing whether they should buy the tickets separately or not. Bud says to Thelonious

#Watashi-ga anata-no tiketto-mo ka-u *sa*.
I-TOP you-GEN ticket-also buy-PRS *sa*

'I will buy the ticket for you *sa*.'

Interestingly, (269) does not mean that Bud is willing to buy the tickets for Thelonious: it only means that Bud as the utterer of the sentence *speculates* or *believes* that he himself will buy the tickets for the sake of Thelonious's convenience. Therefore, the entire utterance sounds fairly strange in this context.

Recall that Geurts (2019) argues based on Brandom (1994, 1997) that the distinction between beliefs and intentions is subsumed under the difference between telicity and atelicity of given commitments. According to this dichotomy, the commitment by Bud in (269) should be considered telic given the context of the utterance, since it is goal-directed: i.e., the relevant commitment is, say, *fulfilled* once S (Bud) will indeed buy the ticket for Thelonious. This makes a stark contrast with (265a), (266b), (267a), (268b), and (269) interpreted in the other way: in all of these cases, commitment is atelic in all these examples. Thus, the fact that (269) is felicitous only under the interpretation that it expresses Bud's belief illustrates that *sa* is only compatible with an atelic commitment.

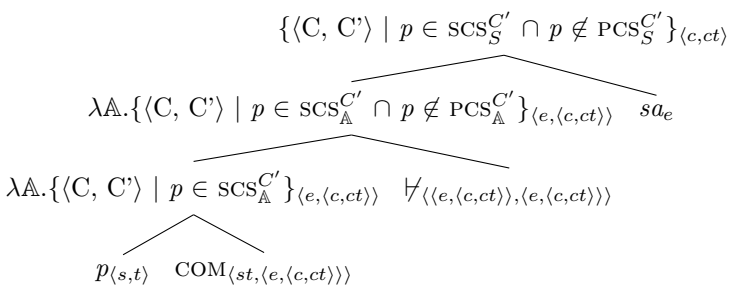
Therefore, *sa* only makes reference to the elements corresponding to beliefs in $\text{SCS}^{\text{C}}_{S}$. Under the present account, this means that *sa* is available only when it embeds a sentence radical p which syntactically projects a TP.

From these observations, the following discourse effect of *sa* is elucidated: *sa* pertains to S's atelic self commitment to the truth of p, and it nullifies the implicature that p is a member of $\text{PCS}^{\text{C}}_{S}$. Informally, *sa* expresses that the agent S believes that p is true while the same agent is not

publicly committed regarding the truth of the same proposition.

The semantics of the particle can be analysed by introducing a formal device which plays the opposite role of $\vdash$. Calling such a formal semantic object $\nVdash$, the LF structure of a sentence with *sa* can be depicted as

(270)



$\vdash$ + *sa* (the *S*-head at the level of syntax) together specifies that p is not a member of S's PCS in the updated context. That p is not an element of S's PCS in a particular context C means that S is not committed to the other DPs to act upon the truth of p. Notice that there are two ways to construe this specification. One is that this means the following:

(271) $p \notin \text{PCS}_S^{\text{C}} := \forall x \in \mathbb{A}-\{\text{S}\} : \neg \text{S} \vdash_x^{\text{C}} p$

(271) dictates that for all the DPs other than S, S is *not* committed to them to act upon p's truth. Under this construal, *sa* encodes the information that S is not committed to anyone in the discourse other than S-self regarding the truth of p.

The other way to construe $p \notin \text{PCS}_S^{\text{C}}$ is formally depicted in (272).

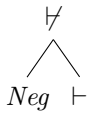
(272) $p \notin \text{PCS}_S^{\text{C}} = \neg\forall x \in \text{DP-}\{\text{S}\} : \text{S} \vdash_x^{\text{C}} p$

In (272), $p \notin \text{PCS}_S^{\text{C}}$ is defined in such a way that it is not the case that S is committed to all other DPs to act upon the truth of the proposition: i.e., there can be some DP(s) other than S in C to whom S is committed to act upon p's truth.

These two possible definitions are different in that (271) predicts that S should not be blamed by anyone if p turns out false, while (272) says that it is possible that S will be blamed by someone if the falsity of p is revealed. To decide which definition to take, it is suggestive to note that no matter how many DPs C contains, none of them should blame S for p's not being true. For

instance, in the presence of DPs other than S and A, the utterance in (265b) is equally infelicitous even if it is made by those other DPs. This is expected by (271), but not by (272). Therefore, there is a reason to believe that (271) should be construed as the correct interpretation of the information that $p \notin \text{PCS}_S^{\text{C}}$.

An immediate question, then, is as to how $\nvdash$ should be derived. Do we have to assume that the head is primitive in the sense that it cannot be decomposed into smaller grammatical units? Even though this is a potential approach to take, it is not desirable simply because it is *ad hoc*. Given this undesirability, I instead propose that $\nvdash$ is morphologically complex, consisting of two abstract functional elements. One of the elements is $\vdash$, and the other corresponds to a negative prefix found in *im*polite, *un*fortunate, *non*sensical and so on. The prefix is responsible for yielding $\nvdash$ in the sense defined in (271). Thus, morphosyntactically, $\nvdash$ has the following structure (I call the relevant prefix *Neg*):

(273)


Thus, there is no need to make recourse to an *ad hoc* formal apparatus: $\nvdash$ emerges naturally from the combination of the functional elements familiar to us.

With these formal semantic characters of $\nvdash$ and *sa* in mind, let us next discuss the prosodic aspect of the particle. Interestingly, *sa* is only compatible with ↓. The particle is strongly unacceptable with ↑ and →. See the pitch track of (266b) illustrated in Figure 5.1.

From the perspective of the proposal laid out in this dissertation, this fact indicates that *sa* is available only in the presence of a QUD which is expected to be resolved by (the utterance of) *p*.[1]

[1] A remark is in order. Ryoichiro Kobayashi (p.c.) points out that the following utterance can optionally associate → with *sa*.

(i) Context: S falls on the ground, and says to A the following, who is worrying about whether S is fine or not.

Daizyoobu *sa*↓/→
alright *sa*↓/→

'I'm fine *sa*↓/→'

At this point, I have no substantial explanation for this optional →, and I have to leave the investigation for future research. But one point that I would like to note is that *sa*→ seems to be allowed only in a copula sentence, with the copula *da* replaced by *sa*. For instance, cleft sentences like

(ii) Kendrick-to kenka-si-ta *no*-wa Anderson *sa*↓/→
Kendrick-with fight-do-PST *no*-TOP Anderson *sa*↓/→

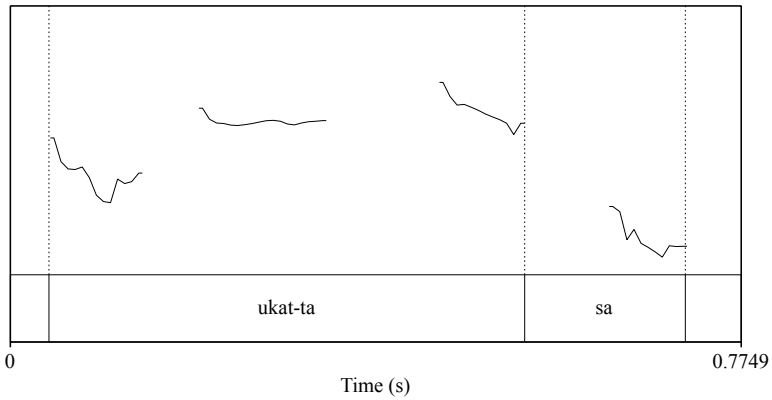


Figure 5.1: The pitch track of (266b)

This is because an utterance with no relevant QUD should be associated with →. Furthermore, the fact that *sa* cannot be associated with ↑ is indicative of the presuppositional status of the information borne by the particle. In other words, that p is a member of S's public commitment set PCS should be presupposed in the context of the utterance C for *sa* to be felicitously used.

This is not bizarre at all. *Sa*'s semantics is (271) under the present analysis. (271) dictates that S is not committed to the other DPs regarding the truth of p. Notice here that until S says something about p, S is not committed to the other DPs to act upon its truth. S becomes publicly committed to act upon p's truth only after S's utterance of a relevant declarative sentence (with or without *yo*)[2] or the accommodation of its truth *via* contextual cues, common knowledge etc. This amounts to the truism that the information that $p \notin \text{PCS}_S^C$ is *default* in C unless S's relevant commitment is made explicitly. Therefore, the information encoded by *sa* is presupposed by *default*. Put differently, the use of *sa* keeps S's *dis*commitment intact even after the utterance of a declarative sentence.

This analysis predicts that *sa* is unavailable, or at least sounds infelicitous, after S becomes committed to the other DPs to act upon p's truth. This is because this commitment directly

'The one who had a fight with Kendrick is Anderson *sa*↓/→'

are fine with →, while non-copula sentences of the sorts discussed in the body text do not allow the flat contour to be associated with the SFP. Perhaps the optional availability of → under discussion is an idiosyncratic fact about the copula construction; perhaps not.

[2]If the utterance does not contain *yo*, then S's relevant commitment will be made unless it is canceled.

contradicts the semantics of *sa*. (274) bears this out.[3]

(274) Context: S and A are addressing the QUD "What did Fredrik buy?"

a. S:

Fredrik-wa hon-o kat-ta (*yo*).
Fredrik-TOP book-ACC buy-PST (*yo*)
'Fredrik bought a book (*yo*).'

b. A:

Fredrik, hon-o kat-ta *nda ne*↑
Fredrik book-ACC buy-PST *nda ne*↑
'Fredrik bought a book *nda ne*↑'

c. S:

#Un. Hon-o kat-ta *sa*↓
yes book-ACC buy-PST *sa*↓
Intended. 'Yes. He bought a book *sa*↓'

(274a) introduces the information to C that $p \in \text{PCS}^{\text{C}}_{S}$. After this, embedding the same proposition within *sa* is infelicitous, as (274c) shows. This eloquently speaks to the present proposal: *sa* is usable only if S's public commitment has not been made in C. If the relevant commitment is made public, the information encoded by *sa* becomes new. Crucially, however, the use of *sa* suggests a context update which is contradictory to the current context in such a case. This kind of update should be banned unless it is made for explicit pragmatic purposes. Indeed, (274c) is licit only as an utterance with which S intends to hedge their bets, take back their assertion etc., which means that S wants to neutralise their commitment. Since it is an awkward step for an agent *a* to take back the commitment which *a* has once made public, (274c) is illicit unless there is a valid reason for this take-back.

The assumption that *yo* and *sa* realise the same functional head *S* further explains the fact that these two SFPs cannot co-occur:

(275) *Terry-wa hon-o kat-ta *yo sa*/*sa yo*.
Terry-TOP book-ACC buy-PST *yo sa*/*sa yo*.

[3] *Nda* is an abbreviated form of *no da*.

Intended. 'Terry bought a book *yo sa*/*sa yo*.'

This analysis further predicts that *sa* and *ne* are incompatible within a single sentence as well, because *ne* is the phonetic realisation of A which embeds not $\nvdash$ but $\vdash$, while $\nvdash$ must be embedded by S for the functional head to be realised as *sa*. This is indeed borne out, as shown in (276).[4]

(276) *Terry-wa hon-o kat-ta *ne sa*/*sa ne*.
Terry-TOP book-ACC buy-PST *ne sa*/*sa ne*.
Intended. 'Terry bought a book *ne sa*/*sa ne*.'

Summarising thus far, *sa* realises S which embeds a sentence radical+COM corresponding to a belief. The same head also embeds what I call $\nvdash$, and the entire expression with *sa* serves as a CCP from C to C', in the latter of which that $p \notin \text{PCS}^{\text{C}}_{S}$ is made explicit.

This analysis predicts that the same particle is unusable in imperatives, given the fact that the sentence radical embedded by the IMP operator is irrealis, which means that the relevant commitment is telic. More precisely, *sa* should not be used in imperatives because they realise an irrealis p+COM. This prediction is borne out, as the following examples depict:

(277) *Ayamar-e *sa*
apologise-IMP *sa*
'Apologise *sa*.'

(278) *Ayamar-i *na sa*
apologise-do *na sa*
'Apologise *na sa*.'

(279) *Ayamar-i *sa na*
apologise-do *sa na*
'Apologise *sa na*.'

The central assumption in this dissertation regarding the semantics of an imperative sentence is that it is pertinent to an agent's (public) intention. Given that an intention is nothing but an

[4] A note is in order: in some dialects of Japanese, especially the ones spoken in some parts of the Kyushu area (Saga, Kumamoto and Oita), *sa* and *ne* are allowed to co-occur in the order of *sa ne* in a declarative sentence corresponding to a belief. The fact that *sa* and *ne* should be ordered in *sa ne* is in principle compatible with the proposal made in this dissertation: *sa* and *ne* are the post-syntactic realisations of S and A, respectively. It may be that these dialects can realise A as *ne* when it embeds $\nvdash$ (and S), in which case *ne* encodes the information that $p \notin \text{PCS}^{\text{C}}_{A}$. At this moment, I do not have access to the data that enables me to test this idea along with its implications. Therefore, I leave the scrutiny of this speculation for future research.

agent's telic self commitment, imperatives should be incompatible with *sa*. The ungrammaticality of these examples bears this out.

Finally, let us discuss how the present analysis explains the behaviour of *sa* in interrogatives. As observed in (280), (281), (282) and (283), this particle is generally incompatible with *ka*.

(280) *Ritchie-ga Ronnie-o kaiko-si-ta *ka sa*↓
Ritchie-NOM Ronnie-ACC fire-do-PST Q *sa*↓
Intended. 'Did Ritchie fire Ronnie *ka sa*↓'

(281) *Dare-ga Ronnie-o kaiko-si-ta *ka sa*↓
who-NOM Ronnie-ACC fire-do-PST Q *sa*↓
Intended. 'Who fired Ronnie *ka sa*↓'

(282) *Ritchie-ga Ronnie-o kaiko-si-ta *no ka sa*↓
Ritchie-NOM Ronnie-ACC fire-do-PST *no* Q *sa*↓
Intended. 'Ritchie fired Ronnie *no ka sa*↓'

(283) *Dare-ga Ronnie-o kaiko-si-ta *no ka sa*↓
who-NOM Ronnie-ACC fire-do-PST *no* Q *sa*↓
Intended. 'Who fired Ronnie *no ka sa*↓'

In contrast, if *ka* is deleted in a *wh* interrogative with *no*, the use of the particle becomes grammatical, as in

(284) Dare-ga Ronnie-o kaiko-si-ta *no sa/yo/*$^{??}$*ne*↓
who-NOM Ronnie-ACC fire-do-PST *no sa/yo/*$^{??}$*ne*↓
'Who fired Ronnie *no sa/yo/*$^{??}$*ne*↓'

(284) indicates that *sa* is in principle available in interrogatives, and the ungrammaticality observed in (280), (281), (282) and (283) should be explained in terms of some other factors.

First, recall that a commitment to act upon Q is to act in accordance with the partition of the possible worlds defined on the basis of the set of propositions. Is this type of commitment telic or atelic? Obviously, question act is telic (Geurts 2019), which is conventionally associated with an interrogative sentence, for it has a clear goal of resolving the issue. However, this does not mean that the sentence radical associated with it yields a telic commitment as well: rather, it is natural to assume that a commitment to act upon a certain partition of possible worlds is not

about an agent's intention about how the world is to be but about the same agent's belief about how the world is actually like. Given the assumption that a belief corresponds to an atelic (self) commitment, I claim that an agent's commitment about a question, be it self or public, is atelic. From this assumption, the fact that (284) is grammatical immediately follows.

Then, how can we capture the behaviour of *sa* in the other interrogatives? In fact, we have already equipped ourselves with necessary ingredients. We can simply claim that *sa* is post-syntactically incompatible with *ka*. In other words, in the post-syntactic process of VI, the Q-morpheme should be deleted in the presence of $\nvdash\!\!+S$.

Notice at this point that if *ka* is dropped in the relevant examples, then the resulting sentences become virtually indistinguishable from their declarative counterparts. For instance, (280) will be *Ritchie-ga Ronnie-o kaiko-si-ta* sa↓, which is equivalent to "Ritchie fired Ronnie *sa*↓," expressing S's self commitment and public discommitment to act in accordance with the propositional content. The same holds true for the other sentences in question. Therefore, the *ka* dropped patterns of the examples are all illegitimate as interrogative sentences with *sa*. Notice also that the rising contour ↑, which is the default contour for interrogatives, is generally not available in sentences with *sa*, since the relevant information encoded by *sa* is generally presupposed in C. Therefore, the *ka* dropped versions of (280), (281), (282) and (283) cannot be realised with ↑, which would sound distinct to the hearer from their declarative counterparts if available.

In sum, the present account dictates that an agent a's (dis)commitment to act in accordance with Q is an atelic commitment, given that Q is essentially about a's belief about the world. From this, the fact that *sa* is available in (284) is immediately explained away. The ungrammaticality of (280), (281), (282) and (283) is expounded with recourse to the independently motivated DM-based post-syntactic operation of VI, together with the fact that *sa* is generally incompatible with ↑, which follows from *sa*'s semantics.

In this section, it has been shown that the distribution of *sa*, along with its distribution, is explicable in terms of the present proposal. The particle is only compatible with S's atelic commitment, which makes it only usable in interrogatives and declaratives (which do not correspond

to S's intention). In other words, *sa* is generally infelicitous in imperatives, since imperatives express S's telic commitment. The fact that *sa* is only compatible with interrogatives with *ka* is explained in terms of the DM-style post-syntactic VI: it is stipulated that *sa* is post-syntactically incompatible with the overt Q-morpheme *ka*. Succinctly put, the Q-morpheme must be realised as $\emptyset$ in the presence of $\vdash$ and S, the latter of which is to be realised as *sa*.

5.2 *Ba* as a telic counterpart to *sa*? Speculative notes on the possible extension of $\nvdash$ to a telic commitment

In the last section, I demonstrated that *sa* is only compatible with S's *atelic* commitment to act upon p (i.e., S's belief that p). From this basic observation, I showed that the SFP cannot be used in imperatives. However, this analysis is not in and of itself *explanatory*: what the analysis basically says is that "*sa* realises S by which the modifier $\nvdash$ is embedded *and the sentence radical must represent S's (public) belief*". The italicised part is clearly a restatement of the fact observed, while the rest can be formally explicated under the present CCP model based upon the notion of commitment. Thus, the analysis is essentially *descriptive*, and the reason for this descriptivity is due to the recourse to the unformalisable fact italicised above. In order for my proposal about *sa*, or $\nvdash$ more generally, to be explanatory, the "*and the sentence radical must represent S's (public) belief*" part must be eliminated from the present formal account. This in turn means that it should be in principle possible, and actually expected, that we have S's telic self commitment to act in accordance with p with the neutralised implicature of $p \in \textsc{pcs}_S^{\mathrm{C}}$ in C, which is precisely what $\nvdash\!\!+S$ does. In other words, to achieve the explanatory adequacy of the present account, we should find the telic counterpart to *sa* in the Japanese language. Although a more detailed investigation must await future research, I briefly show in this section that we indeed seem to find a telic counterpart to *sa*.

The particle is *ba*. First of all, this particle is infelicitous in a declarative sentence, as in

(285) *Maro-wa hon-o kat-ta *ba*.
Maro-TOP book-ACC buy-PST *ba*
Intended. 'Maro bought a book *ba*.'

In contrast, this SFP is perfectly natural in an imperative sentence, as the following example shows.

(286) Ayamar-e *ba*↑/→
apologise-IMP *ba*↑/→
'Apologise *ba*↑/→'

The particle is strikingly interesting from the perspective of the present discussion, since it can be followed by expressions that make S's *dis*commitment explicit: see (287).

(287) Ayamar-e *ba*↑/→ Doo-natte-mo sir-ana-i kedo.
apologise-IMP *ba*↑/→ how-be-also know-NEG-PRS but
Intended. 'Apologise *ba*↑/→ I don't know how it will go, though.'

In (287), *Doo-natte-mo sir-ana-i kedo* clearly marks that S is not committed to A (and other DPs) to act upon making p = "A makes an apology" true. This indicates that *ba* cancels the implicature that S is publicly committed to act upon p('s truthfulness): i.e., *ba* realises S, by which $\nvdash$ is embedded in an imperative sentence. Therefore, *ba* seems to be a telic counterpart to *sa*.

But the nature of this particle is not known at all, and hence it is far from safe to conclude that *ba* is indeed a telic version of *sa*. Nonetheless, let us note that the SFP is widely used as a conditional-marker, as in

(288) Maro-ga hon-o ka-e *ba* boku-wa uresi-i.
Maro-NOM book-ACC buy-GER *ba* I-TOP happy-PRS
'If Maro buys a book, I'd be happy.'

Ba in (288) embeds the irrealis p = "if Maro buys a book". Recall that the SFP pertinent to an agent's telic commitment embeds an irrealis p. Given this, it seems initially plausible to assume that *ba* indeed can be used as a telic counterpart to *sa*. (Notice already that the verbal ending *-e* in the conditional clause in (288) is identical to the imperative verbal ending, which expresses that the sentence radical is irrealis.)

Furthermore, *ba* is incompatible with interrogatives as well, as in

(289) a. *Ritchie-ga Ronnie-o kaiko-sur-u *no ba*.
Ritchie-NOM Ronnie-ACC fire-do-PRE Q *ba*
'Will Ritchie fire Ronnie *ba*?'

b. *Dare-ga Ronnie-o kaiko-sur-u *no ba*.
who-NOM Ronnie-AC fire-do-PRE Q *ba*
'Who will fire Ronnie *ba*?'

The fact observed in (289) is consistent with the present proposal, in which a commitment to act upon Q is essentially atelic. This also supports the present account, which assumes that *ba* is only compatible with S's telic public commitment.

Below, I note some facts about this SFP pertaining to the present dissertation, for which I do not have a concrete explanation at the moment.

This particle is unusable in a declarative sentence with S's commissive speech act, despite the fact that S's commitment to act upon its (futuristic) truthfulness is telic.

(290) *Sara, ara-u *ba*.
dish wash-PRS *ba*
Intended. 'I'll do the dishes *ba*.'

I suspect that *ba* and *sa*'s unavailability in declaratives like (290) and (290) pertains to the fact that it is S who is the agent of the event described in the sentence radical. For p to be true, S's telic commitment of acting upon p (i.e., S's intention of making p true) must be directly reflected upon S's action relevant to p. For instance, in (286), whether A makes an apology or not can, but is not necessarily, determined by the presence/absence of S's commitment to act upon it. In this sense, p can be either realized or not regardless of S's (public) commitment to act upon it. In contrast, p in (290) can only be true if S is committed to act upon making it true, simply because S is the agent of the (futuristic) event. Thus, cancellation of S's public commitment in this case is odd, to say the least. To the other DPs, this cancellation sounds strange, as there seems no rational reason for S to be privately but not publicly committed to act upon p's being true. The proposition will be true in anyway if S intends to make it true and indeed makes it so as the agent, and if so, there would be no cost for being publicly committed to act in accordance

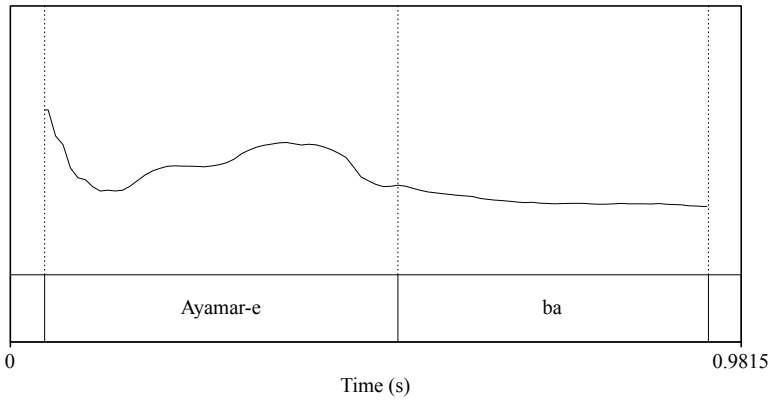


Figure 5.2: The pitch track of (286) with →

with *p*'s truthfulness. Thus, regardless of the actual post-syntactically inserted vocabulary item of the *S*-head embedding ⊬ in (290) (*sa* or *ba*), cancelling S's public commitment in this example is pragmatically dispreferred.

As for the prosody of *ba*, it can be associated with either → or ↑. This is shown in Figure 5.2 and Figure 5.3. This fact is striking since *sa* is only compatible with ↓. I discussed that *sa*'s (near) obligatory falling contour is due to the factual assumption that S's not being publicly committed to act upon *p* is usually presupposed by default until the relevant commitment is made by either *yo* or pragmatic implicature. According to the present analysis, *ba*→ indicates that S's cancellation of public commitment can be new alongside the new information encoded by the sentence radical. *Ba*↑, in contrast, indicates that S's *dis*commitment in question is new while what is described in the sentence radical is presupposed, at least partly. Let us examine this prediction.

First, the flat SFC is only felicitous in an utterance where S is not involved in the discussion of whether A should make an apology or not. Imagine that A and some other individual are fighting and S is eavesdropping on their quarrel. In such a context, S is not involved in the conversation, and S becomes part of the discourse with the utterance of (286). In such a context, what is encoded by *ba* is not *presupposed* but *unknown*: a presupposition is something assumed to be known among the DPs, and the information that is not part of or irrelevant to the discourse are not assumed to be presupposed. Therefore, in this context, S's *dis*commitment (neutralisation of S's public

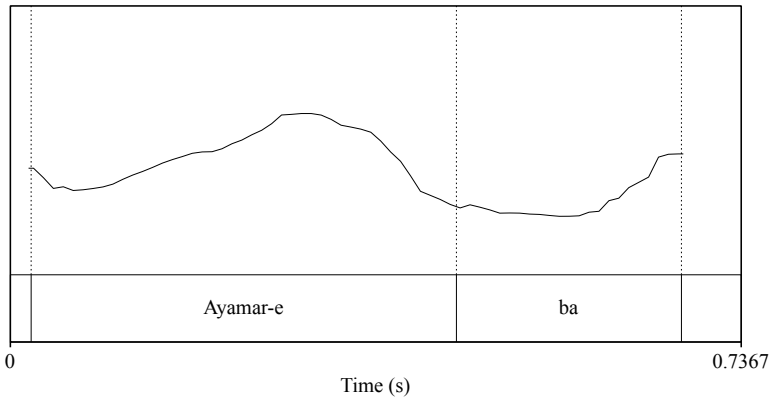


Figure 5.3: The pitch track of (286) with ↑

commitment) is information structurally *new*, and consequently, it has to bear →.

So far, so good. But the problem to the present analysis is the rising contour ↑ that can be associated with *ba*. This contour is available if (290) is uttered as an answer to a QUD such as "What should A do?," "Should A make an apology?" and so on. Thus, at least a part of what is expressed by the sentence radical is presupposed, and the rising contour is valid if the information encoded by *ba* is new. However, if *ba* is indeed the telic counterpart to *sa*, then we expect that the default SFC associated with it be ↓, contrary to fact. This is because S is generally not publicly committed to act upon making p true until the relevant commitment is made either directly from the use of an SFP (*yo* and its variants) or indirectly from pragmatic implicature. Indeed, this was shown to be what underlies the near obligatory association of ↓ with *sa*.

Several explanations can be stipulated. For instance, it might be the case that in (286) with ↑, S's *dis*commitment is intentionally marked as new, so as to emphasise that S is not publicly committed to make p = "A makes an apology" true while suggesting A to make an apology (i.e., being self committed to act upon A's making an apology). The emphatic effect may result from the pragmatic inference of the sort that has been observed throughout this dissertation. Or it might turn out that the availability of the rising contour in (286) is just an idiosyncratic fact about *ba*. Though I favour the former line of thought, at this point I do not have a straightforward way to vindicate it.

5.3 Summary

Let us wrap up this chapter. In this chapter, *sa*'s semantics was closely examined. It was shown that this particle is a grammatical particle that encodes the information that $p \notin \text{PCS}_S^C$. I also showed that it can only be associated with ↓, the fact that was straightforwardly explained from its semantics. The same particle is only compatible with a limited type of declarative sentences since what *sa* encodes is an atelic (*dis*)commitment by S. This semantic restriction on the use of *sa* further explained why this SFP cannot be used in imperatives.

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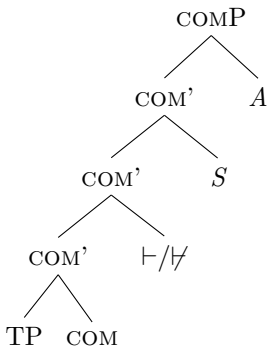
Chapter 6

Syntax of SFPs

6.1 Syntax of SFPs under the present account

The last five chapters examined the semantics and pragmatics of the Japanese SFPs *yo*, *ne* and *sa*. The central proposal of the account is that *yo* and *sa* realise S in the treetop while *ne* realises A post-syntactically. Given the analysis laid out thus far, we obtain the following basic syntactic structure in the treetop for declarative and interrogative sentences:

(291)

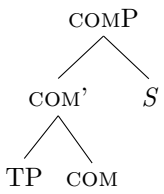


This COM corresponds to the clause type operators DECL, IMP and INTER in traditional terms, and it semantically expresses an agent's self commitment. The optional ⊢/⊬-head modifies this head in such a way that the same agent's public commitment or its absence thereof is also introduced to LF. S and A feed the conversational speaker and addressee to the semantic computation as the agents of the commitment. They serve as an external argument to the COMP, just like a subject

is an external argument to a vP and a TP. Therefore, what projects after the Merge of S and A is COM.

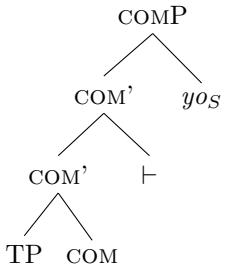
If neither $\vdash$ nor $\nvdash$ is Merged, S should be Merged as a default option, which yields

(292)

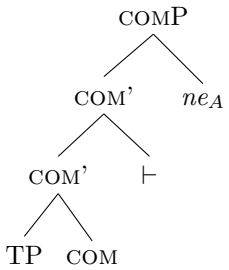


If $\vdash$ is Merged, in contrast, both S and A can Merge. If the former is Merged, then *yo* will surface; if A appears in the syntax, then the head will be realised as *ne via* the process of VI. One of them must be Merged so as to feed an agent who makes the relevant commitments, but one of them can be absent. Thus, there are three possible syntactic structures depicted in the following three examples:

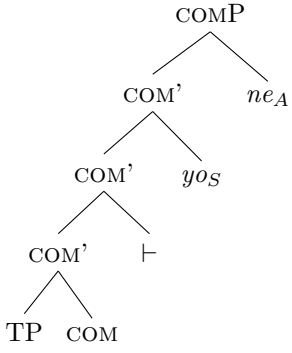
(293)



(294)

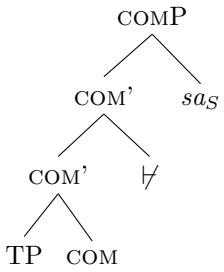


(295)



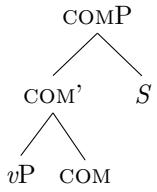
A declarative sentence is compatible with *sa*, which is the post-syntactic realisation of S, which embeds $\nvdash$. This functional head in turn embeds a non-irrealis TP:

(296)



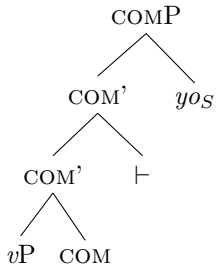
In the case of an imperative sentence, not a TP but a *v*P Merges with COM, which is further Merged with S as a default option:

(297)

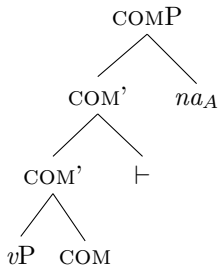


The COM' can be Merged with $\vdash$. If this happens, then one of S and A, or both, can be Merged:

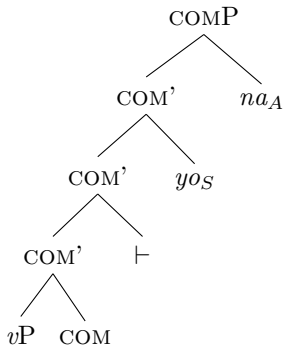
(298)



(299)

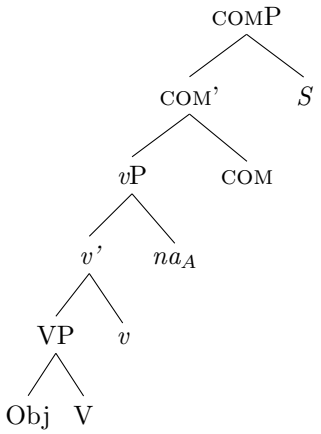


(300)



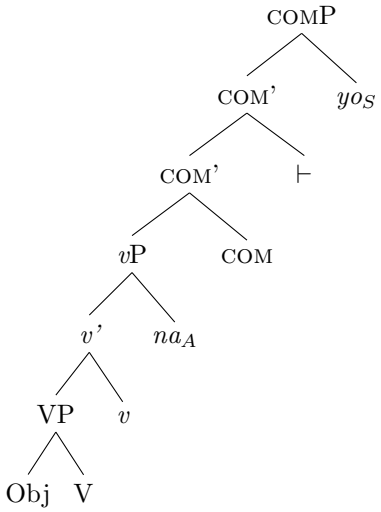
In Chapter 3 and 4, it was shown that A can be optionally Merged as an (element that feeds the) external argument to the vP. If this happens, the COMP has the structure in (301).

(301)



As shown in (301), the A-head will be realised as *na via* VI at the syntax-morphology interface. (301) can host ⊢ as well, and if this modifier is added to the structure, then S will be *yo*:

(302)



One of the most conspicuous properties of the present proposal is that while a sentence without any SFP (apart from *na* used as an external argument introducer) suggests/requests a context

update in which S's relevant self commitment is added to the discourse, the use of SFPs *facilitates* the process of such a context update. If S utters a declarative sentence without *yo* or *ne*, for instance, then S suggests by this utterance that S's belief that *p/Q* be added to the context. By means of this, S intends to update the CG. What these particles practically do is enact this update more steadfastly. By using them, S suggests that a particular agent *a* be publicly committed to the other DPs to act upon *p/Q*. In so doing, it becomes easier for the agents to whom such a commitment is made to come to hold the same belief, intention and question, because the merit of doing so is indirectly secured by the commitment.

Of course, they do not have to come to believe that *p*, intend to make *p* true, or hold the same *Q*. Crucially, the public commitment by such agents can be left unspecified. If it is indeed unspecified, then the agent is not suggested to become committed to *p/Q*. Thus, whether to be committed to it or not is entirely up to them. Furthermore, as I showed in Chapter 1, $\textsc{pcs}^{\textsc{c}}_{a}$ is a (proper) subset of $\textsc{scs}^{\textsc{c}}_{a}$, and hence *a*'s public commitment to act upon *p/Q* is *stronger* than the same agent's self commitment to act upon the same semantic content. Normatively speaking, therefore, the use of an SFP is meant to facilitate the update by strengthening/amplifying an agent's relevant commitment by making it not just self/private but also public. In this sense, the use of an SFP makes the context update more *steadfast*: it is meant to make explicit each one of the steps towards the addition of a proposition to the CG.

With this background in mind, let us compare the present proposal with two of the recent syntactic analyses of the treetops proposed in the previous literature.

6.2 Comparison with the recent analyses

The notion of commitment has caught some significant attention in the syntactic literature for the past decade or so. In this section, I will introduce two major proposals relevant to the idea laid out in the last section and compare them with the present account. I will show that while both of them have some similarities to this analysis, they fall short of an account for the data discussed

in this dissertation with conceptual and empirical adequacy unlike the present account.

6.2.1 Wiltschko and Heim (2016)

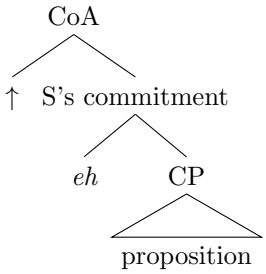
In the context of discussing the discourse effect of confirmational expressions like *right?* and *eh?* in English, Wiltschko and Heim (2016) and Heim et al. (2016) claim that the syntax above, what is traditionally called the CP, be split into two basic layers. One corresponds to the layer which encompasses S's commitment to the truth of *p*. The other layer is responsible for encoding what they call the *Call on the Addressee* (CoA) in the sense of Beyssade and Maradin (2006) (see also Yang and Wiltschko 2016 and Heim 2019). To look at their proposal a bit more closely, see the example in (303) below from Heim et al. (2016, 112).

(303) Context: Mary, who just got a dog, runs into her friend John. Mary cannot remember whether she has already told John that she has a new dog. To be sure, she utters
I have a new dog, *eh*↑

They propose that the layer which encodes S's commitment to the truth of *p* corresponds to the *assertion* speech act. And the head of this layer is realised as *eh* in (303). According to these authors, this morpheme introduces S's belief about A's belief. Furthermore, they argue that ↑ realises the head of the CoA projection. CoA encodes the information about what S wants A to do. Given their assumption that *eh* introduces the complex proposition that A believes *p*'s truth, by the use of this rising contour S intends to ask A to confirm that this complex proposition (i.e., A believes that *p* is true) is true.

According to Heim et al. (2016, 117), these two heads modify the speech act in such a way that "the utterance does not function as a declarative, but as a request for confirmation". Thus, *eh* is called *confirmational*, and this particle and ↑ are layered in the way depicted below:

(304)



The structure that these authors propose resembles (291), the structure that I propose for the distribution of the SFPs *yo* and *ne* in Japanese. Particularly, both of the proposals assume that the projection pertaining to A embeds the one pertinent to S. But the details are different. First, in the structure proposed by these scholars, the two projections above a CP seem necessary, whilst my proposal does not force both S and A to be Merged. In my system, the projection of either of them suffices the purpose of feeding a structure legible at the CI-interface.

Secondly, and more importantly, these authors assume that particles such as *eh* and intonational morphemes like ↑ serve to be a *speech act* modifier. Although it makes some intuitive sense, this assumption is not innocuous, as I discussed in Chapter 2. Speech act is, as the name suggests, an act of speech. Every part of an utterance is a constituent of a particular speech act. Hence, the assumption that a particular element of an utterance serves as a speech act modifier is not plausible, once what speech act means is taken seriously (cf. Searle 1975). In contrast, the present proposal does not suffer this conceptual drawback, since what these projections do is to determine who is committed to the other DPs or the same DP to act on the content of the sentence radical, and it makes no reference to the notion of speech act. Rather, following the lead of Brandom (1994, 1997) and Geurts (2019), the present account seeks to *deduce* various speech acts from the interaction among $\vdash$, COM and a sentence radical. Consequently, this proposal resolves the conceptual problem inherent to the (in and of itself appealing) system proposed by Heim, Wiltschko and other authors.

Finally, it is unclear how the behaviour of *sa* can be captured by the structure that these scholars propose, since the particle does not involve any CoA whatsoever. Although Japanese is not the language that their analysis aims to cover, it is desirable that their proposal can be

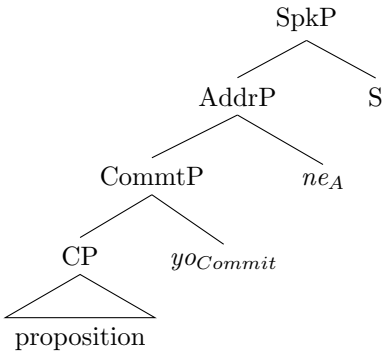
expanded to the data discussed in this dissertation, which does not seem to be an easy task. Given the fact that the present proposal provides a straightforward explanation for the distribution and semantics of *sa*, it should be empirically favoured.

6.2.2 Miyagawa (2022)

6.2.2.1 Miyagawa's (2022) analysis of the SFPs

Miyagawa (2022) proposes an account, similar to Heim et al. (2016) and others, of the distribution of *yo*, *ne*, *kana* and *sira/i*, all of which were discussed in the previous chapters in great detail (with the assumption that *kana* is a stylistic variant of *kane*). The central proposal by this author is that *yo* is the head that realises what he calls the Commit-head while *ne* realises the Addr-head, which corresponds to my *A*. According to Miyagawa, the former particle semantically encodes *certainty*, while *ne* is a confirmational particle that requests for confirmation to A. Above the Addr-head projects what he calls the Spk-head, which is equivalent to my *S*. The concrete syntactic structure that Miyagawa proposes is given below (ignoring the specifiers of SpkP and AddrP):

(305)



As support for his proposal, Miyagawa discusses data like (306) below.

(306) a. Bill-wa iku *ne*?
Bill-TOP go *ne*
'Bill will go, right?'

b. Bill-wa iku *yo ne*?
Bill-TOP go *yo ne*
'Bill will go, right?'

According to Miyagawa (2022, 100), "[i]n [(306a)], which does not have *yo*, the occurrence of *ne* signals that the speaker is attempting to ascertain the truthfulness of the proposition 'Bill will go.' In [(306b)], which contains *yo* along with *ne*, the speaker wishes the addressee to confirm *with certainty* the truthfulness of the proposition". (emphasis original). Shigeru Miyagawa (p.c.) further claims, based upon the personal communication among him, Virginia Hill and me, that *yo* pertains to evidentiality and in (306b) the speaker wishes the addressee to confirm *with evidence* *p*'s truth.

Miyagawa further presents (307) as evidence that *ne*'s meaning is a request for confirmation that *p* is true, since "there is no truthfulness (assertion) associated with the imperative expression that the speaker is trying to ascertain" (Miyagawa, 2022, 102).

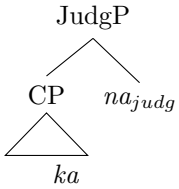
(307) *Ik-e *ne*!
go-IMP *ne*
'Go!'

Furthermore, citing Oguro's (2015) observation that *ka* licenses NPIs such as *dare-mo* "who-also", as in (308), Miyagawa claims that the fact that *wh Q ka yo* and polar interrogatives with *yo* receive a rhetorical interpretation follows from *ka*'s negative feature. Under his analysis, the fact that *ka yo* in (133) essentially yields the reading that Ritchie will never fire Ronnie, for instance.

(308) Dare-mo ik-u *ka*!
who-also go-PRS Q
'No one goes!'

As per *kana*, Miyagawa argues that it consists of the two particles *ka* and *na*, just like what I did in the previous chapters. Crucially, however, Miyagawa claims that *na* is distinct from *ne* and it realises the Judgement head just above *ka* and below the Commit-head, following Krifka (2019):

(309)

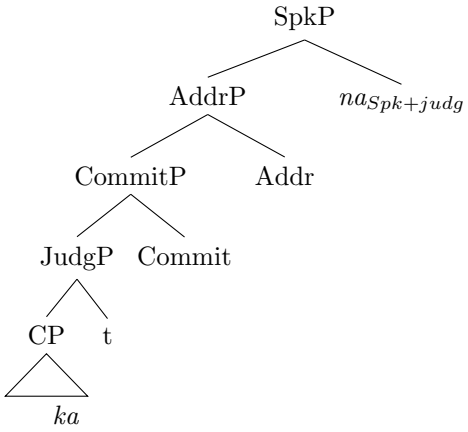


Miyagawa bases his analysis upon his observation that the following example from Miyagawa (2022, 107) expresses S's "wonder, awe or some such quality" on the part of S regarding the content of the sentence radical. Indeed, Miyagawa (2022, 106) essentially construes *kana* as "the marker of uncertainty".

(310) Dare-ga kur-u *ka na*?
who-NOM come-PRS Q *na*
'I wonder who will come.'

Since *na* is pertinent to S's attitude towards the propositional content of the utterance, according to this author, it moves up to the Spk-head *via* Head Movement:

(311)



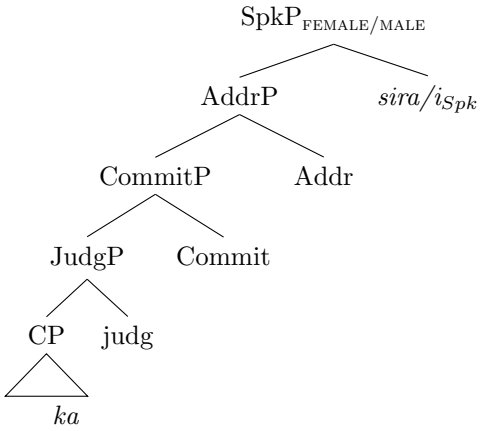
He claims that this is evidenced by the fact that *na* does not co-occur with honorification, which according to him is licensed by what he calls *allocutive agreement* between the honorific expression and the Addr-head. See (312) below.

(312) *Dare-ga ki-mas-u *ka na*.
who-NOM come-POL-PRS Q *na*
'I wonder who will come.'

Since the Head Movement of *na* necessarily lands the particle at the Addr-head before moving up to Spk, the head relevant to the allocutive agreement is taken by *na*, which causes the ungrammaticality in question. So he argues.

Finally, he briefly discusses that *sira* and *i* are also pertinent to S's gender identity. As he observes, *sira* is used by speakers whose preferred pronouns are *she/her/hers* while *i* is registered as its male counterpart. This fact indicates that they occur at the Spk-head:

(313)



6.2.2.2 Comparison with the present proposal

The structure Miyagawa proposes differs from the one I propose in some crucial respects. First, Miyagawa assumes that the AddrP is embedded by the SpkP, while I present the structure in which this embedding relation is reversed. Secondly, Miyagawa in principle disscoates *yo* from S, while I claim that the same particle realises S which embeds $\vdash$, therefore, arguing that S is pertinent to the agent's public commitment whenever *yo* is realised. Let me delve into the detailed comparison of these two approaches.

First of all, I am not sure what it practically means that *yo* realises the Commit-head. Commitment always requires a person who makes the commitment, and a person to whom the agent is committed, and a semantic content to act upon which the agent is committed. The bare Commit-head does not say anything about this tripartite relation concerning commitment. Does the CommitP work in the same way as, say, a *v*P does? Does the Commit-head take an external argument in addition to an internal argument? What kind of grammatical relation is defined by this functional head? Even though the reference to this basic definition of commitment is occasionally made in the monograph, how the two agents relevant to a commitment are related to this Commit-head is not discussed in that work, to the best of my knowledge. Let alone how *yo* serves its function in relation to these DPs and p/Q, to which I now turn.

Even though Miyagawa claims that *yo amplifies* an agent's commitment, the functional head (*viz.* Commit) is always in the syntactic projection under his account. Thus, the claim that *yo* is

relevant to the amplification of an agent's commitment seems to mean that Commit can be realised either overtly or covertly, and if it is overtly realised as *yo*, then the commitment is amplified. What kind of feature is responsible for this effect? This fundamental question is left untouched in Miyagawa's account.

As a counterpoint, the present proposal provides a straightforward explanation for this effect borne by the particle. As I noted throughout this dissertation, *yo semanticises* S's public commitment to act upon p/Q. This amounts to making the relevant public commitment uncancellable. Syntactically, comP has both its internal and external arguments. The external argument can be either S or A, depending on whether $\vdash$ adjoins to the structure or not. Those external arguments serve as the agents committed to act upon p/Q, which is embodied by the internal argument of com. In this sense, it works in the same way as the other phrases do. Thereby, the present account provides a rationale for the effect of *yo* noted by Miyagawa at an intuitive level, together with a much more concrete syntactic analysis of comP.

This brings light to the next difference between Miyagawa's proposal and mine. Based upon the contrast in (306), Miyagawa claims that *yo* should not always be tied with S's commitment. The argument was made on the basis of his assumption that (306) does not involve S's commitment to act upon the truthfulness of p. However, the following example nullifies this assumption:

(314) Bill-wa ik-u *yo ne*? # Boku-wa soo omow-ana-i kedo.
Bill-TOP go-PRS *yo ne* # I-TOP so think-NEG-PRS but
'Bill will go *yo ne*? # I don't think he will, though.'

In this example, (306b) is followed by a sentence in which S's commitment to the falsity of p is explicitly marked. The fact that such an utterance sounds infelicitous if made after the use of *yo ne* presents that S's commitment *is* relevant to the use of *yo*. This speaks in favour of my account, in which *yo* is assumed to be S's (public) commitment.

The assumption that *ne* requests the confirmation from A that p is true is not innocuous as well. As discussed in Chapter 3 and 4, some dialects allow the particle to be used in imperatives, which directly contradicts the observation made by Miyagawa that the particle is ungrammatical

in imperatives. In addition, the fact that *yo ne* and similar expressions can be used in imperatives militates against the same assumption as well. If we are to borrow Miyagawa's own words, *ne* should not be used in imperatives "because there is no truthfulness (assertion) associated with the imperative expression that the speaker is trying to ascertain" (Miyagawa 2022, 102). Therefore, (307) should not be taken as evidence that *ne* is always pertinent to *p*'s truthfulness.

Furthermore, even though it is true that the particle signals such a discourse effect in many cases, it does not exhaust the function of it. This point was explicitly shown in Chapter 3. In my opinion, the erroneous direct association of *ne* with request for confirmation is due to the failure of dissecting the particle from the SFCs it can bear: as McCready and Davis (2020) rightly point out, the nature of *ne* comes to sight only when we succeed in dissociating it from the specific contours associated with it. The present proposal does just this, and in so doing, it successfully elucidates its syntactic, semantic and pragmatic behaviour.

In this connection, it should be mentioned that the idea that *yo ne* signals that S requests for confirmation with evidence does not fare with the example in (219b), repeated here as (315).

(315) Kono kyoku ii-des-u *yo ne*↓
this song good-POL-PRS *yo ne*↓
'This song is nice *yo ne*↓'

It is fair to say that there is no evidence for the excellence of a song, apparently because it depends on one's unique values. This fact casts a pall over the assumption that *yo* is irrelevant to S's assumption and *yo ne* requests confirmation with evidence that *p* is true.

Additionally, the assumption that *ka* bears a negative feature and thus licenses an NPI is not quite correct: as the example in (316) illustrates, *ka* does not license *dare-mo* 'who-also' in a pure interrogative:

(316) *Dare-mo soko-ni iki-mas-u *ka*↑
who-also there-to go-POL-PRS Q↑
Intended. 'Who will go there *ka*↑'

Thus, the assumption that the negative feature of *ka* induces the rhetorical reading of interrogatives with *yo* requires further scrutiny.

Furthermore, it is not the case that *ka yo* always yields this type of negative rhetorical reading, as I showed in Chapter 2. Crucially, if *no* is added to the interrogative, the utterance does not yield the reading that Miyagawa's analysis expects; instead, such an interrogative expresses S's unbelievability, surprise and so forth, not something like "no one will do such a thing". Elsewhere in the same monograph, Miyagawa discusses that *no* pertains to *exhaustivity*. Even if we assume that this is correct, it is unclear how such a semantic notion modifies the analysis and enables us to get the right result as for the semantics and pragmatics of an interrogative with *no ka yo*. In contrast, the analysis proposed throughout this dissertation explains the readings of such interrogatives straightforwardly, as I have already shown.

Let me discuss *kana* next. Miyagawa claims that *na* should start its derivational life as judg since (310) expresses S's uncertainty about the truth of *p*. At first glance, it is not clear why *yo*, which pertains to *certainty* according to Miyagawa (2022), is about the Commit-head, whereas *na*, which is pertinent to the opposite semantics to that of *yo* (i.e. *uncertainty*), realises judg. It sounds much more straightforward to assume that it just realises the same Commit-head with the opposite feature value, say, [-Commit].

Miyagawa (2022, 106-107) is aware of this problem. The reason that Miyagawa still assumes that *na* realises judg is primarily because "*ka* in *kana* is clearly the Q-particle, as we can see by the fact that it licenses a *wh*-phrase in a question$\cdots$ Thus, at least the first portion *ka* of *kana* occurs at C [somewhere in the sentence radical: DM]$\cdots$ [In contrast, since *na*'s] meaning is something akin to '(I) wonder,' and as such, it reflects some type of attitude–a judgement–the speaker has about the question". In short, the effect of expressing uncertainty derives from not just *na* but also *ka*, according to Miyagawa.

Still, I'm not sure why some such quality like "I wonder" corresponds to judg in lieu of Commit. This is not just because it is unclear what judg really does, but more importantly because Commit is not well defined (with respect to judg). There is no explicit criterion for some particles being the realisation of Commit while some others being that of judg. The point is a clear reflection of the first problem that I noted regarding Miyagawa's analysis: since what Commit does is not

articulated (neither is what judg does in this regard), we cannot independently test whether the assumption that *na* starts as judg is valid or not.

Furthermore, in Chapter 4 of the same monograph, Miyagawa claims that "JudgP appears to not be a permanent part of the structure of utterances" (Miyagawa, 2022, 162), based upon cross-linguistic observations concerning Topicalisation. If judg is indeed absent in the clausal spine, then what hosts *na*? An apparent candidate seems to be the Commit-head, since it occurs just above judg. However, if we assume that *na* is base-generated at this position, then we do not have a way of accounting for the fact that *yo na* and *na yo* are both allowed, since *yo* realises the same functional head according to Miyagawa's analysis. If one is to take seriously the use of the word "permanent," which is in the scope of negation in the above quote, then it can be stipulated that the same head projects at least when *na* is used. However, this is obviously *ad hoc*, for there is no motivation for doing so, apart from trying to maintain the very stipulation that *na* realises judg. Ergo, the assumption that *na* starts its derivational life as judg should be abandoned, in the absence of concrete evidence that motivates us to hold it.

Putting aside these problems, let us nonetheless stipulate with Miyagawa that *na* encodes judg, for the sake of the present argument. Even with such an assumption, it is not the case that *kana* always encodes S's uncertainty. See the following example.

(317) Context: A teacher asks first-grade students

Ichi tasu ichi-wa nani *ka* *na*↑
one plus one-TOP what Q *na*↑

'What is the result of 1+1 *na*↑'

In this example, the teacher uses *kana*. Still, it is obvious that the teacher knows the answer to the question, and likewise it is obvious that the students know that the teacher knows the answer. Therefore, *kana* is not always pertinent to S's uncertainty. Accordingly, *na* as judg is not supported empirically either.

The present proposal provides a straightforward explanation for the semantics of *na* in (317). *Na* as *A* is relevant to the updated context in which the students are publicly committed to address

the question proposed by the teacher. It is safe to assume that *na* is a morphological variant of *ne*, the point envisaged by many scholars (see McCready and Davis 2020 and much other work). As for the fact that *na* is incompatible with honorification, I simply assume that this is due to the fact that *na* is much more informal than *ne*.[1] See Potts and Kawahara (2004) for a possible formal explanation for the process of honorification in Japanese.

Indeed, it is not just safe to assume that *na* and *ne* are stylistic variants; there is empirical evidence to do so, from the data of *sira/i*. As Miyagawa himself notes (Miyagawa 2022, 111-112) and I showed in Chapter 4, *sira/i follows ne*. The same applies to *sira/i/yo* and *na*. While Miyagawa leaves this issue of ordering for future research, my account provides a genuine explanation for this fact. Simply, these particles realise S below A, which can be realised as either *ne* or *na*.

Furthermore, the fact that *sira/i* cannot co-occur, speaks to the present analysis and undermines Miyagawa's assumption that *yo* realises the Commit-head. This is because they should at least in principle be able to co-occur if they realise distinct heads. The fact observed in (318) supports the present analysis, in which they are all assumed to be the post-syntactic realisations of the same functional head (*viz. S*).

(318) *BLACKPINK-ga sin-kyoku-o das-ita *ka yo sira/i*
BLACKPINK-NOM new-song-ACC release-PST Q *yo sira/i*
Intended. 'Did BLACKPINK release a new song *yo sira/i*.'

All these arguments together provide strong empirical evidence that the present analysis should be favoured over the account recently proposed by Miyagawa. Unlike the latter account, my proposal dissociates intonational profiles of an SFP from the SFP itself, and this allows the detailed semantic scrutiny of the particles along with the elucidation of the Japanese syntactic structure in the treetops.

Finally, it is unclear where in Miyagawa's structure sits *sa*. If it realises Commit, then the fact follows that *yo* and *sa* does not co-occur. But the ungrammaticality of *sa ne/na sa* and others requires explanation. If *sa* realises Addr, then why is it impertinent to A's PB and such? Does it

[1] It should be noted that in the ordinary (informal) use of the language, examples like (312) are perfectly grammatical. Thus, the awkwardness of (312), witnessed by Miyagawa, should not be treated within the realm of grammar.

realise judg, and then move up to Spk by way of Addr? Then how does judg encode the proper semantics of *sa*? How can we determine when judg projects and when it does not? All these conundrums should be circumvented with a clear and precise formal treatment of Commit and judg, among other functional elements.

Note in passing that the present analysis stands in the same assumption as Miyagawa's in terms of its *de-syntacticisation* of speech act. The virtue of this was discussed in the last subsection and Chapter 2.

6.3 Summary

This chapter discussed the syntactic structure of the Japanese SFPs examined in the previous chapters and proposed that above COM optionally project $\vdash$, $\nvdash$ and S and A. $\vdash$ serves as the modifier of COM in such a way that it imposes the stricter restriction upon an agent's commitment. $\nvdash$ in contrast neutralises the implicature evoked *via* the utterance of a bare declarative sentence. The projection of both of S and A is not necessary under this analysis. By comparing this idea with the two recent proposals about to the object of the current inquiry, I showed that the present syntactic theory is both conceptually and empirically more desirable than these alternatives.

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Chapter 7

Extension: Phrase Final Particles in Japanese

7.1 Initial observation and analysis of Phrase Final Particles in Japanese

It is widely known that *yo*, *ne/na* and *sa* can also be optionally attached to almost any phrase, as Saito and Haraguchi (2012) and Saito (2015) observe.

(319) a. Jordan-wa *yo*, Boston-de *yo*, wain-o *yo*, non-da *yo*.
Jordan-TOP *yo* Boston-at *yo* wine-ACC *yo* drink-PST *yo*
'Jordan *yo* drank *yo* wine *yo* in Boston *yo* .'

b. Jordan-wa *ne/na*, Boston-de *ne/na*, wain-o *ne/na*, non-da *ne/na*.
Jordan-TOP *ne/na* Boston-at *ne/na* wine-ACC *ne/na* drink-PST *ne/na*
'Jordan *ne/na* drank *ne/na* wine *ne/na* in Boston *ne/na* .'

c. Jordan-wa *sa*, Boston-de *sa*, wain-o *sa*, non-da *sa*.
Jordan-TOP *sa* Boston-at *sa* wine-ACC *sa* drink-PST *sa*
'Jordan *sa* drank *sa* wine *sa* in Boston *sa*.'

Following Yamada (To appear), I call such particles *phrase final particles* (PFP). Just like their SFP counterparts, they exhibit S- or A-oriented pragmatic status: *yo* and *sa* are S-oriented while

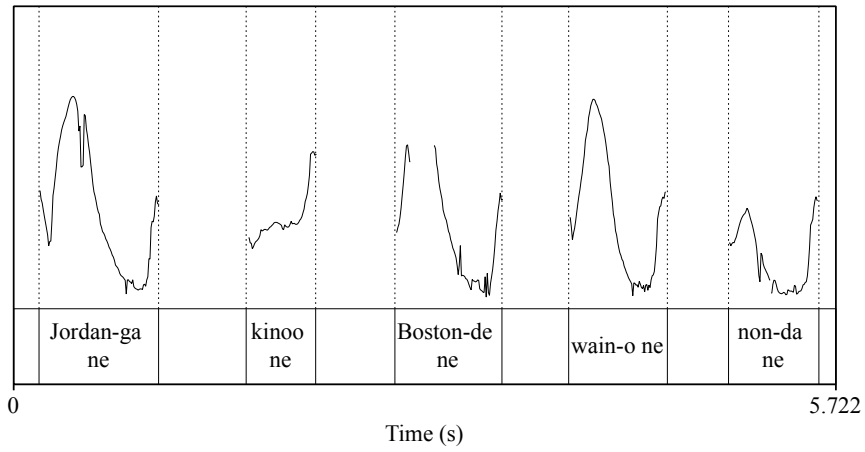


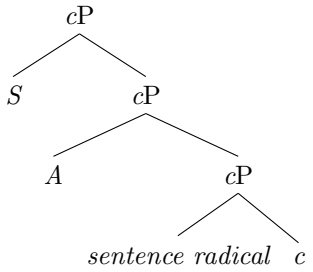
Figure 7.1: The pitch track of (319b) with *ne*

ne and *na* are A-oriented. Furthermore, these PFPs have a strong sense of *call on an agent a*: that is, by using them, a particular agent intends to attract attention from some other particular agent. Also, according to Yamada (To appear, 2), they "encode the speaker's construal of the social relation established between the speaker and the addressee".

As for the prosody of such PFPs, they must be followed by a pause, which indicates that there is an ι-boundary after them. This is shown in Figure 7.1.

Yamada (To appear) seeks to explain the distribution and behaviour of these PFPs in terms of Portner et al.'s (2019) *c*P projection in the treetop as in (320), the *c*-head of which hosts various discourse features. Particularly, Yamada claims that this head hosts, among other features, what he calls CALL and RELATION features, the semantics of which are defined below from Yamada (To appear):

(320)



(321) a. $[\![_i[\textsc{call}]]\!] = \lambda p.\lambda x.\lambda y.p$: *y* tries to call *x*'s attention at the moment when a CALL feature

is pronounced.

b. $[\![_i[\text{RELATION}]]\!] = \lambda p.\lambda x.\lambda y.p$: *y* confesses at the moment when the feature is pronounced that *y* thinks that *y* has the social relation $relation_1$ with *x*.

Yamada further proposes based upon DM that these features in *c* trigger *node-sprouting* by the following rule from Yamada (To appear, 4):

(322) $X \rightarrow [_X\ X\ Agr_{u[\text{CALL}],u[\text{RELATION}_1]}]$ / ___ is c-commanded by $c_{i[\text{CALL}],i[\text{RELATION}_1]}$

Let us see how this proposal works with *Jordan-wa yo* in (319a). Yamada assigns the structure $[_{NP}$ *Jordan-wa*$_N$ Agr] to this expression, and the Agr-head bears [CALL] and [RELATION$_1$]. (322) dictates that $[_{NP}$ *Jordan-wa*$_N$ Agr], which is c-commanded by $c_{i[\text{CALL}],i[\text{RELATION}_1]}$, will be realised as $[_{NP}$ *Jordan-wa*$_N$ *yo*], since the Agr-head has the two features relevant to the post-syntactic VI of *yo*. If Agr bears not [RELATION$_1$] but [RELATION$_2$], for instance, then it will be realised as *ne*. In the same way, [RELATION$_3$] makes Agr *sa*, post-syntactically.

7.2 Closer inspection

Obviously, the structure (320) endorsed by Yamada is very much similar to the structure in (291), which I argued to be the uppermost syntactic structure in Japanese. Given this fact, it is natural to expect that Yamada's proposal regarding the distribution of PFPs can be extended to the present proposal. The aim of this chapter is to show that this extension is indeed possible, with conceptual and empirical updates.

First, in order to extend Yamada's analysis to the present proposal, we have to pinpoint where to update in the analysis. One obvious candidate is the [RELATION] feature that Yamada assumes to be borne by Agr. As I showed above, this feature encodes the information that an agent *a* confesses at the moment of the pronunciation of the feature that *a* has a certain social relation with some other agent(s). [RELATION] has the variants [RELATION$_1$], [RELATION$_2$] and [RELATION$_3$], each of which will be realised as *yo*, *ne* and *sa via* the post-syntactic process of VI. Crucially, however, what these variants are remains unexplored. What kind of *relation* does

yo encode, for instance? Only after the nature of these presumed features is understood will a concrete account of the use of PFPs be made.

Secondly, although this is not an important issue from an empirical standpoint, the assumption that there is the Agr-head Merged with each lexical element is conceptually not necessarily desirable. Along with the advent of the *Minimalist Program* (MP), the rationale for this head was put to a careful scrutiny from both empirical and theoretical perspectives, which concluded that this head does not meet the minimalist desiderata including the *Inclusiveness Condition* (cf. Chomsky, 1995, 2000a). Thus, it should be desirable that a concrete account for the distribution of PFPs be made with no recourse to the Agr-head.

The proposal to be made should surmount these two issues. How can the notion of (public) commitment make it possible? Recall that the SFPs always involve $\vdash$ or $\nvdash$, which modifies COM. This COM-head takes p/Q as its input, which corresponds to a proposition, an irrealis proposition, and a set of propositions in the case of a declarative, imperative, and interrogative sentence, respectively. Thus, SFPs should be attached to something relevant to one of them.

Ideally, the account to be given to the distribution of PFPs should echo that given to SFPs, taking into consideration the morphophonological identity between them. However, it is apparent that the elements to which PFPs are attached are different from p/Q. For instance, *Boston-de* "in Boston" *per se* has no truth condition as it is an adverb of type $\langle\langle e,\ t\rangle,\ \langle e,\ t\rangle\rangle$ (assuming that it attaches to a VP, syntactically). The same goes for other elements to which PFPs are attached. Should we just give up the expansion of the proposal made thus far in this dissertation to PFPs, then?

Fortunately, there is another way of construing the semantics of those phrases to which PFPs are attached, and the way enables us to confine PFPs in the same formal analysis given to their sentence final counterparts. The next section details how.

7.3 Neo-Davidsonian semantics and how it resolves the problems

It is well-known that Davidson (1967) proposed that a sentence like

(323) Steven wrote this song in Brighton.

is to be represented at LF (the CI-interface, in our terminology) as

(324) $\exists$e[wrote(this song)(Steven)(e) $\wedge$ In(Brighton)(e)]

Davidson argued that the logical form in (324) accounts for inferences like "If Steven wrote this song in Brighton, then he wrote this song," from the logic of $\wedge$. Soon after Davidson's proposal, Castañeda (1967) further sought to refine this idea and proposed that the event argument can be separated from the verb's traditional arguments. According to this proposal, (324) can be modified as

(325) $\exists$e[wrote(e) $\wedge$ Agent(Steven)(e) $\wedge$ Theme(this song)(e) $\wedge$ In(Brighton)(e)]

Such a separation later came to be called *neo-Davidsonian*, the term I adopt in this dissertation as well. Compelling arguments that support this neo-Davidsonian semantics have been provided in the literature by the works such as Parsons (1990); Schein (1993, 2002); Pietroski (2005).

Pietroski (2011) independently proposes within the framework of this neo-Davidsonian semantics that the non-monadic elements in a given logical form be *modanicised via* a local application of closure as soon as the departure from monadicity arises. Thus, *Agent(Steven)(e)* is to be represented as[1]

(326) $\exists x$[Agent(e, x) $\wedge$ Steven(x)]

Accordingly, (323) is to be represented as

[1]To be precise, Pietroski (2011) writes (326) as $\exists\cdot$[Agent(e, x), Steven(x)], where $\cdot$ represents the conjunction of monadic predicates (*Steven* and *Agent*). The net effect that Pietroski seeks to capture with this form does not change if we adopt (326), and accordingly I assume the structures of the sort in (326, 327) henceforth.

It should also be noted that Pietroski (2018), which builds upon Pietroski (2005) and further departs from neo-Davidsonian semantics, aims to present a semantic theory without truth value. In what follows, I refrain from pursuing the same goal as Pietroski's, just for the sake of simplicity. The gist of the present proposal will not be affected by the choice.

(327) $\exists$e [wrote(e) $\wedge$ $\exists x$[Agent(e, x) $\wedge$ Steven(x)] $\wedge$ $\exists y$[Theme(e, y) $\wedge$ this song(y)] $\wedge$ $\exists z$[In(e, z) $\wedge$ Brighton(z)]]

Once this type of semantics is adopted, we have an immediate account for the distribution of PFPs under the present dissertation's proposal. Notice that the external argument *Steven*, and other elements are all existentially closed, which means that they all semantically correspond to a truth condition (e.g., the syntactic phrase *Steven* is semantically to be interpreted as "there is an x such that x is an agent of the event e and x is Steven"). Therefore, each phrase in (319) maps onto a truth condition at the CI-interface, as in (328).

(328) a. $[\![$*Jordan-wa*$]\!] = \exists x$[Agent(e, x) $\wedge$ Jordan(x)]

b. $[\![$*Boston-de*$]\!] = \exists x$[In(e, x) $\wedge$ Boston(x)]

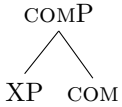
c. $[\![$*wain-o*$]\!] = \exists x$[Theme(e, x) $\wedge$ wine(x)]

d. $[\![$*non-da*$]\!] = \exists$e[drank(e)]

I assume with Hornstein (1999, 2001) that the semantic roles assigned to the external and internal arguments of a verb are featurally encoded to these arguments. To be precise, the θ-roles borne by *Jordan-wa* and *wain-o* are assigned to them as interpretable [+Agent] and [+Theme] features, which check their uninterpretable counterparts borne by V and v. These features are checked at the timing of Merging them with v and V, by the process of which they become interpretable to the CI-system. By means of this, (328a) and (328c) result.

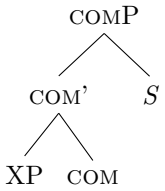
Now we have a way of incorporating PFPs into the system of the present dissertation. I argue that they are the post-syntactic realisations of S and A within each phrase when they embed $\vdash$ or $\nvdash$. More concretely, I claim that in the treetops of each XP exists COM, which encodes the information that an agent a is committed to a-self to act upon the truth of p. Here p is the proposition $\exists x$[Agent(e, x) $\wedge$ Jordan(x)] in the case of *Jordan-wa*, and $\exists x$[In(e, x) $\wedge$ Boston(x)] in the case of *Boston-de*. Thus, the basic structure of an XP is

(329)



As before, if ⊢ is not Merged, S attaches to this phrase as a default option. This yields

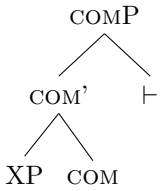
(330)



This yields the semantic interpretation that S is committed to S-self to act on (the truth of) p. If XP = *Boston-de*, then (330) means that S is committed to S-self to act upon (the truth of) the proposition "the event is in Boston".

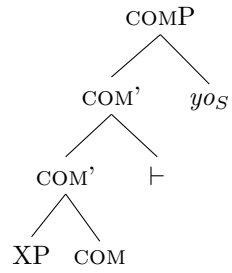
If ⊢ is Merged, in contrast, then the following structure results.

(331)

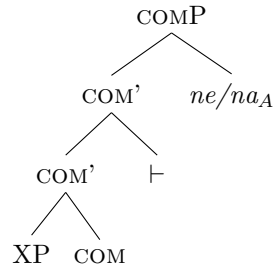


The modified COM' in (331) can take either S or A as its external argument:

(332) a.



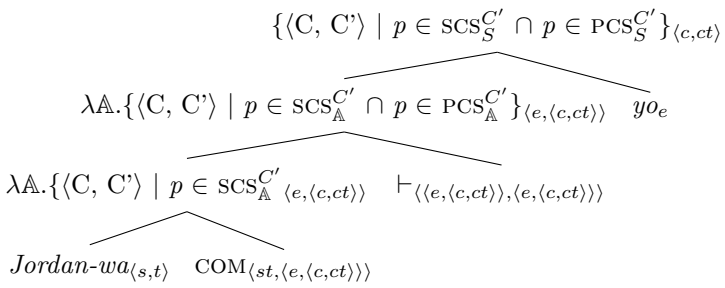
b.



As shown in (332a, b), S and A will be realised as *yo* and *ne/na* in this case. *Yo* and *ne/na* yield the interpretations at the CI-interface that S or A is committed to the other DPs than S- or A-self regarding the truth of p, just like in the case of *yo* and *ne/na* as SFPs. In the case of PFPs, however, p is an existentially closed proposition corresponding to an XP other than what has been traditionally called a CP in the syntactic literature. Thus, *Jordan-wa yo* means that S

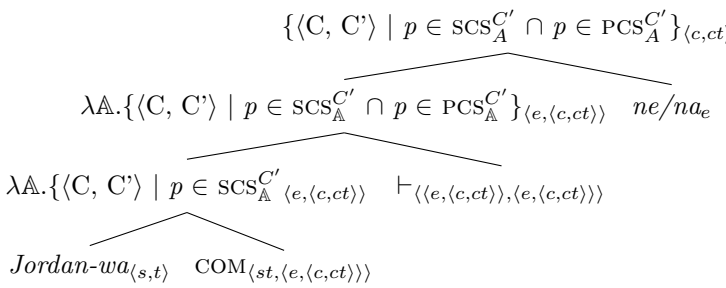
is publicly committed to act upon the truth of "there is an x such that x is the agent of e and x is Jordan". More concretely, the present CCP-based proposal claims that *yo* is pertinent to the context update in which S's public commitment is *suggested/requested*. Therefore, *Jordan-wa yo* has the LF structure as in

(333)



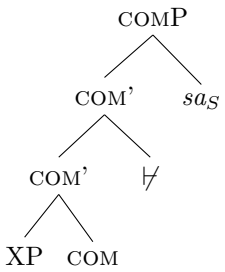
Similarly, *Jordan-wa ne/na* suggests a context update in which A is publicly committed to act upon the truth of the same proposition. The LF structure in question is given in (334).

(334)



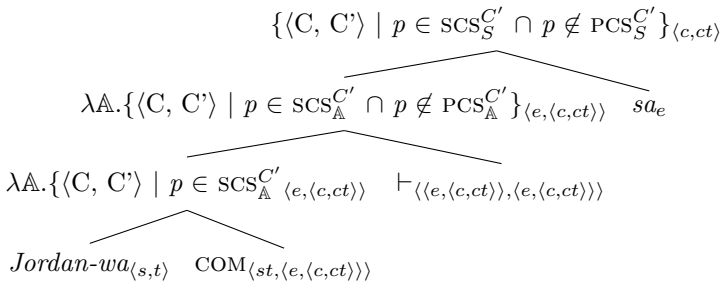
If $\not\vdash$ modifies COM, then S is fed as the external argument to the COMP and the structure in (335) results.

(335)



At the CI-interface, *sa* (more precisely, $\not\vdash + S$) is interpreted as the cancellation of the implicature that S is publicly committed to the truth of p, just like I showed in Chapter 5. Thus, *Jordan-wa sa* means that S is self committed but not publicly committed to act upon the truth of "there is an x s.t. x is the agent of e and x is Jordan". The LF structure in question is given below.

(336)



Once the present dissertation's proposal is adopted to PFPs, an immediate explanation follows for what kind of relation [RELATION] in Yamada (To appear) encodes. It encodes a relation between two groups of agents. One is defined as an agent or agents who is/are committed to the others to act in accordance with p, in the case of *yo* and *ne/na*. The other is defined as an agent or agents to whom the commitment is made. In the case of *sa*, the relevant relation is established between two groups of agents, in which one (S) is *not* publicly committed to the other to act on p's truth. Thus, the present proposal straightforwardly expands the analysis in Yamada (To appear) with deeper insights.

Notice already that the present analysis does not make any recourse to the Agr-head. What is needed is the independently motivated COM and $\vdash/\nvdash$ along with S and A, the empirical necessity of which was shown in the previous chapters. Thus, by combining the central ideas of the present dissertation with the neo-Davidsonian semantics proposed by Pietroski (2011), the present analysis successfully eliminates the Agr-head from the explanation for the distribution of PFPs, the head which has no conceptual necessity within the framework of the MP and biolinguistics.

As per the semantics of PFPs, it has not been intensively discussed in the literature. However, Saito and Haraguchi (2012) are certainly right when they say that the interpretation of the PFPs *yo* and *ne/na* are roughly the same as their sentence final counterparts, intuitively speaking. For example, *yo* in *Jordan-wa yo* has the strong sense that "S is telling the other DPs that$\cdots$". Similarly, according to Saito and Haraguchi's analysis (the observation of which is attributed to Keiko Murasugi), *ne/na* in *Boston-de ne/na* has a similar function to *right?* in English, which involves A's opinion, belief, attitude and so forth.

Even though the remarks on the semantics of PFPs by Saito and Haraguchi are pre-theoretic,

the present analysis provides a solid formal ground for the intuition they note. *Yo*'s sense of "S is telling the other DPs that$\cdots$" directly comes from its discourse effect of introducing S's public commitment with regard to the truth of p. Since it is S who is committed to act upon the truth of an existentially closed proposition, the effect in question follows naturally. In a similar manner, *ne/na*'s effect of evoking A's opinion, belief etc. results from the semantics of the particles: that is, the particles encode A's public commitment to act upon p's truth.

As for *sa* as a PFP, its semantics is hard to discern: there is no previous work on this, even in passing. Nevertheless, it is safe to note that it is pertinent to S's opinion about what it embeds, just like *yo* and unlike *ne/na*. *Jordan-wa sa* thus pre-theoretically sounds as though S is providing information about Jordan to the other DPs. But the present theory predicts more: according to the semantics of *sa* laid out in Chapter 5, *sa* as a PFP should nullify S's *public* commitment regarding p's truth. Thus, if S says *wain-o sa*, then it should be the case that in so doing S publicises the belief that there is wine as the theme of the verb *non-da* while explicitly marking that S is not publicly committed to act upon its truth.

It is hard to test whether *sa* as a PFP indeed has this function. If it is embedded in a bare declarative or a declarative with *yo*, then S's public commitment to act upon p's truth will be encoded despite the marking that S is not publicly committed to the truth of a part of p. Take an example from (337), where *yo* is used in lieu of *sa* as a SFP.

(337) Jordan-ga *sa*, Boston-de wain-o non-da *nda yo*.
Jordan-NOM *sa* Boston-at wine-ACC drink-PST *nda yo*
'Jordan *sa* drank wine in Boston *nda yo*.'

The neo-Davidsonian logical form of this sentence is[2]

(338) $\exists$e [drank(e) $\wedge$

$[\exists x[\text{Agent(e, } x) \wedge \text{Jordan}(x)] \in \text{SCS}^{\text{C}}_S \cap \exists x[\text{Agent(e, } x) \wedge \text{Jordan}(x)] \notin \text{PCS}^{\text{C}}_S] \wedge$

$\exists y[\text{Theme(e, } y) \wedge \text{wine}(y)] \wedge$

$\exists z[\text{In(e, } z) \wedge \text{Boston}(z)] \,] \in \text{PCS}^{\text{C}}_S$

[2]For the sake of convenience, I omit the self commitments and public commitments to the truth of the existence of wine as the theme and Boston as the place where the event took place.

Verbosely put, (338) means that S is publicly committed to the existence of a past event s.t. the theme and the location of it are wine and Boston, while S is only self committed with regard to the existence of Jordan as the agent of the event. Simply put, S is publicly committed to a proposition, to the truth of its sub-propositions of which S is not publicly committed.

The best way to test the semantics of *sa* as a PFP is to add an expression of S's uncertainty to the truth of the relevant proposition, which makes S unreasonable to become publicly committed to its truth. This is shown in (339).

(339) Dare *da*-tta *ka na*··· tasika Jordan-ga *sa*, Boston-de wain-o non-da *nda yo*.
who *da*-PST Q *na* if.I'm.correct Jordan-NOM *sa* Boston-at wine-ACC drink-PST *nda yo*
'Who was that···as far as I remember, Jordan *sa* drank wine in Boston *nda yo*.'

This example contains an expression which shows S's uncertainty about who drank wine in Boston. In such a context, *sa* can be felicitously attached to *Jordan*, as expected from the semantics in (338). Compare this example with (340), where *sa* is replaced with *yo*.

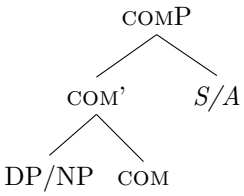
(340) Dare *da*-tta *ka na*··· tasika Jordan-ga ??*yo*, Boston-de wain-o non-da *nda yo*.
who *da*-PST Q *na* if.I'm.correct Jordan-NOM ??*yo* Boston-at wine-ACC drink-PST *nda yo*
'Who was that···as far as I remember, Jordan *yo* drank wine in Boston *nda yo*.'

Though the judgement is subtle regarding the acceptability of *yo* as a PFP in this example, it sounds fairly more awkward than *sa* does in (339). The awkwardness results from the conflict between S's uncertainty about the truth of $p = \exists x[\text{Agent}(e, x) \wedge \text{Jordan}(x)]$ and *yo*'s function, which encodes S's public commitment to act upon the truth of the same p. The contrast thus speaks in favour of the present analysis, where *yo* and *sa* encode fundamentally different discourse effects.

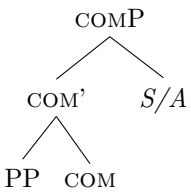
7.4 Syntax of PFPs

In Chapter 6, I showed that above the propositional content of a sentence projects a COMP. To the exttent that the present analysis of PFPs is successful, it predicts that the COM-head projects within each XP other than the extended projection of a VP, and ⊢can be attached to a COMP within the XP as well. Thus, nominal phrases, adpositional phrases, adverbial phrases and adjectival phrases all project a COMP as in

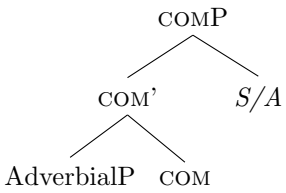
(341) a.



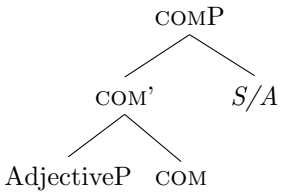
b.



c.



d.



This analysis thus claims that there is a fundamental structural parallelism across lexical categories: lexical phrases in general are embedded within the same functional head COM. Such parallelism is actually widely observed in the literature. Szabolcsi (1984) among others claim that D is in fact a kind of C. Leu (2008) and Emonds (2008), for instance, argue that P and D emerge from the same underlying category. Heine and Kuteva (2007) demonstrate that determiners tend to emerge from locative elements, historically.

The parallelism discovered across the categories is conceptually appealing, but at the cost of inducing one particular problem. The problem is already noted by Yamada (To appear), and it

pertains to *c-selection*. It is clear that what a V c-selects is not a COMP but an NP. If COMP projects above the NP, then this should intervene the relevant c-selection between the V and the NP. In fact, the problem has been noted in the literature since the advent of the DP-hypothesis. No verb imposes selectional restrictions upon D, and verbs generally select N instead. Indeed, as Shlonsky (2006) points out, the problem of this sort is conspicuous in and inherent to Cartographic approaches to the syntactic structuring (cf. Rizzi 1997; Cinque 1999, 2002, 2013 among others): if a plethora of functional heads project above a lexical NP, then how the c-selection is to be satisfied?

At this point, let us look back at the parallelism between the COMP structure I propose and the *c*P structure proposed by Portner et al. (2019) and adopted by Yamada (To appear). According to Portner et al. and Yamada, *c*, which corresponds to my COM, is the locus of the interaction between a given linguistic expression embedded within a *c*P and the context of utterance. Under the architecture of the language faculty endorsed by Chomsky (1995, 2004, 2005, 2008), it is the point where the external systems have access to a given syntactic structure. A given phrase becomes accessible to the external systems by means of what is now called *Transfer*, which happens in a *phase-based* cycle. Transfer sends a syntactic chunk to the CI- and Sensorimotor (SM)-interfaces. At the CI-interface, the semantic interpretation is assigned to the syntactic chunk, and at the SM-interface, the phonetic form of a given expression is determined.

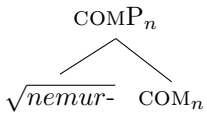
Marantz (1997, 2008, 2013) among others proposes, within the framework of DM, that categorisers such as *v* and *n* are the *phase heads*, which induce the Transfer of its complements. Categorisers determine the lexical/grammatical category of a $\sqrt{ROOT}$: e.g., if $\sqrt{nemur}$ 'sleep' is Merged with the nominaliser (*n*) *i*, then it is categorised as a noun *nemur-i*. In contrast, if the same $\sqrt{nemur}$ is Merged with the verbaliser (*v*) *u*, then it becomes a verb *nemur-u*. According to Marantz, each categoriser is a phase head and by virtue of this syntactic status it Transfers the $\sqrt{ROOT}$ it embeds (Chomsky 2007). The Transferred $\sqrt{ROOT}$ is thus interpreted at the CI-interface in accordance with the category assigned to it by the phase head.

Based upon this parallelism between categorisers and COM(/*c*), I hypothesise that categorisers

are nothing but COM. Specifically, I claim that the functional head bears one of the feature combinations of [+Cat(egory): ±N,±V] (Chomsky 1970), and by virtue of this, it serves its purpose as the categoriser.[3] *+Cat* means that it has the positive (hence, interpretable) Cat feature value. A particular combination of $\pm N$, $\pm V$ determines what kind of category is to be assigned to the $\sqrt{ROOT}$ embedded within COM. Thus, [+Cat: +N,-V] determines that the category to be assigned to the $\sqrt{ROOT}$ is N, while [+Cat: -N, +V] assigns V to the $\sqrt{ROOT}$. Similarly, [+Cat: -N, -V] and [+Cat: +N, +V] make COM serve as an adjectiviser and adpositioniser, respectively. As for the adverb, I claim with Heine and Kuteva (2007) and Boeckx (2014) among others that it shares the same basic syntactic structure as the adposition. Thus, it is assumed to be categorised by COM with [+Cat: -N, -V] as well. Henceforth, I describe COM with [+Cat] as COM_{Cat}: e.g., COM with [+Cat: +N, -V] is COM_n, and COM with [+Cat: -N, +V] is COM_v, and so forth.

As for a $\sqrt{ROOT}$, I assume that it inherently bears [-Cat]. Since this feature is uninterpretable, it must be deleted *via feature checking* or *Agreement*, which is concomitantly done at the timing of Merging the $\sqrt{ROOT}$ with COM_{Cat}. Hence, $\sqrt{nemur\text{-}}$ and COM_n forms the structure in

(342)



And the COM-head will be post-syntactically realised as *i*, forming the nominal expression *nemur-i*.

This proposal solves the problem of c-selection. What projects is COM which bears the information about the category. Therefore, what is selected by a verb, for instance, is not just COM but COM *with [+Cat: +N, -V], viz.* COM_n. Simply put, the information about the category that should be c-selected is accessible to the verb.[4] Ergo, the present proposal circumvents the c-selection conundrum noted by Yamada (To appear). [5]

[3] I assume with the proposal made by Aboh (2010) that the relevant *Cat*-feature is assigned to COM at the level of Numeration (i.e. the timing of introducing the element to the syntactic Work Space (WS)).

[4] This is a reminiscent of the idea of *focus projection* proposed by Selkirk (1984) and *feature percolation* in Lieber (1980); Williams (1981) and others.

[5] It should be noted that COM pertaining to an SFP is also a phase head. Thus, it corresponds to what is traditionally called *C*. More precisely, the present account assumes that what Rizzi (1997) calls the *Force*-head is a phase head.

7.5 Summary

In sum, the present account neatly explains the distribution and semantics of PFPs in a straightforward way. Indeed, the reason that this dissertation is entitled "Commitment and *Discourse* Particles in Japanese" is due to the fact that not only SFPs, but also PFPs are the objects of the present dissertation's inquiry. It is noteworthy that the proposal made in this chapter enables us to treat PFPs as the same as their sentence final counterparts in terms of their semantics. This means that the present analysis unifies these two types of discourse particles in a strictly formal fashion. In so doing, it further explained what kind of relations between the two DPs are expressed by PFPs, the question which arose from Yamada's (2022) analysis of these particles. Yamada's work should be considered the first-ever serious investigation of the formal properties of them, and the present proposal should be taken as an extension of his analysis under the heading of (public) commitment.

This chapter also proposed the that there is a substantial parallelism among various syntactic phrases. Each XP is embedded within a COMP, and the COM-head serves as a phase head. The same head also serves as what is called a categoriser, the function of the head which is encoded in terms of the feature system. In so doing, I claimed that that the proposal is immune to the problem noted by Yamada (To appear) that syntactically projecting a functional phrase above a lexical one makes c-selection impossible to be satisfied.

Of course, there are various issues left uncovered in this chapter concerning the nature of PFPs, such as the prosodic properties they exhibit and their interactions with specific clause types and contextual backgrounds. The fact that *yo ne* is unavailable as a PFP is left unexplored in this chapter as well. I leave these important issues for future research, in the hope that the analysis laid out in this chapter provides a significant step forward in seeking a profound answer to these questions.

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Chapter 8

Summary and Implications

8.1 Summary

Up to this point, the present dissertation discussed the general architecture of the syntactic structure and semantic structure above the sentence radical. I proposed that what has been traditionally called force heads can, and should be subsumed into the single head COM. The head is pertinent to an agent a's self commitment to act in accordance with p/Q. The specific effects that have been assigned to the clause type operators derive from the interaction between the content of the sentence radical and the semantics of COM.

I further argued that $\vdash$ can be Merged above COM in Japanese, which modifies the expression in such a way that a's self commitment to act upon p/Q is to be further refined as a's public commitment, which is defined as a commitment to the other DPs to act in accordance with p/Q. The SFPs *yo*, *ne* and their dialectal/idiolectal variants, and *sa* are the post-syntactic realisations of S and A, which Merge above $\vdash$ or $\nvdash$. They feed the external arguments to the COMP, and semantically they represent S and A as the agents (dis)committed to the other DPs to act upon p/Q.

The proposal was buttressed with the prosodic behaviour of the Japanese language. It was discussed that $\uparrow$, which is associated with an SFP, represents that the information encoded by the

particle (i.e., S or/and A's self or public commitment(s)) is not presupposed, while the semantic content of what precedes the particle is at least presupposed in C. In other words, the sentence with an SFP with ↑ is proposed as an answer to a QUD, which essentially makes a certain expression presuppositional. The rising contour is due to the fact that presupposed elements in Japanese are prosodically weakened while others are not. An SFP with → indicates that the whole sentence is not meant to resolve any QUD: i.e., the sentence with such an SFP is all-new. ↓ in turn encodes that the information associated with an SFP is presuppositional. In other words, an utterance with an SFP with ↓ expresses all-old/presupposed information as an answer to a QUD. In terms of Selkirk (1984), *a*'s public commitment is associated with the [± new] feature, which determines the prosodic realisation of the associated SFP.

Yo can be associated with all of these three SFCs, and so can *ne*. In contrast, *sa* is only compatible with ↓. This prosodic restriction upon *sa* naturally comes from the fact that the information encoded by this particle (i.e., that S is not publicly committed to act in accordance with *p/Q*) is always presupposed/Given at the timing of the utterance with *sa*.

This analysis was further expanded to cover *yo*, *ne* and *sa* as PFPs. Based upon a variant of neo-Davidsonian semantics, I argued that these PFPs exhibit the same behaviour as their sentence final counterparts. In so doing, I showed that the present proposal updates Yamada's (2022) initial analysis of the distribution of PFPs. Thus, the present analysis formally explains the behaviour of PFPs and SFPs in a unified fashion.

Below, I discuss the implications of the present account from the perspectives of formal linguistic theory, biolinguistics and psycholinguistics.

8.2 Syntactic implications of the present account

8.2.1 Strong Minimalist Thesis (SMT) and self (and public) commitment(s)

I showed that there is a significant structural parallelism across XPs, in the way that they are all embedded within a COMP. I further claimed that the COM-head is a phase head, which induces the Transfer of its complement.

The assumption that COM is the locus of Transfer harmonises with Chomsky's (2007) assumption that Transfer cycle happens upon the completion of a propositional content. Recall that the present neo-Davidsonian semantics assumes that each XP maps onto its corresponding existentially quantified proposition at the CI-interface. Thus, what is Transferred forms a propositional unit on its own. Furthermore, the notion of commitment is essentially about *a*'s attitude towards a propositional content, as Geurts (2019) claims based upon Brandom (1994, 1997). Thus, the present theory supports Chomsky's intuition that phases are the loci of propositional units. Consequently, the present account dictates that a syntactic unit Transferred to the CI-interface be interpreted at the interface in a *transparent* fashion: i.e., there is a one-to-one, direct mapping from syntax to semantics/the CI-interface.

There is an empirical implication of the present account for the syntactic theory as well, especially from the perspective of the syntax-phonology interface. Recall that SFPs and PFPs examined in this dissertation all map onto an ι-boundary in the sense of Selkirk (2009, 2011); Itō and Mester (2012). The fact that SFPs define the right edge of ι at the syntax-prosody interface naturally follows from the fact that they occur sentence finally. The correspondence between PFPs and ι-boundaries was observed in Chapter 7. The question is: Why do we have this correspondence?

Selkirk's (2009, 2011) *Match Theory* provides us with a great way to answer this question. Match Theory dictates that at the syntax-prosody interface, there is a family of conditions upon the one-to-one correspondence between syntax and prosody. For instance, 0-level syntactic elements

are required to be mapped onto prosodic words (ωs), and syntactic XPs correspond to prosodic phrases (ϕs). Selkirk further claims that ι corresponds to a speech act: i.e., the syntactic projection that determines a speech act should be mapped onto an ι.

Under the present proposal, we do not have a syntactic head that directly determines the speech act type of a given utterance. Instead, following the lead of Brandom (1994, 1997) and Geurts (2019), I assumed that each speech act type derives from the interplay among COM, the semantic content that it embeds and the context of utterance C. Each speech act is a byproduct of an agent's commitment. According to this model, the relevant *force*-head, which has long been assumed to pertain to a speech act type, is subsumed into the single COM-head. Therefore, the syntactic projection that Match Theory claims to be mapped onto an ι should be COMP, given that it is responsible for both the speech act type determination and what has been traditionally called *force*.

The fact that PFPs and SFPs map onto ιs precisely speaks to this assumption. If an agent *a*'s commitment is prosodically realised, then it has to be mapped onto an ι-boundary. *Yo/ya/i/sira*, *ne/na* and *sa* are the particles that encode either S's or A's (public) (dis)commitment to act upon *p/Q*. Thus, these particles, be they SFPs or PFPs, should be tied with the (right) ι boundaries, which is precisely what we observe. Thus, at least in languages like Japanese, even an XP, which is assumed to be converted to a ϕ according to the original Match Theory, can be mapped onto an ι-boundary, if the topmost COM and above are to be realised by some particle. More precisely, I claim based upon Selkirk's (1984) *prosodic hierarchy* that an ω should be dominated by a ϕ, which should in turn be dominated by an ι: i.e., there should not be level-skipping in a prosodic structure building. Then, the ϕ-status of an XP derives from the fact that it embeds a 0-level element while being Transferred by the phasal COMP, which according to the present proposal corresponds to an ι. In short, an XP embedded within a COMP should be mapped onto a ϕ, and a COMP should be mapped onto an ι (see also Kratzer and Selkirk 2007 and Ishihara 2007 for the correspondence between the prosodic phrasing and the Spell-Out (Transfer) domain). Thus, the present analysis assigns the following prosodic structure to *Jordan-wa ne*:

(343) $(_{\iota}\ (_{\phi}$ Jordan-wa$_{\omega})$ *ne*)

Notice that there is a prosodic phrase boundary between *Jordan-wa* and *ne*. It is widely known in the relevant literature that a ϕ-boundary is responsible for what is called *pitch reset*, which nullifies the f_0 downtrending aka *downastep* within each ϕ (cf. Selkirk and Tateishi 1988, 1991; Ishihara 2016). As we have seen in Chapter 7, Figure 7.1, a significant pitch boost occurs at each PFP. The present analysis dictates that this boost is caused by the ι-status of the relevant element and the ϕ-boundary observed between the particle and what precedes it. Obviously, this supports the present account, which seeks to tie each discourse particle with ι based upon Match Theory.

The fact that the COM-head is not to be mapped to the relevant prosodic boundary when $\vdash$ is not adjoined in a COMP can be explained by simply assuming that there is no overt prosodic element that can host the ι-boundary in such a case. In other words, even though it will be mapped onto an ι, the entire ι remains covert due to the covertness of the head responsible for its ι-status. Thus, in the final output, *Jordan-wa* "Jordan-TOP" looks and behaves like a ϕ, while *Jordan-wa ne* "Jordan-TOP *ne*" exhibits its ι-status, as we have seen in the last chapter.

In this way, the present proposal provides empirical support for Selkirk's Match Theory. In so doing, it significantly improves our understanding of the interaction between syntax and prosody.

What is striking about the present proposal's syntactic implications is that it claims that there is a transparent mapping from syntax to both the CI- and SM-interfaces. At the CI-interface, the Transferred element corresponds to an existentially-closed proposition p (or a set of propositions), to act upon which a is committed either privately or publicly. The job to be done at the interface is to just existentially-close (or defining the partition on the basis of) the Transferred item. The need for the existential-closure (or the partition) comes from the assumption that the Transferred element must be something *committable*: i.e., it has to be something to act upon which a can be committed. Therefore, it is *syntax* (the presence of a COMP) that instructs the CI-interface to make this modification to the Transferred element, not *vice versa*. Hence, no fundamental syntactically-invisible structural modification is necessary at the CI-interface.

At the SM-side, Match Theory claims that each Transferred unit be directly mapped onto the

corresponding prosodic element at the SM-interface. The directness of the mapping is equivalent to the transparency of the Transferred syntactic structure to the eyes of the SM-interface. The existence of a phasal COMP at the level of syntax instructs the SM-interface to assign the ϕ-status to the Transferred XP, based upon the condition of prosodic hierarchy, and once this COMP is Transferred, it will be mapped onto an ι. Whether it will be actually overtly realised as an ι is decided based upon its morphophonological (c)overtness (and other factors, many of which may be language-specific). It is yet again *syntax* that instructs the interface operations. Hence, no syntactically-invisible structural modification is necessary at the SM-side as well.

In this sense, the present account is in line with Chomsky's (2004, 2005, 2008, 2013, 2015a, 2022) *Strong Minimalist Thesis* (SMT), which hypothesises that syntax provides an optimal solution for the interface conditions. More precisely, the COM-head as the phase head provides the optimal instruction for the interfaces. At the CI-interface, the head provides the instruction that the Transferred element be existentially-closed (except the case of COM embedding Q, in which the partition is defined on the basis of the set of propositions). At the SM-interface, the Transferred element be mapped onto a ϕ.

8.2.2 Restricting the proliferation of functional projections – or demarcating the upper-bound of the syntactic structure building

It is fair to say that one of the great success stories of the MP is the cartographic approach represented by the works including Rizzi (1997); Cinque (1999). It all started since Chomsky (1986) extended the X-bar schema to elements like Infl(ection) and C(omplementiser). Soon after this extension, Larson (1988) followed the approach and proposed an extended VP-projection (see also Hale and Keyser 1993; Pylkkänen 2008; Ramchand 2008). Pollock (1989) followed this first step and proposed the influential split-Infl hypothesis. The extension was later crystalised as Rizzi's (1997) fine-structure for the CP-layer and Cinque's (1999) extremely elaborated IP-layer. See Radford (2018) for a clear and concise review of the history of the cartographic approach to syntax. The approach enables us to articulate fine-grained syntactic structure in the way that the

previous frameworks could have never done.

However, there is a serious issue in cartographic approaches in general: they have few theoretical frameworks that guide, restrict or principally organise them. Due to this acute problem, cartography has witnessed the excessive proliferation of functional projections for the past few decades (see Fukui and Sakai 2003; Boeckx 2014 among others). Some of the cartographic approaches proceed as if they set another novel syntactic projection as they encountered a new empirical phenomenon that has not been drawn on the map. The more we make an empirical observation, the more it gets likely that such proposals enlarge the basic syntactic spine, no visible evidence/guideline for which we can see, to borrow the term from Fukui and Sakai (2003). See Shlonsky (2006); Neeleman et al. (2009); Vermeulen (2009, 2011, 2013); Boeckx (2014); Szendrői (2017) and others for conceptual and empirical problems of cartography in general.

One of the obvious reasons for such proliferations is that there is no upper-bound for the syntactic structure proposed in the literature. In contrast to the lower-bound of a given phrase, which is defined by a given lexical category such as N and V, projections above it can be expanded potentially *ad infinitum*, if such an upper-bound is absent. Because of this lack of the upper-bound, advocates of cartography can in principle add as many functional heads as they want to the structure, which is clearly undesirable. What we need is an explicit way of imposing a restriction upon such addition.

The present proposal provides a straightforward way to restrict such an ever-growing syntactic tree. Recall that the central proposal of the present dissertation is that there is a COM-head at the treetop of each XP, which encodes a particular agent's self commitment to act upon p/Q. This means that COM is the uppermost functional projection in a given phrase, be it sentential or phrasal. In other words, COM is the very upper-bound of a given phrase. Therefore, the present proposal at least imposes a severe restriction upon the cartographic approach in such a way that everything that seems above a COMP should be considered outside syntax proper. Put differently, it provides a guideline for cartography, which dictates that there not be a functional projection above a COMP.

In addition, it also claims that our linguistic thought is governed by the concept of (self) commitment, in the sense that COM connects a particular agent *a* and what is below COM (i.e., *p/Q*). One of the primary jobs of this functional head is to determine the relation between *a* and *p/Q* and provide the CI-interface with the information that *a* is committed to act upon *p/Q*. Therefore, the complement for a COM-head must be something to act upon which someone can be committed, as we have already seen in the last subsection.

This suggests that those functional heads to be postulated should be relevant to the construction of an expression to which *a* can become committed. More precisely, the present proposal confines the legitimate functional heads only to those pertaining to the construction of *committable* expression. Conversely, any functional head postulated by a cartographic approach that plays no role in *a*'s commitment to act upon *p/Q* should be abandoned. For instance, the distinction of the two functional heads [$\text{Fin}_{[that]}$] and [$\text{Fin}_{[+N]}$], proposed by Rizzi (2014) in order to explain the alleviation of the "*that*-trace effect" by the occurrence of an adjunct (Culicover 1993), is clearly unmotivated according to this account, since the distinction plays no role in the process of constructing a sentence radical which *a* can be (privately/publicly) committed to act upon.

The same holds true for the Int(errogative)P and ReasonP brought to the literature by Rizzi (2001) and Shlonsky and Soare (2011). These heads are postulated so as to capture the different syntactic behaviour between "why" and "how" in interrogatives with respect to their interaction with negation. The distinction between the two is, however, not independently motivated. What is the relevant semantico-pragmatic difference between "why" and "how" that has a certain effect upon the construction of a sentence radical, apart from their lexical semantic difference? If there is none, as I suspect, then the distinction should not be encoded in the functional projection. Succinctly put, just because they (seem to) exhibit a different syntactic behaviour does not provide us with evidence that they indeed project distinct functional heads. What motivates a projection of a distinct functional head is its effect upon constructing a committable unit: if to become committed to act upon *p/Q* with a functional element *f* is equivalent to become committed to act upon *p/Q* without *f*, then we should not postulate it. Thus, the present proposal casts grave

doubt on Endo's (2015) postulation of the existence of ReasonP1 and ReasonP2 as well, among so many others, since the distinction does not yield distinct commitments.

In contrast, TopicP and FocusP should be considered legitimate functional projections, clearly because they are relevant to the construction of an expression to act upon which *a* is committed to some DP(s). For instance, *a*'s (self/public) commitment to act upon p_1 = "Peter$_{Topic}$ kissed his daughter$_{Focus}$" is clearly different from the same agent's (self/public) commitment to act upon p_2 = "Peter$_{Focus}$ kissed his daughter$_{Topic}$". The former but not the latter is natural as an answer to the QUD "Who did Peter kiss?," and hence *a*'s commitment to act upon p_2 would be inconsistent with the context in this case. In contrast, if the QUD is "Who kissed his daughter?," then the latter is felicitous while the former is not. In such a context, *a*'s commitment to act upon p_2 is perfectly felicitous, while that to act upon p_1 is not. Therefore, there is a clear motivation for postulating these functional elements from the perspective of the present dissertation.

An implicit assumption behind this argument is that there is a transparent relation between a syntactic structure and its semantic interpretation: that is, each compositional part of a syntactic structure must have a corresponding semantic representation. Notice already that the transparency in question is precisely what the SMT dictates: according to the thesis, language (the core syntactic/computational system of the language faculty) provides optimal solutions for the interface conditions. Obviously, a syntactic structure with a functional projection that lacks its unique contribution to the corresponding semantic (LF) structure does not provide an optimal solution for relevant CI-interface conditions, due to its unnecessary complexity. Given the fact that the present analysis supports the SMT in a substantial fashion, the idea that the mapping from syntax to semantics/the CI-interface is transparent is precisely what it naturally expects. Consequently, that there should only be semantically active/visible functional heads is a straightforward assumption from the perspective of the present COMP-based account of the syntax in the treetop.

8.2.3 Section summary

The idea of COM imposes a valuable restriction upon the general cartographic approach by defining the upper-bound of each XP. Furthermore, the hypothesis that each expression is governed by *committability* has a therapeutic value for the approach, with the statement that the functional heads be those pertaining to the construction of a semantic content to act upon which an agent is committed. In this way, the present proposal restricts the cartographic approach both from the upside and within the inside. It restricts the approach from the upside as it defines the uppermost projection of a given XP as a COMP, and by doing so it disables stipulations to be made about functional projections above this level. And it restricts cartography within the inside as it prohibits postulation of functional projections of any sort with no independent semantic contribution below the level of a COMP, given the condition of the SMT. Ergo, it has a therapeutic value for protecting the cartographic enterprise from resulting in syntactic chaos.

Thus, as Yutaka Morinaga (p.c.) aptly puts it, the present proposal is in a sense both pro-cartography and anti-cartography. It is pro-cartography, for it seeks to decompose what has been traditionally called a CP and provide a concrete and elaborate syntactic structure. But it is also anti-cartography, since it severely restricts postulation of functional elements from a theoretical perspective. I consider this virtuous, as it allows us to have the cake and eat it too: by putting cartography under a strict theoretical surveillance, the theory laid out in this dissertation makes it possible for us to pursue the nature of core simplistic properties of the syntactic computation while trying to draw fine, meticulous syntactic structures of human language yielded by such simplistic (and elegant) computational procedure.

From the arguments in this section, the importance of COM in the general architecture of the language faculty within the framework of the MP should be obvious to the reader. However, the virtues of the idea of self and public commitments does not end here. Below, I discuss the implications that the present proposal has for biolinguistic and psycholinguistic investigations, with which I seek to corroborate the persuasiveness of the account both evolutionarily and psychologically.

8.3 Biolinguistic implications of the present account

Let us start with a broad question. What dissociates us from other species? Noam Chomsky's answer to this question is "language" (Chomsky 1966, 1986, 2000b, 2006, 2002, 2010, 2012), to which I essentially concur (see also Fujita 2009, 2014, 2017; Berwick and Chomsky 2016; Chomsky et al. 2019 among many others; see Christensen and Kirby 2003; Fitch 2010; Hurford 2014 for an overview). It is a widely known fact that other species do indeed have some communicative means: vervet monkeys produce a few distinct sound patterns to inform or signal the existence of some specific type of threats (Seyfarth and Cheney 2003; Seyfarth et al. 1980a,b and so forth), and songbirds form a verbal signal, the complexity of which is considered to be the measure of the individual's sexual attractiveness (Suge and Okanoya 2010 and Okanoya and Merker 2007).

However, these communication systems observed in other species are fundamentally different from our language capacity. While animal communication is a means to increase the probability of survival of an individual or species, our language and the communication based upon language use are not restricted by such external conditions. First and foremost, we use language to construct internal(ised) "thoughts": *via* language, we can think about what the world is like, what it will be like in the future, and what it was like in the past. Syntactically speaking, a TP (with the projection of FocusP, TopicP and so on; Rizzi 1997) corresponds to our "thought," which corresponds to a propositional content of an utterance.[1] The use of such an internal thought, which according to the SMT is optimally constructed by the syntactic computation, is not bound by our survival strategy: i.e., the vast majority of our language use is impertinent to sexual or natural selection. Simply put, our language of thought is –though sometimes inclined– crucially not determined by external conditions (except for those cases in which we use language under unbearable duress), and hence our language use is essentially *creative* (Chomsky 1965, 1966).

[1] As Ryoichiro Kobayashi (p.c.) rightly points out, the assumption that a TP corresponds to "thought" is not innocuous: for instance, Chomsky (2022) claims the [+Tense]-feature is borne by v, and the T-head does not actively project in syntax. Instead, he assumes that above a vP projects INFL. Throughout this dissertation, I have refrained from getting into the discussion about what precisely is the syntactic unit that corresponds to "thought," and simply assume that a TP + FocusP, TopicP etc. as a whole constitutes it.

Ryoichiro Kobayashi (p.c.) also points out that if an imperative sentence lacks a TP projection, it would mean under the present proposal's assumption that an imperative sentence is irrelevant to one's thought, clearly contrary to fact. Again, the problem can be circumvented if some special T-head is assumed to be Merged in an imperative sentence, as I alluded to in Chapter 2, footnote 7.

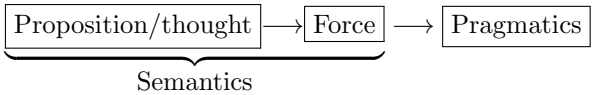
Furthermore, we can embed this TP (*sentence radical*: Lewis 1970) within what Frege (1918) calls *force* (see also Dummet 2001), which determines the *flavour* of an utterance. For instance, declarative force is conventionally associated with *assertion*, and it expresses that the utterer thinks that the proposition is true. Interrogative force is, in contrast, considered to express a request for information, roughly speaking. Thus, force embeds propositions and decides the basic character of the utterance.

We, human beings, use linguistic expressions thus formed as *force+proposition = semantics* in a particular context to facilitate a particular conversational move. This level of linguistic act is called *pragmatics*. For instance, the following sentence can be *pragmatically* interpreted in many ways, depending on the context of the utterance.

(344) Jacob released a new song.

If you as S utter (344) in a context where you and A are both big fans of Jacob Collier and committed to each other to inform any news about Jacob as soon as its announcement, then your utterance of (344) is understood by A as the provision of the latest information about Jacob. If the same sentence is uttered by S as a boss to A as S's subordinate who always has no choice but do what S wants, in contrast, then (344) may be interpreted as S's request that A buy or give a listen to the song. Other contexts may invite other readings of the sentence. This fact speaks to another aspect of our language, which is absent in other species' communications: our linguistic communication (communication *via* language) is further subject to *pragmatic reasoning*, through which a particular utterance should be finally interpreted by taking into consideration various factors including social customs and assumptions about A's state of knowledge (Grice 1975; Stalnaker 1973, 2002 and Searle 1969).

Summing up these characteristics of our language (use), we have the following picture (Davis 2011):



Thus, our language use (linguistic communication) works on the basis of a propositional thought coloured by a force. This amalgam determines the semantic content of the utterance, and it is subject to pragmatic inference, from which A assigns a particular interpretation to the utterance and/or S intends A to interpret their utterance, in a particular fashion.

From this picture, we can say that what differentiates our language and linguistic communication from the other species' communication systems are: (i) the presence of internalised thought+force, and (ii) the link between such semantic content and pragmatics. If we consider ourselves to live in a species-specific linguistic *Umwelt* (Hoffmeyer 1996) and seek to know ourselves better through the lens of language, then we need to understand these two conspicuous aspects of our language (use).

Contrary to (i), which has caught serious formal attention and thus has been relatively well-understood thanks to intensive research investigations from various perspectives (cf. Frege 1918, Chomsky 1955/1975, 1957, 1970, 1995, Lewis 1979 and Dummet 2001), the nature of the link between semantics and pragmatics in (ii) has not yet been well revealed. Recent studies under the heading of *formal pragmatics*[2] enthusiastically seek to provide semantic tools for formulating a load of what has been called *pragmatic phenomena* (see Büring 2003, 2016a,b; Tomioka 2010a,b; Wagner 2012; Constant 2014 among others, taking an example from the phenomenon called *Contrastive Topic*). But still we need pragmatic reasoning immune to such formalism to have the right interpretation of an utterance at a particular context. What dissociates semantics (sentence radical + $\boxed{\text{Force}}$) and $\boxed{\text{Pragmatics}}$? More precisely, how can we understand the link/distinction between the two, so that we understand our own species better?

To the extent that the account I propose succeeds, it provides an answer to this question. $\boxed{\text{Force}}$ is COM (i.e., an agent's self commitment), and $\boxed{\text{Pragmatics}}$ is the rest of an agent's commitment (more precisely, the things pertinent to the contextual interpretation of the utterance of a sentence radical+COM). An agent's public commitment is a part of $\boxed{\text{Pragmatics}}$ when the utterance only publicises their self commitment. If $\vdash$ is Merged in the syntactic structure, then

[2]There are many other names given for the approaches with the same spirit: among them *dynamic semantics* is perhaps one of the best known (cf. Heim 1982, 1992; Portner 2004 and many others).

this becomes a part of semantics. In other words, it *semanticises* the public commitment. In this sense, the borderline between these two is *plastic*: it can be marked before or after $\vdash$, so to speak.

The question that I would like to address at this point is: Why does human language connect semantics and Pragmatics by means of *commitment*? Why is it nothing but an agent's commitment that connects these two? Why do we, humans, have two types of commitment, *viz.* self and public commitments? The answer I give to these questions are essentially biological.

First of all, you can publicise your false beliefs either intentionally or unintentionally. Sometimes you happen to believe something (p) that is actually false. In this case, the statement that p happens to be the publicisation of an incorrect belief. In other cases, you can make a statement that p despite your knowledge that it is in actuality false. Then, you are in effect telling a lie. In both of these cases, your statement is *dishonest* with regard to the truth value of p. This kind of dishonest publicisation of a belief is ubiquitous in our ordinary communication, be it intentional or unintentional. In this sense, our language is not an honest signal, as Kazuo Okanoya (p.c.) notes (see Staler 1983 and Searcy and Nowicki 2005 for the biologically precise definition of honest signals).

This is an apparent deficit of our language capacity from the evolutionary perspective. As the informative component of an utterance can always be deceptive, it does not necessarily signal the true state of an utterer's belief, intention and so forth. Therefore, the context change based upon each utterance can be fooled by the very utterance itself. This indicates that our communication can, and does sometimes lead us to some undesirable consequences, which is obviously evolutionarily non-beneficial.

This potential dishonesty inherent to our language use is, however, the flip side of the creative aspect of our language use that is uniquely human. An honest communicative signal, like the alarm calls of male putty-nosed monkeys (Arnold and Zuberbühler 2006a,b, 2012, 2013; Schlenker et al. 2016 and many others), directly denotes a mind-external object, such as the threat to the survival of the species, groups, conspecifics and so on. Since the denotatum of the signal is mind-external and there is a one-to-one relation between the signal and the denotatum, the signal

keeps its honesty. And thanks to this honesty, the signals evoke appropriate escaping movements in accordance with the external conditions/threats (cf. Matsumoto 2022 for the potential link between how primate alarm calls are formed and some syntactic phenomena like *topicalisation*). In contrast, as Chomsky (2000b, 2021) and Berwick and Chomsky (2016) point out, what a word denotes is a mind-internal element/concept. Each expression is not directly associated with an external thing (see also Ramchand 2018). Thanks to this dissociation from the external world of our mental lexicon, we can create new words by categorising concepts in novel ways, and combine these words freely, as we wish, with no hindrance of external stimuli (cf. Chomsky 1966, 1986, 2005, 2015b and related works; see also Bronowski 1977 for the idea that the separation of affect, which is the dissociation of emotions and information, is key to human (and language) evolution). This would have never been possible if the faculty of language were tightly connected to the external world and thus only capable of producing honest signals. This creative aspect of language is what makes us unique in the animal kingdom, and what underlies our civilisation and prosperity, which may come to an end in the near future because of the other side of it, spreading conspiracy theories and other lies that distract the general populace from the existential threats that the species itself has been causing. In short, creativity comes at the (great) cost of dishonesty. No matter what, our linguistic signal stays potentially dishonest.

I claim that an agent a's public commitment is key to mitigating such a con of the linguistic capacity of ours. Recall that what $\vdash$ does is to semanticise a's public commitment, which results in the amplification of the relevant commitment. Practically speaking, this imposes a severer restriction upon the agent's future actions. Informally speaking, this means that $\vdash$ sacrifices some degree of liberty of a. By sacrificing a-self, a seeks to increase the probability that the other DPs come to believe that p is true (in the case of the utterance of a declarative sentence). In other words, by using $\vdash$, a seeks to show that the utterance should be taken to be a decent, honest signal. As I presented, as long as language is creative, the signal based upon the language use can never be honest across the board. What $\vdash$ does is a compensation: by shackling a-self, a seeks to make the signal sound more probable to be honest. Of course, a does not have to impose such a

restriction upon *a*-self; then, *a* simply utters a signal that is not inherently honest with no increase in the probability of the other DPs believing *a*.

Thus, there is an obvious evolutionary virtue of ⊢. The next crucial question is: How did ⊢ become linguistic? More precisely: How did it become Mergeable?

For an element/concept to be Merged, it has to be Mergeable. According to Chomsky (2008), an item can be Merged if it bears what he calls the *Edge Feature* (EF). EF is a feature that basically states that its bearer need its Merge-mate. Thus, for ⊢ to be Mergeable, it has to have EF. Therefore, the key evolutionary stage relevant to the evolution of ⊢ is where the concept (functional element) was *lexicalised via* the assignment of EF. This is in line with Chomsky (2001); Boeckx (2011a,b, 2014) and many others.

According to the works including Bobaljik and Thráinsson (1998); Fortuny (2008); Giorgi and Pianesi (1997); Pylkkänen (2008); Sigurdsson (2011); Zanuttini et al. (2012), languages vary as to how lexical features f_1 and f_2, both drawn from a universal repertoire (UG), are *(un)bundled* at the level of the lexicon.[3] Calling this *"Bundling" Parameter*, they formalise it in the following form (from Boeckx 2014):

(345) Bundling Parameter:

Given two lexical features f_1 and f_2, drawn from a universal repertoire (UG), does a given language L project f_1 and f_2 as a bundle or do f_1 and f_2 function as distinct heads in syntax?

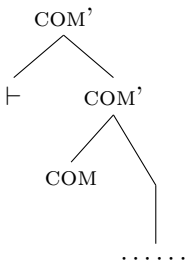
If this idea is correct, then the distinction between languages like Japanese with particles like *yo* and *ne* and others like English with no such particles can be made on the basis of this Bundling Parameter. That is, the former type of languages do not project COM and ⊢ as a bundle, and instead treat them as distinct heads in syntax; in contrast, in languages like English, these two functional features function as a bundle. Put in another way, the former languages treat COM and ⊢ as distinct Mergeable *Lexical Items* (LIs), whilst the latter languages count them as a single LI.

This captures the parametric variation between these two types of languages. Languages like

[3]The idea can be traced back to Borer (1984) and Chomsky (2001).

Japanese project the syntactic structure in the treetop, given the assumption that they have ⊢ as a distinct functional LI (assuming that they are head-initial):

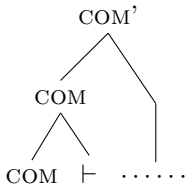
(346)



In this type of languages, ⊢ is in principle distinct from COM, and hence *a*'s self and public commitments are semantically computed separately.

In contrast, languages like English have the syntactic structure illustrated in (347), in which COM and ⊢ function as a single bundle.

(347)



In this type of language, *a*'s self and public commitments must be treated as a single semantic unit: they cannot be computed separately, unlike in languages like Japanese.

This leads us to some interesting predictions. For instance, we expect ⊬ not to be usable without nullifying *a*'s self commitment in the latter type. This is because COM and ⊢ form a single LI in this type. If *Neg* is Merged to this Bundle (LI), then the result of this operation is a morphological complex [*Neg* [COM ⊢]], in which *Neg* should affect not just ⊢ but also COM. Thus, this complex nullifies not just *a*'s public commitment but the same agent's self commitment as well. If so, such languages should not have a lexical element like *sa* in Japanese. Though I have to leave the investigation of this prediction for future research, along with other issues that arise from the argument provided here, it should be noted that the idea laid out here is generally in line with Fukui's (1986) hypothesis that parameters reside in the (in)activity of *functional* features/categories. More precisely, the present analysis claims that the parameters pertaining to the lexical status of ⊢, which is apparently a functional element, is whether it should project

as a distinct LI or it should be bundled with COM. In both cases, *a*'s public commitment (more precisely, the grammatical element that encodes *a*'s public commitment) is always active. The parameter determines whether it always comes with COM or not.

Let us get back to the evolutionary question. How did the concept of *public commitment* arise in the human species? Without it, we would not have had the Mergeable LI ⊢ in the first place. Obviously, it is a social construct, which is why it is also called *social* commitment (cf. Geurts 2019). This means that it evolved through what is called *cultural evolution* (Shennan 2009; Henrich 2016; Henrich and Henrich 2007). What is special about ⊢ is the endowment of EF to this socially evolved concept of *public commitment*, the allegedly species-specific, uniquely human feature that enables us to execute cross-modular thinkings.

The factual assumption that the concept of *public commitment* evolved through cultural evolution does not stand in the opposite position that Chomsky (2008, 2013, 2015a,b, 2021) takes, which dictates that the language faculty evolved as a result of mutation. This construal of language evolution leaves no room for the chance of *descent with modification*, simply because there is no time for that, given the recency of the emergence of the species in an evolutionary eye. But this argument applies only to the evolution of the core language faculty, which in the present terms is nothing but unbounded Merge. More precisely, the core language faculty that is assumed to have evolved *via* mutation along with the emergence of *Homo Sapiens* consists of Merge and EF, the latter of which endows the unboundedness to the simplest possible set forming operation. The rest can in principle be subject to descent with modification, cultural evolution, and many other evolutionary processes acknowledged in the field. Therefore, the emergence of the concept of *public commitment* as a result of cultural evolution is compatible with the view of language (EF+Merge) as the emergent property of single mutation. If the concept did indeed evolve through cultural evolution, then it should be something beneficial to the species; otherwise it would have been wed out by the (brute) force of selection. The obvious communicative benefit of public commitment, linguisticised as ⊢, was already noted above.

Whether this is evolutionarily valid or not can be put to an experimental scrutiny. Although

the exact simulation must be the topic for future research, let me sketch out the model of such an experiment. We can define two groups of agents G and H, where G consists of those agents who have the ⊢-like (sub-)communicative means while H consists of those who do not have such means. Suppose that the selective pressure is defined in such a way that the more secured the honesty of the agents' communicative signals are, the more it remunerates for the agents or the groups which the agents are in. If this selective pressure favours G, then the present account will be experimentally supported. As I noted, the actual agent simulation must be run in future research.

All in all, the present proposal assumes that before ⊢ was COM. The COM-head is responsible for constructing thought (beliefs, intentions and questions), which according to the present theory is nothing but an agent's *self commitment*. The content of a COMP is essentially *internal*, in the sense that it pertains to the process of *internalisation*. Later in the process of cultural evolution, the beliefs and intentions thus constructed became publicisable *via externalisation*, which made it possible for the species to verbalise what it believes and intends. As the linguistic society/group/community grew, the problem of dishonest signal became more acute. Hence, the concept of *public commitment* got stabilised and EF was endowed to it accordingly. And it came to be Merged to the syntactic structure either as a part of bundle or as a distinct LI, just like what evolutionary biologists would call *tinkering*.

8.4 Psycholinguistic implications of the present account

It is at least intuitively believed that children with severe ASD rarely use SFPs *yo* and *ne*, or do not use them at all. Why? I will demonstrate a potential approach to this question from the perspective of the present account.[4] See Matsui et al. (2006) and Matsui et al. (2009) among others for the role and acquisition of *yo* in preschool children's speeches.

Sadake and Kobayashi (1987) experimentally shows that a child with severe ASD , who participated in their experiments, rarely uses SFPs when there is no instruction or prompt to use them.

[4] I deeply thank Hiromichi Hagihara for a series of discussions.

The SFPs they examine are *yo* and *ne*. According to these researchers, the participant in their experiments (five years and two months old at the timing of the experiment) came to use *yo* and *ne* when the experimenters instructed them to do so by demonstrating the use of the particles.

In a follow-up experiment, Matsuoka et al. (1997) report that the same participant could not regain the usage of *ne* at all while they could master *yo*'s usage when no verbal prompt was provided to them. This indicates that the participant was simply trying to repeat what was said to them when they used *ne* in Sadake and Kobayashi's (1987) experiment. After this was revealed, these researchers trained the same participant to regain the usage of *ne* as well as *yo* once a week for over eight months.

Finally, the researchers observed the participant's linguistic behaviour in their interaction with their parents at home for seventy-five minutes a week. The observation lasted five weeks. Interestingly, while the 271 number of *yo*s were observed in the participant's speeches during the observation, only four *ne*s were attested. This is interpreted by the researchers as an indication that the participant, who is with ASD, could not practically regain the usage/use of the SFP *ne*, while the same participant came to master the usage of *yo*.

Note that the series of experiments that these researchers conducted involve only one participant. Therefore, the danger cannot be overemphasised of generalising from their observations that children with ASD generally cannot use *ne* appropriately while they can regain the usage of *yo* under intensive training. Naoe et al. (2022) already point this out, and conducted a corpus-based investigation with a larger dataset from 54 people. In that examination, they found that people with ASD use *ne* and *yo* far less frequently than typically-developed people, which converges with the experimental result of Matsuoka et al. (1997). The finding of this work is important especially given the fact that it is the first of its kind to investigate the correlation between the frequent use of the particles and the neuro-diversity in question with statistic significance. Naoe et al. (2021) also experimentally show that adult people with ASD use *ne* much less than those typically developed adult people. They also report that a load of incorrect uses of *yo* are observed in the speech of those adults with ASD.

These two experimental results suggest that people with severe ASD find it difficult to master the usage of *yo* and *ne*. The difference between the observation made by Matsuoka et al. (1997) and Sadake and Kobayashi (1987) on the one hand and the finding by Naoe et al. (2021) and Naoe et al. (2022) on the other is that while the former suggests that a child with ASD can regain the usage of *yo* if intensively trained, the latter report that there are many incorrect uses of *yo* in the speech of people with ASD with no training. The question is: What is it that is said to be learned or regained by the participant with ASD in the experiments by Matsuoka et al. (1997) and Sadake and Kobayashi (1987)? Is these authors' assumption that the participant regained the usage of *yo* correct, despite evidence that people with ASD exhibit incorrect uses of the particle?

At this point, recall that the present theory dictates that *yo* encodes S's public commitment to act upon p. By definition, an agent a's public commitment presupposes a's pro-sociality, in the sense that a's public commitment is a commitment by *a to the other DPs* to act upon p. Therefore, a's mastery of the SFPs (and PFPs) requires full awareness of the other DPs than a-self. It is quite natural, then, that people with severe ASD, who do not show active pro-sociality, exhibit rare or no use of discourse particles in the absence of intensive trainings. So as to master the use of the particles, a has to first conceptualise *public commitment*, which is no small deal for a person with ASD. Thus, whether people/children with ASD can indeed (re)gain the usage of *yo* or not can be tested by examining whether they have the concept of *social/public commitment* and its lexicalised element (i.e., $\vdash$) in their mind. Since $\vdash$ does not appear in the externalised speech as a distinct phonetic item, even in the presence of *yo*, the mere observation that *yo* is used in their speech does not provide evidence that they have mastered what the particle encodes.

Sa is an interesting particle to be examined psycholinguistically in this respect: it encodes the information that $p \notin \textsc{pcs}^{\text{C}}_{S}$, and hence the mastery of its usage indicates the mastery of $\vdash$, much more than that of *yo* seems to indicate it. Recall that *yo*'s effect can be induced *via* a simple pragmatic implicature from the utterance of a sentence in which the particle is not used. Thus, it might well be the case that those with ASD use *yo* without knowing that it semanticises S's relevant public commitment. Put differently, it is possible that they use it as if it had no effect.

Put yet differently, we cannot eliminate the possibility merely from the fact that they have come to use *yo* frequently that they use *yo* as the post-syntactic realisation of the *S*-head the same head which *does not* embed ⊢, thus using the particle as if it were the post-syntactic realisation of the *S*-head in a bare declarative/imperative/interrogative sentence. To persuasively argue that they indeed use *yo* in the same way that others do, one may ask them whether they take responsibility for the truth of *p* and whether they are willing not to retract the responsibility. If they say yes, then they seem to use the particle in the way that others do. But obviously, the experiment *per se* is too unrealistic to be done.

In contrast, *sa* provides us with a way of circumventing this conundrum. *Sa*'s effect does not arise pragmatically: rather, it does the opposite of what is normally pragmatically implicated. And in order to master its usage, one has to Merge ⊢ with *Neg* at the syntactic level. Hence, whether a child with ASD acquires the usage of *sa* directly tells us whether the same child successfully conceptualises (S's) public (atelic) commitment to act upon *p*. This in turn tells us whether the conceptualisation of *public commitment*, which is a (pro-)social construct, is possible for children with severe ASD or not.

This proposal thus provides us with a strictly formal tool for careful scrutiny of the observation made by Matsuoka et al. (1997) and Sadake and Kobayashi (1987). Since they do not dissociate ⊢ from *yo*, their observation in one participant's language use should not be taken as evidence that the participant mastered the usage of *yo*. In the presence of evidence that there are many incorrect uses of *yo* in the language use of people with ASD, along with the fact that they do not use the particle frequently, it is safer to tentatively assume that we cannot say that the participant with ASD indeed mastered the usage of *yo*. Note that this is not in and of itself a drawback: rather, in so doing we can construct a more detailed and careful experimental design, which seeks to examine whether a person with ASD can conceptualise *public commitment*. Once this is done, it will certainly contribute to our understanding of the language of people with ASD.

Now let us turn our attention back to the question of ASD children's inability to (re)gain the use of *ne*. According to the present analysis, the particle realises the *A*-head under which the

modifier ⊢ adjoins. This means that for the particle to be used, the notion of *Addressee* has to be conceptualised and encapsulated in EF in addition to ⊢. The acquisition of the concept of *Addressee* requires a lot. For one thing, it is not about the polar opposite of S: as I showed in Chapter 4, there can be cases where the addressees do not exhaust all of the DPs other than S. Thus, the concept of *Addressee* cannot be defined as *Not-Speaker*. It requires the recognition/specification of a particular discourse agent or a group of particular agents from the pool of (potential) addressees. Since having the concept of *social/public commitment* is not enough for the conceptualisation of *Addressee*, people with ASD seem to have extreme difficulty in the recognition of the distinction between those discourse agents who should be encoded as *Addressee* and those who should not be, in addition to the difficulty in the acquisition of the concept called *public commitment*. In terms of the present theory, the capacity that is allegedly absent in the relevant autistic individuals at least includes the capacity to distinguish A from all the DPs except A.

If the above argument is on track, those individuals with severe ASD do not have a way of Merging the *A*-head in the treetop as an argument to a COMP. That is, the LI *A* is absent in their mental lexicons. This absence is due to the lack of the concept of *Addressee*, the lexicalisation of which results in the LI. Due to this absence of *A*, *ne* and its stylistic variants fail to surface in their utterances. This explains why the particle is particularly difficult for ASD children to acquire. Of course, it might well be the case that in addition to *Addressee*, *public commitment* is also absent in those children.

The discussion above does not go beyond the realm of speculation at this stage. However, it yields some interesting predictions. First, it predicts that if the way of distinguishing addressees from other DPs is discovered by the children with ASD, then they will learn the *Addressee* concept, which eventually leads them to (re)gain the usage of *ne* if they have a way of learning the concept of *public commitment*. I take this a step forward: to the best of my knowledge, the relation between the lack of pro-sociality and its linguistic reflection in autistic children has not been deeply understood at a theoretical level, because of the lack of precise definition of pro-sociality and the formal way of construing it within the context of linguistic research. They are often said

to struggle with the acquisition of empathetic emotions. But what does it precisely mean that they are not pro-social or they do not exhibit empathy from the perspective of a formal linguistic theory? It has been hard to clear the mist of those vague notions to put them into a formal linguistic perspetctive, and it is not the (experimental) psychologist's job to do this. Rather, it should be done by a formal linguist. And the present proposal provides a potential venue to pursue. The relevant cognitive traits covered by these pre-theoretical notions are the ways to understand what *public commitment* is, to pick a particular group of agents, and to assign the discourse role of *Addressee* to the group thus chosen, hence distinguishing it from the other DPs.

At least, this produces a falsifiable hypothesis, the validity of which can be tested in an experimental setting. For instance, if one could think of an experiment in which a child's cognitive capability can be tested of assigning the particular discourse role called *Addressee* to particular DPs, then its connection to the mastery of the usage of *ne* or the lack thereof can be examined. This will certainly improve our understanding of not just the nature of discourse particles in Japanese but also its psychological reality, along with the cognitive features of children with ASD.

I hope to have shown that the present theory of Japanese discourse particles provides many psycholinguistic implications with great potential. The important point is that the theory is not just formal; it is formal with *psychological* grounds. Given its formality, it yields a clear and solid foundation for psycholinguistic experiments. And the validity of the formal analysis can be tested on the basis of the result of such experiments. There is, therefore, no armchair-ness in the present analysis. It is expected that the theory laid out in this dissertation facilitates cross-disciplinary studies towards the better understanding of the psychological nature of our language.

8.5 Future prospectus

Throughout this dissertation, I tried to show that the notion of commitment plays a vital role in our linguistic thought. I empirically showed that a's self and public commitments should be distinguished, at least in languages like Japanese, where there are overt morphological cues for

doing so.

Given that the theory proposed in this dissertation has many important conceptual and empirical implications, as I showed in this chapter, it is hoped that it sheds light on the phenomena in other languages similar to the ones intensively discussed here, and in so doing the typological generalisation will be made.

Furthermore, I did not discuss other discourse particles in Japanese, such as *wa*, *ze* and *zo*. Given the fact that they are only licit when preceded by *da* or other Tense-markers, they seem to embed a TP (see Saito and Haraguchi 2012 for the analysis of *wa* in this line). But *ze* and *zo* can be used phrase-finally, only if preceded by *da/desu*, while the particles examined in this dissertation do not require the presence of such copulas (*sa* behaves more differently in this regard, since it cannot co-occur with such copulas, as in **da*/**desu sa*). At this point, their nature is not obvious at all. Therefore, I leave the examination of them as my homework assignment.

As I noted several times in the preceding chapters, Brandom (1994) and Pietroski (2018), two of the works on which much of the present analysis is based, advocate semantics without recourse to truth values. Even though I presented a formal theory of Japanese discourse particles based upon the now popular truth conditional semantics, it is expected that the theory can be reframed in terms of these avowedly anti-truth conditional semantic theories. It is not an easy task to do this job, and hence I have to leave it for future research, with the note that both Pietroski's idea and the analysis laid out in this dissertation base themselves upon *compositionality* of natural language semantics, which means that they share some crucial foundations. I hope this is an auspicious sign. But the chasm between inferentialism that Brandom progresses and compositional semantics looks wide. Fortunately, however, Pereplyotchik (2020) discusses at length that the width of the gap is only apparent. The reframing of the present proposal in question must be pressed forward with Pereplyotchik's ambition and optimism in the near future.

Finally, the psycholinguistic and evolutionary linguistic experiments of the sort I speculatively noted in this chapter should reveal much more about the biological and psychological nature of the particles discussed in this dissertation. They have to be done in interdisciplinary collaborations.

With these notes, I conclude this dissertation while being publicly committed to act in accordance with the relevant investigations in the future.

References

Aboh, Enoch O. 2010. Information structuring begins with the numeration. *Iberia: An International Journal of Theoretical Linguistics* 2:12–42.

Alcázar, Asier, and Mario Saltarelli. 2013. *The syntax of imperatives*. Cambridge: Cambridge University Press.

Arnold, Kate, and Klaus Zuberbühler. 2006a. The alarm calling system of adult male putty-nosed monkey *cercopithecus nictitans martini*. *Animal Behavior* 72:643–653.

Arnold, Kate, and Klaus Zuberbühler. 2006b. Semantic combinations in primate calls. *Nature* 441:303.

Arnold, Kate, and Klaus Zuberbühler. 2012. Call combinations in monkeys: Compositional or idiomatic expressions? *Brain Language* 120:303–309.

Arnold, Kate, and Klaus Zuberbühler. 2013. Female putty-nosed monkeys use experimentally altered contextual information to disambiguate the cause of male alarm calls. *PLoS One* 8.

Austin, John L. 1962. *How to do things with words*. Oxford: Oxford University Press.

Beck, Sigrid. 1996. Quantified structures as barriers for LF movement. *Natural Language Semantics* 4:1–56.

Beck, Sigrid. 2006. Intervention effects follow from focus interpretation. *Natural Language Semantics* 14:1–56.

Berwick, Robert C., and Noam Chomsky. 2016. *Why only us: Language and evolution*. Cambridge, MA: MIT Press.

Beyssade, Claire, and Jean-Marie Maradin. 2006. The speech act assignment problem revisited: Disentangling speaker's commitment from speaker's call on addressee. In *Selected Papers from CSSP 2005*.

Biezma, Maria, and Kyle Rawlins. 2012. Responding to alternative and polar questions. *Linguistics and Philosophy* 35:361–406.

Bobaljik, Jonathan, and Höskuldur Thráinsson. 1998. Two heads aren't always better than one. *Syntax* 1:37–71.

Boeckx, Cedric. 2011a. Approaching parameters from below. In *The biolinguistic enterprise: New perspectives on the evolution and nature of the human language faculty*, ed. Anna Maria Di Sciullo and Cedric Boeckx, 205–221. Oxford: Oxford University Press.

Boeckx, Cedric. 2011b. The emergence of the language faculty, from a biolinguistic point of view. In *The oxford handbook of language evolution*, ed. Maggie Tallerman and Kathleen Gibson, 492–501. Oxford: Oxford University Press.

Boeckx, Cedric. 2014. *Elementary syntactic structures: Prospects of a feature-free syntax*. Cambridge: Cambridge University Press.

Borer, Hagit. 1984. *Parametric syntax*. Dordrecht: Foris.

Brandom, Robert. 1987. Singular terms and sentential sign designs. *Philosophical Topics* 15:145–167.

Brandom, Robert. 1994. *Making it explicit*. Cambridge, MA: Harvard University Press.

Brandom, Robert. 1997. Replies. *Philosophy and Phenomenological Research* 57:189–204.

Brandom, Robert. 2000. *Articulating reasons: An introduction to inferentialism*. Cambridge, MA: Harvard University Press.

Brandom, Robert. 2008. *Between saying and doing: Towards an analytic pragmatism*. Cambridge, MA: Harvard University Press.

Brandom, Robert. 2009. *Reason in philosophy: Animating ideas*. Cambridge, MA: Harvard University Press.

Bronowski, Jacob. 1977. *A sense of the future*. Cambridge, MA: MIT Press.

Büring, Daniel. 2003. On D-trees, beans, and B-accents. *Linguistics and Philosophy* 26:511–545.

Büring, Daniel. 2016a. (Contrastive) topic. In *The Oxford handbook of information structure*, ed. Caroline Féry and Shinichiro Ishihara, 64–85. Oxford: Oxford University Press.

Büring, Daniel. 2016b. *Intonation and meaning*. Oxford: Oxford University Press.

Cable, Seth. 2007. The grammar of Q: Q-particles and the nature of wh-fronting, as revealed by the wh-questions of Tlingit. Doctoral Dissertation, MIT.

Cable, Seth. 2010. *The grammar of Q: Q-particles, wh-movement, and pied-piping*. Oxford: Oxford University Press.

Castañeda, Hector-Neri. 1967. Comments. In *The logic of decision and action*, ed. Nicholas Rescher. University of Pittsburgh Press.

Chomsky, Noam. 1955/1975. *The logical structure of linguistic theory*. New York: Springer.

Chomsky, Noam. 1957. *Syntactic structures*. The Hague: Mouton.

Chomsky, Noam. 1965. *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.

Chomsky, Noam. 1966. *Cartesian linguistics*. Cambridge: Cambridge University Press.

Chomsky, Noam. 1970. Remarks on nominalization. In *Readings in English transformational grammar*, ed. Roderick A. Jacobs and Peter S. Rosenbaum, 184–221. Waltham, MA: Ginn.

Chomsky, Noam. 1986. *Knowledge of language*. New York: Praeger.

Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.

Chomsky, Noam. 2000a. Minimlist inquiries. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 133–167. Cambridge, MA: MIT Press.

Chomsky, Noam. 2000b. *New horizons in the study of the language and mind*. Cambridge: Cambridge University Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.

Chomsky, Noam. 2002. *On nature and language*. Cambridge: Cambridge University Press.

Chomsky, Noam. 2004. Beyond explanatory adequacy. In *Structures and beyond*, ed. Adriana Belletti, 104–131. Oxford: Oxford University Press.

Chomsky, Noam. 2005. Three factors in language design. *Linguistic Inquiry* 36:1–22.

Chomsky, Noam. 2006. *Language and mind*. Cambridge: Cambridge University Press.

Chomsky, Noam. 2007. Approaching ug from below. In *Interfaces + recursion = language? Chomsky's minimalism and the view from syntax and semantics*, ed. Uli Sauerland and Michael Gartner, 1–29. Berlin: Mouton de Gruyter.

Chomsky, Noam. 2008. On phases. In *Foundamental issues in linguistic theory: Essays in honor of Jean-Roger vergnaud*, ed. Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 291–321. Cambridge, MA: MIT Press.

Chomsky, Noam. 2010. Some simple evo devo theses: how true might they be for language? In *The evolution of human language: Biolinguistic perspectives*, ed. Richard K. Larson, Viviane Dépfez, and Hiroko Yamakido, 45–62. Cambridge: Cambridge University Press.

Chomsky, Noam. 2012. *The science of language: Interviews with James McGilvray*. Cambridge: Cambridge University Press.

Chomsky, Noam. 2013. Problems of projection. *Lingua* 130:33–49.

Chomsky, Noam. 2015a. Problems of projection: Extensions. In *Structures, strategies and beyond*, ed. Elisa Di Domenico, Cornelia Hamann, and Simona Matteini, 3–16. Amsterdam: John Benjamins.

Chomsky, Noam. 2015b. Some core contested concepts. *Journal of Psycholinguistic Research* 44:91–104.

Chomsky, Noam. 2021. Minimalism: Where are now, and where can we hope to go. *Gengo Kenkyu* 160:1–41.

Chomsky, Noam, Ángel J. Gallego, and Dennis Ott. 2019. Generative grammar and the faculty of language: Insights, questions and challenges. *Catalan Journal Of Linguistics* 0:229–261.

Christensen, Morten, and Simon Kirby, ed. 2003. *Language evolution*. Oxford: Oxford University Press.

Ciardelli, Ivano. 2009. Inquisitive semantics and intermediate logics. Master's thesis, University of Amsterdam.

Ciardelli, Ivano, Jeroen Groenendijk, and Floris Roelofsen. 2019. *Inquisitive semantics*. Oxford: Oxford University Press.

Ciardelli, Ivano, and Floris Roelofsen. 2009. Generalized inquisitive logic: completeness via intuitionistic Kripke models. *Proceedings of the 12th Conference on Theoretical Aspacts of Rationality and Knowledge* 71–80.

Cinque, Guglielmo. 1999. *Adverbs and functional heads*. Oxford: Oxford University Press.

Cinque, Guglielmo. 2002. We had to meet in cafés to read *syntactic structures*. *Glot International* 6:190–193.

Cinque, Guglielmo. 2013. *Typological studies. word order and relative clauses*. New York: Routledge.

Comorovski, Illeana. 1989. Discourse and the syntax of multiple constituent questions. Doctoral Dissertation, Cornell University.

Condoravdi, Cleo, and Sven Lauer. 2009. Performing a wish: Desiderative assertions and performativity. In *Talk presented at Califormia Universities Semantics and Pragmatics (CUSP)*. UC Santa Cruz.

Condoravdi, Cleo, and Sven Lauer. 2010. Imperatives and public commitments. In *Handout of talk presented at the 11th Annual Semantics Fest*. Stanford University.

Constant, Noah. 2014. Contrastive topic: Meanings and realizations. Doctoral Dissertation, University of Massachusetts, Amherst.

Culicover, Peter W. 1993. Evidence against ECP accounts of the *that-t* effect. *Linguistic Inquiry* 24:557–561.

Davidson, Donald. 1967. Truth and meaning. *Synthese* 17:304–323.

Davis, Christopher. 2010. Decisions, dynamics, and the Japanese particle *yo*. *Journal of Semantics* 26:329–366.

Davis, Christopher. 2011. Constraining interpretation: Sentence final particles in Japanese. Doctoral Dissertation, University of Massachusetts, Amherst.

Dayal, Veneeta. 1996. *Locality in wh-quantification: Questions and relative clauses in Hindi*. Dordrecht: Kluwer Academic Publishers.

Dummet, Michael. 2001. *Gottlob Frege (1848-1925)*. Oxford: Wiley-Blackwell.

Embick, David, and Rolf Noyer. 2007. Distributed morphology and the syntax/morphology interface. In *The Oxford handbook of linguistic interfaces*, ed. Gillian Ramchand and Charles Reiss, 289–324. Oxford: Oxford University Press.

Emonds, Joseph E. 2008. Valuing v-features and n-features: What adjuncts tell us about case, agreement, and syntax in general. In *Merging features: Computation, interpretation, and acqui-*

sition, ed. Jose M. Brucart, Anna Gavarro, and Jaume Sola, 194–214. Oxford: Oxford University Press.

Endo, Yoshio. 2007. *Locality and information structure*. Amsterdam: John Benjamins.

Endo, Yoshio. 2015. Two Reasonps: What are*(n't) you coming to US for? In *Beyond functional sequence: The cartography of syntactic structures*, ed. Ur Shlonsky, volume 10, 220–231. Oxford: Oxford University Press.

Endo, Yoshio, and Masako Maeda. 2020. *Kaatogurafii [cartography]*. Tokyo: Kaitakusha.

Farkas, Donka F., and Kim B. Bruce. 2010. On reacting assertions and polar questions. *Journal of Semantics* 27:81–118.

Farkas, Donka F., and Floris Roelofsen. 2017. Division of labor in the interpretation of declaratives and interrogatives. *Journal of Semantics* 34:237–289.

Féry, Caroline. 2013. Focus as prosodic alignment. *Natural Language and Linguistic Theory* 31:683–734.

Fitch, Tecumseh W. 2010. *The evolution of language*. Cambridge: Cambridge University Press.

Fortuny, Jordi. 2008. *The emergence of order in syntax*. Amsterdam: John Benjamins.

Frege, Gottlob. 1918. Der Gedanke. *Beiträge zur Philosophie des deutschen Idealismus* 1:58–77.

Fujita, Koji. 2009. A prospect for evolutionary adequacy: merge and the evolution and development of human language. *Biolinguistics* 3:128–153.

Fujita, Koji. 2014. Recursive merge and human language evolution. In *Recursion: Complexity in cognition*, ed. Tom Roeper and Margaret Speas, 243–264. New York: Springer.

Fujita, Koji. 2017. On the parallel evolution of syntax and lexicon: A merge-only view. *Journal of Neurolinguistics* 43:178–192.

Fukui, Naoki. 1986. A theory of category projection and its applications. Doctoral Dissertation, MIT.

Fukui, Naoki, and Hiromu Sakai. 2003. The visibility guideline for functional categories: Verb raising in Japanese and related issues. *Lingua* 113:321–375.

Geurts, Bart. 2019. Communicationas commitment sharing: Speech acts, implicatures, common ground. *Theoretical Linguistics* 45:1–30.

Ginzburg, Jonathan. 1996. Dynamics and the semantics of dialogue. In *Language, logic, and computation*, ed. Jerry Seligman and Dag Westerståhl, volume 1, 221–237. Stanford: CSLI Publications.

Giorgi, Alessandra, and Fabio Pianesi. 1997. *Tense and aspect: From semantics to morphosyntax*. Oxford: Oxford University Press.

Grice, Paul. 1975. Logic and conversation. In *Syntax and semantics 3: Speech acts*, ed. Peter Cole and Jerry Morgan, 41–58. New York: Academic Press.

Groenendijk, Jeroen. 1999. The logic of interrogation: classical version. In *Proceedings of SALT 9*, 109–126. Cornell University Press.

Groenendijk, Jeroen. 2009. Inquisitive semantics: Two possibilities for disjunction. *Proceedings of the 7th International Tbilisi Symposium on Language, Logic, and Computation* 80–94.

Groenendijk, Jeroen, and Martin Stokhof. 1984. *Studies in the semantics of questions and the pragmatics of answers*. Amsterdam: University of Amsterdam.

Groenendijk, Jeroen, and Martin Stokhof. 1991a. Dynamic Montague grammar. In *Dyana deliverable R2.2a, quantification and anaphora I*, ed. Jeroen Groenendijk, Martin Stokhof, and David Beaver. University of Edinburgh: Center for Cognitive Science.

Groenendijk, Jeroen, and Martin Stokhof. 1991b. Dynamic predicate logic. *Linguistics and Philosophy* 14:39–100.

Gungloson, Christine. 2003. *True to form: Rising and falling declaratives as questions in English*. New York: Routledge.

Hale, Ken, and Samuel Jay Keyser. 1993. *Prolegomenon to a theory of argument structure*. Cambridge, MA: MIT Press.

Halle, Morris, and Alec Marantz. 1993. Distributed morphology and pieces of inflection. In *The view from Building 20: Essays in linguistics in honor of Sylvan Bromberger*, ed. Ken Hale and Samuel Jay Keyser, 111–176. Cambridge, MA: MIT Press.

Hamblin, Charles L. 1973. Questions in Montague English. *Foundations of Language* 10:41–53.

Han, Chung Hye. 1998. The structure and interpretation of imperatives: Mood and force in universal grammar. Doctoral Dissertation, University of Pennsylvania.

Han, Chung Hye. 1999. The contribution of mood and force in the interpretation of imperatives. In *Proceedings of NELS 29*, ed. Pius Tamanji, Masako Hirotani, and Nancy Hall, 97–111. GLSA.

Hara, Yurie. 2006. Grammar of knowledge representation: Japanese discourse items at interfaces. Doctoral Dissertation, University of Delaware.

Harley, Heidi, and Rolf Noyer. 1999. Distributed morphology. *Glot International* 4:3–9.

Harris, Daniel W. 2019. Intention and commitment in speech acts. *Theoretical Linguistics* 45:53–67.

Hayashi, Shiro. 1960. *Kihon bunkei no kenkyuu [research on basic sentence forms]*. Tokyo: Meiji Tosho.

Heim, Irene. 1982. The semantics of definiteand indefinite noun phrases. Doctoral Dissertation, University of Massachusetts, Amherst.

Heim, Irene. 1992. Presupposition projection and the semantics of attitude verbs. *Journal of Semantics* 9:183–221.

Heim, Johannes. 2019. Commitment and engagement : the role of intonation in deriving speech acts. Doctoral Dissertation, University of British Columbia.

Heim, Johannes, Hermann Keupdjio, Zoe Wai-Man Lam, Adriana Osa-Gómez, Sonja Thoma, and Martina Wiltschko. 2016. Intonation and particles as speech act modifiers: A syntactic analysis. *Studies in Chinese Linguistics* 37:109–129.

Heine, Bernd, and Tania Kuteva. 2007. *The genesis of grammar: A reconstruction*. Oxford: Oxford University Press.

Henrich, Joseph. 2016. *The secret of our success: How culture is driving human evolution, domesticating our species, and making us smarter*. Princeton: Princeton University Press.

Henrich, Joseph, and Natalie Henrich. 2007. *Why humans cooperate*. Oxford: Oxford University Press.

Hiraiwa, Ken. 2005. Dimensions of symmetry in syntax: Agreement and clausal architecture. Doctoral Dissertation, MIT.

Hiraiwa, Ken, and Shinichiro Ishihara. 2002. Missing links: Cleft, sluicing, and "no da" construction in Japanese. In *Proceedings of the 2nd HUMIT Student Conference in Language Research (MIT Working Papers in Linguistics 43)*, ed. Heejeong Ko Tania Ionin and Andrew Nevins, 33–54. MITWPL.

Hiraiwa, Ken, and Shinichiro Ishihara. 2012. Syntactic metamorphosis: Clefts, sluicing, and in-situ focus in Japanese. *Syntax* 15:142–180.

Hoffmeyer, Jesper. 1996. *Signs of meaning in the universe*. Bloomington: Indiana University Press.

Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30:69–96.

Hornstein, Norbert. 2001. *Move! a minimalist theory of construal*. Oxford: Blackwell.

Hurford, James. 2014. *The origins of language: A slim guide*. Oxford: Oxford University Press.

Ishihara, Shinichiro. 2003. Intonation and interface conditions. Doctoral Dissertation, MIT.

Ishihara, Shinichiro. 2007. Major phrase, focus intonation, multiple spell-out (map, fi, mso). *The Linguistic Review* 24:137–167.

Ishihara, Shinichiro. 2011. Japanese focus prosody revisited: Freeing focus from prosodic phrasing. *Lingua* 121:1870–1889.

Ishihara, Shinichiro. 2016. Japanese downstep revisited. *Natural Language and Linguistic Theory* 34:1389–1443.

Itō, Junko, and Armin Mester. 2012. Recursive prosodic phrasing in Japanese. In *Prosody matters: Essays in honor of Elisabeth Selkirk*, ed. Roni Browsky, Shigeto Kawahara, Takahito Shinya, and Mariko Sugahara, 280–303. London: Equinox.

Jackendoff, Ray. 1972. *Semantic interpretation in generative grammar*. Cambridge, MA: MIT Press.

Kamali, Beste, and Manfred Krifka. 2021. Focus nd contrastive topic in questions and answers, with particular reference to Turkish. *Theoretical Linguistics* 46:1–71.

Kamali, Beste, and Daiki Matsumoto. To appear. How negative concord fails or succeeds in polar questions. In *Proceedings of WAFL 16*.

Kamp, Hans. 1981. A theory of truth and semantic interpretation. In *Formal semantics - the essential readings*, ed. Paul Portner and Barbara Partee, 189–222. Oxford: Blackwell.

Karttunen, Lauri. 1974. Presupposition and linguistic context. *Theoretical Linguistics* 1:181–194.

Karttunen, Lauri, and Stanley Peters. 1979. Conventional implicature. In *Syntax and semantics 11: Presupposition*, ed. Choon-Kyu Oh and David A. Dinneen, 1–56. New York: Academic Press.

Kindaichi, Haruhiko. 1953. Fuhenka jodoushi no honshitsu (the essence of non-inflecting auxiliary verbs). *Kokugo Kokubun* 22.

Koyama, Tetsuhara. 1997. Bumatsusi to bunmatsu intoneeshon (sentence final particles and sentence final intonation). Bunpou to Onsei [Grammar and Speech], chapter 6, 97–119. Tokyo: Kuroshio.

Kratzer, Angelika. 1991. Modality. In *Semantics: An international handbook of contemporary research*, 639–650. Berlin: Mouton de Gruyter.

Kratzer, Angelika, and Elisabeth Selkirk. 2020. Deconstructing information structure. *Glossa: A Journal of General Linguistics* 5:113.

Kratzer, Angelika, and Elizabeth Selkirk. 2007. Phase theory and prosodic spellout: The case of verbs. *The Linguistic Review* 24:93–135.

Krifka, Manfred. 1992. A compositional semantics for multiple focus constructions. In *Informationsstruktur und Grammatik*, ed. Joachim Jacobs, 17–53. Opladen: Westdeutscher Verlag.

Krifka, Manfred. 2001a. For a structured meaning account of questions and answers. In *Audiatur vox sapientiae: A Festschrift for Achim von Stechow*, ed. Caroline Féry and Wolfgang Sternefeld, 287–319. Berlin: Akademie Verlag.

Krifka, Manfred. 2001b. Quantifying into question acts. *Natural Language Semantics* 9:1–40.

Krifka, Manfred. 2016. Bias in commitment space semantics: Declaratives questions, negated questions, and question tags. *Proceddings of SALT* 25:328–345.

Krifka, Manfred. 2019. Commitments and beyond. *Theoretical linguistics* 45:73–91.

Krifka, Manfred. 2021a. Layers of assertive clauses: Propositions, judgements, commitments, acts. ms., ZAS.

Krifka, Manfred. 2021b. Modeling questions in commitment spaces. In *Asking and answering: Rivaling approaches to interrogative methods*, ed. Moritz Cordes, 63–95. Narr Dr. Gunter.

Lambrecht, Knud. 1994. *Information structure and sentence form: Topic, focus, and the mental representations of discourse referents*. Cambridge: Cambridge University Press.

Larson, Richard K. 1988. On the double object construction. *Linguistic Inquiry* 19:335–391.

Leu, Thomas. 2008. The internal syntax of determiners. Doctoral Dissertation, NYU.

Lewis, David. 1970. General semantics. *Synthese* 22:18–67.

Lewis, David. 1979. Score-keeping in a language game. *Journal of Philosophical Logic* 8:339–359.

Lieber, Rochelle. 1980. On the organization of the lexicon. Doctoral Dissertation, MIT.

Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *University of Pennsylvania Working Papers in Linguistics* 4:201–225.

Marantz, Alec. 2008. Words and phases. In *Phases in the theory of grammar*, ed. Sook-Hee Choe, 191–222. Seoul: Dong In.

Marantz, Alec. 2013. Verbal argument structure: Events and participants. *Lingua* 130:152–168.

Matsui, Tomoko, Hannes Rakoczy, Yui Miura, and Michael Tomasello. 2009. Understanding of speaker certainty and false-belief reasoning: a comparison of Japanese and German preschoolers. *Developmental Science* 12:602–613.

Matsui, Tomoko, Taeko Yamamoto, and Peter McCagg. 2006. On the role of language in children's early understanding of others as epsitemic beings. *Cognitive Development* 21:158–173.

Matsumoto, Daiki. 2022. Evolution of topicalization in human language. In *Proceedings of JCoLE*, ed. Andrea Ravignani, Yannic Jadoul, Rie Asano, Mauricio Martins, Daria Valente, Yohei Oseki, Francesco Ferretti, Evelina Daniela Rodrigues, Stefan Hartmann, Olga Vasileva, Misato Hayashi, and Slawomir Wacewicz, 481–488. Kanazawa, Japan.

Matsumoto, Daiki. forthcominga. Commitment space semantics and sentence final particles in japanese. *JELS* .

Matsumoto, Daiki. forthcomingb. Contiguity theory and the ordering of contrastive elements. *Linguistic Inquiry* .

Matsuoka, Katsuhiko, Mami Sawamura, and Shigeo Kobayashi. 1997. Ziheishou-ni-okeru shuuzyoshi-tuki houkoku gengo koudou-no kakutoku-to katei-bamen-de-no tuiseki tyousa (study of the acquisition of sentence final particles in the language of autism and their usage in the home). *Koudo Ryouhou Kenkyuu* 2:95–105.

McCready, Elin. 2005. The dynamics of particles. Doctoral Dissertation, University of Texas Austin.

McCready, Elin. 2006. Japanese yo: Its semantics and pragmatics. *Sprache und Datenverarbeitung* 30:25–34.

McCready, Elin. 2009. Particles: Dynamics vs. utility. In *Japanese/Korean linguistics*, ed. Yukinori Takubo, Tomohide Kinuhata, Szymon Grzelak, and Kayo Nagai, volume 16. CSLI.

McCready, Elin, and Christopher Davis. 2020. Sentence-final particles in Japanese. In *Handbook of Japanese semantics and pragmatics*, ed. Wesley M. Jacobsen and Yukinori Takubo, 655–684. Berlin: Mouton de Gruyter.

McCready, Elin, and Norry Ogata. 2007. Evidentiality, modality, and probability. *Linguistics and Philosophy* 30:147–206.

Minami, Fujio. 1993. *Gendai nihongo bunpou no rinkaku [an outline of modern Japanese grammar]*. Tokyo: Taishukan.

Miyagawa, Shigeru. 2022. *Syntax in the treetops*. Cambridge, MA: MIT Press.

Miyazaki, Kazuhito, Taro Adachi, Harumi Noda, and Shino Takahashi. 2002. *Modariti [modality]*. Tokyo: Kuroshio.

Naoe, Taiga, Satoshi Nambu, Asumi Suzuki amd Hanae Koiso, and Minoru Makuuchi. 2022. Nihongo bogo wasya-no nichizyou kaiwa-ni okeru syuuzyoshi “yo” “ne” no siyoo to zihei-keikou-no kankei –Nihongo nichizyou kaiwa koopasu-o motiita kentou– (the relation between the use of *yo* and *ne* and autistic-tendency in the daily conversations of native Japanese speakers – An

examination using CEJC–). In *Syakai gengo kagaku kai dai 46 kai taikai happyou ronbunsyuu (Proceedings of the 46th conference of the Japanese Association of Sociolinguistic Sciences)*, 102–105.

Naoe, Taiga, Tsukasa Okimura, Toshiki Iwabuchi, Sachiko Kiyama, and Michiru Makuuchi. 2021. Pragmatic atypicality of individuals with autism spectrum disorder: Preliminary data of sentence-final particles in Japanese. International Symposium on Issues in Japanese Psycholinguistics from Cooperative Perspectives, 2021, online.

Neeleman, Ad, Elena Titov, Hans van de Koot, and Reiko Vermeulen. 2009. A syntactic typology of topic, focus and contrast. In *Alternatives to cartography*, ed. Jeroen van Craenenbroeck, 15–51. Berlin: Mouton de Gruyter.

Oguro, Takeshi. 2015. Wh-questions in Japanese and the Speech Act Phrase. *Linguistica Atlantica* 34:1–16.

Okanoya, Kazuo, and Bjorn Merker. 2007. Neural substrates for string-context mutual segmentation: a path to human language. In *Emergence of communication and language*, ed. Caroline Lyon, Chrystopher L. Nehaniv, and Angelo Cangelosi, 421–434. New York: Springer-Verlag.

Oshima, David Y. 2014. On the functional differences between the discourse particles *ne* and *yone* in Japanese. *The proceedings of the 28th Pacific Asia conference on language, information and computation* 442–451.

Oshima, David Y. 2016. On the polysemy of the Japanese discourse particle *ne*: A study with special reference to intonation. *Forum of International Development Studies* 4:1–17.

Parsons, Terence. 1990. *Events in the semantics of English*. Cambridge, MA: MIT Press.

Pereplyotchik, David. 2020. Generative linguistics meets normative inferentialism. *Croatian Journal of Philosophy* 20:311–352.

Pierrehumbert, Janet B., and Mary Beckman. 1988. *Japanese tone structure*. Cambridge, MA: MIT Press.

Pietroski, Paul M. 2005. *Events and semantic architecture*. Oxford: Oxford University Press.

Pietroski, Paul M. 2011. Minimal semantic instructions. In *The Oxford handbook of linguistic minimalism*, ed. Cedric Boeckx, 472–498. Oxford: Oxford University Press.

Pietroski, Paul M. 2018. *Conjoining meanings: Semantics without truth values*. Oxford: Oxford University Press.

Pollock, Jean-Yves. 1989. Verb movement, universal grammar, and the structure of ip. *Linguistic Inquiry* 20:365–424.

Portner, Paul. 2004. The semantics of imperatives within a theory of clause types. In *Proceedings of SALT 14*, ed. Kazuha Watanabe and Robert B. Young. New York: CLC Publications.

Portner, Paul, Miok Pak, and Raffallela Zanuttini. 2019. The speaker-addressee relation at the syntax-semantic interface. *Language* 95:1–36.

Potts, Christopher, and Shigeto Kawahara. 2004. Japanese honorifics as emotive definite descriptions. In *Proceedings of SALT 14*, ed. Kazuha Watanabe and Robert B. Young, 235–254. New York: CLC Publications.

Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, MA: MIT Press.

Radford, Andrew. 2018. *Colloquial English: Structure and variation*. Cambridge: Cambridge University Press.

Ramchand, Gillian C. 2008. *Verb meaning and the lexicon: A first phase syntax*. Cambridge: Cambridge University Press.

Ramchand, Gillian C. 2018. *Situations and syntactic structures: Rethinking auxiliaries and order in English*. Cambridge, MA: MIT Press.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar: Handbook of generative syntax*, ed. Lilliane Haegeman, 281–337. Dordrecht: Kluwer.

Rizzi, Luigi. 2001. On the position of "Int(errogative)" in the left periphery of the clause. In *Current studies in Italian syntax: Essays offered to Lorenzo Renzi*, ed. Guglielmo Cinque and Giampaolo Salvi, 267–296. Amsterdam: Elsevier.

Rizzi, Luigi. 2014. Some consequences of criterial freezing. In *Functional structure from top to toe: The cartography of syntactic structures*, ed. Peter Svenonius, volume 9, 19–54. Oxford: Oxford University Press.

Roberts, Craige. 2004. Context in dynamic interpretation. In *Handbook of contemporary pragmatic theory*, ed. Laurence Horn and Gregory Ward, 197–220. Oxford: Blackwell.

Roberts, Craige. 2012. Information structure in discourse. *Semantics and Pragmatics* 5:1–69.

Roelofsen, Floris, and Donka F. Farkas. 2015. Polarity particle responses as a window onto the interpretation of questions and assertions. *Language* 91:448–462.

Rooth, Mats E. 1985. Association with focus. Doctoral Dissertation, University of Massachusetts, Amherst.

Rooth, Mats E. 1992. A theory of focus interpretation. *Natural Language Semantics* 1:75–116.

van Rooy, Robert. 2003. Questioning to resolve decision problems. *Linguistics and Philosophy* 26:727–763.

Sadake, Matsugu, and Shigeo Kobayashi. 1987. Ziheisyoo-ni okeru goyouron-teki dentatu-kinou-no kenkyuu: Syuuzyosi-bun hyougenn-no kunren-ni tuite (Pragmatic study of the acquisition of sentence final particles by asd experiment participants through training). *Tokusyu kyouiku kenkyuu* 25:19–30.

Saito, Mamoru. 2015. Cartography and selection: Case studies in Japanese. In *Beyond functional sequence: The cartography of syntactic structures*, ed. Ur Shlonsky, 255–274. New York: Oxford University Press.

Saito, Mamoru, and Tomoko Haraguchi. 2012. Deriving the cartography of the Japanese right periphery: The case of sentence-final discourse particles. *Iberia: An International Journal of Theoretical Linguistics* 4:104–123.

Schein, Barry. 1993. *Plurals and events*. Cambridge, MA: MIT Press.

Schein, Barry. 2002. Events and the semantic content of themantic relations. In *Logical form and language*, ed. Gerhard Preyer and Georg Peter, 263–344. Oxford: Oxford University Press.

Schlenker, Philippe, Emmanuel Chemla, Kate Arnold, and Klaus Zuberbühler. 2016. Pyow-hack revisited: Two analyses of putty-nosed monkey alarm calls. *Lingua* 171:1–23.

Schwarzschild, Roger. 1999. Givenness, avoidF and other constraints on the placement of accent. *Natural Language Semantics* 7:141–177.

Searcy, William A., and Stephen Nowicki. 2005. *The evolution of animal communication: Reliability and deception in signaling systems*. Princeton: Princeton University Press.

Searle, John R. 1969. *Speech acts*. Cambridge: Cambridge University Press.

Searle, John R. 1975. Indirect speech acts. In *Syntax and semantics 3: Speech acts*, 59–82. Cambridge: Cambridge University Press.

Searle, John R. 1979. *Expression and meaning: Studies in the theory of speech acts*. Cambridge: Cambridge University Press.

Searle, John R., and Daniel Vanderveken. 1985. *Foundations of illocutionary logic*. Cambridge: Cambridge University Press.

Selkirk, Elisabeth. 1984. *Phonology and syntax: The relation between sound and structure*. Cambridge, MA: MIT Press.

Selkirk, Elisabeth. 2009. On clause and intonational phrase in Japanese: The syntactic grounding of prosodic constituent structure. *Gengo Kenkyu* 136:35–73.

Selkirk, Elisabeth. 2011. The syntax-phonology interface. In *The handbook of phonological theory*, ed. John Goldsmith, Jason Riggle, and Alan C. L. Yu. Oxford: Wiley-Blackwell.

Selkirk, Elisabeth, and Koichi Tateishi. 1988. Constraints on minor phrase formation in Japanese. In *Proceedings of chicago linguistic society (CLS) 24*, ed. Lynn MacLeod, Gary Larson, and Diane Brentari, volume 24, 316–336. Chicago: Chicago Linguistic Society, part one: the general session edition.

Selkirk, Elisabeth, and Koichi Tateishi. 1991. Syntax and downstep in Japanese. In *Interdisciplinary approaches to language: Essays in honor of S.-Y. Kuroda*, ed. Carol Georgopoulos and Roberta Ishihara, 519–543. Dordrecht: Kluwer Academic Publishers.

Seyfarth, Robert M, and Dorothy L. Cheney. 2003. Signalers and receivers in animal communication. *Annual Review of Psychology* 54:145–173.

Seyfarth, Robert M, Dorothy L. Cheney, and Peter Marler. 1980a. Monkey responses to three different alarm calls: evidence of predator classification and semantic communicationdifferent alarm calls: evidence of predator classification and semantic communication. *Science* 210:801–803.

Seyfarth, Robert M, Dorothy L. Cheney, and Peter Marler. 1980b. Vervet monkey alarm calls: semantic communication in a free-ranging primate. *Animal Behavior* 28:1070–1094.

Shennan, Stephen, ed. 2009. *Pattern and process in cultural evolution: Origins of human behavior and culture*. California: University of California Press.

Shimoyama, Junko. 1999. Complex NPs and wh-quantification in Japanese. In *Proceedings of NELS 29*, ed. Pius Tamanji, 355–365. Amherst: GLSA.

Shimoyama, Junko. 2001. Wh-constructions in Japanese. Doctoral Dissertation, University of Massachusetts, Amherst.

Shimoyama, Junko. 2006. Indeterminate phrase quantification in Japanese. *Natural Language Semantics* 14:139–173.

Shlonsky, Ur. 2006. Extended projection and CP cartography. *Nouveaux cahiers de linguistique française* 27:83–93.

Shlonsky, Ur, and Gabriela Soare. 2011. Where's 'Why'? *Linguistic Inquiry* 42:651–669.

Sigurdsson, Halldor Armann. 2011. On UG and materialization. *Linguistic Analysis* 37:367–388.

Staler, Peter J. B. 1983. The study of communication. In *Communication*, ed. Tim Halliday and Peter J. B. Slater, volume 2 of *Animal Behavior*, 9–42. Oxford: Blackwell.

Stalnaker, Robert. 1973. Presuppositions. *Journal of Philosophical Logic* 2:447–457.

Stalnaker, Robert. 1978. Assertion. In *Syntax and semantics 9: Pragmatics*, ed. Peter Cole and Jerry Morgan, 315–332. New York: New York Academic Press.

Stalnaker, Robert. 2002. Common ground. *Linguistics and Philosophy* 25:701–721.

Sudo, Yasutada. 2013. Biased polar questions in English and Japanese. In *Beyond expressives: Explorations in use-conditional meaning*, ed. Daniel Gutzmann and Hans-Martin Gärtner, 275–295. Leiden: Brill.

Sudo, Yasutada, and Wataru Uegaki. 2019. Question marker drop in Japanese and generalized factivity. *ICU Working Papers in Linguistics VII in Honor of Tomoyuki Yoshida's 60th Birthday* 57–62.

Sugahara, Mariko. 2003. Downtrends and post-FOCUS intonation in Japanese. Doctoral Dissertation, University of Massachusetts, Amherst.

Suge, Rie, and Kazuo Okanoya. 2010. Perceptual chunking in the self-produced songs of bengalese finches (*lonchura striata var. domestica*). *Animal Cognition* 13:515–523.

Sugito, Miyoko. 2001. Shuujoshi 'ne' no imi/kinou to intoneeshon (the meaning, function, and intonation of the sentence final particle 'ne'). In *Bunpou to onsei II [grammar and speech 2]*, 3–16. Kuroshio.

Suzuki Kose, Yuriko. 1997. Japanese sentence-final particles: A pragmatic principle approach. Doctoral Dissertation, University of Illinois at Urbana-Champaign.

Svenonius, Peter. 2012. Lexical insertion in two stages. ms., University of Tromso.

Szabolcsi, Anna. 1984. The possessor that ran away from home. *The Linguistic Review* 3:89–102.

Szendrői, Kriszta. 2017. The syntax of information structure and the PF interface. *Glossa: A Journal of General Linguistics* 2(1).

Takubo, Yukinori, and Satoshi Kinsui. 1997. Discourse management in terms of mental spaces. *Journal of Pragmatics* 28:741–758.

Tomioka, Satoshi. 2007. Pragmatics of LF intervention effects: Japanese and Korean wh-interrogatives. *Journal of Pragmatics* 39:1570–1590.

Tomioka, Satoshi. 2010a. Contrastive topics operate on speech acts. In *Informaton structure: theoretical, typological and experimental perspectives*, ed. Malte Zimmermann and Caroline Féry. Oxford: Oxford University Press.

Tomioka, Satoshi. 2010b. A scope theory of contrastive topics. *Iberia: An interntaional Journal of Theoretical Linguistics* 2:113–130.

Truckenbrodt, Hubert. 1995. Phonological phrases: Their relation to syntax, focus, and prominence. Doctoral Dissertation, MIT.

Uegaki, Wataru. 2018. A unified semantics for the Japanese Q-particle 'ka' in indefinites, questions and disjunctions. *Glossa: A Journal of General Linguistics* 3:1–45.

Uyeno, Kazuko. 1971. A study of Japanese modality: A performance analysis of sentence particles. Doctoral Dissertation, University of Michigan.

Vanderveken, Daniel. 1994. *Principles of speech act theory*. Montréal: Université du Québec á Montréal.

Vanderveken, Daniel. 1999. *Illocutionary logic and discourse typology*. Montréal: Université du Québec á Montréal.

Vermeulen, Reiko. 2009. Contrast, topic and contrastive topics in Japanese. *MIT Working Papers in Linguistics: Proceedings of Workshop on Altaic Formal Linguistics* 5:361–372.

Vermeulen, Reiko. 2011. Non-topical wa-phrases in Japanese. In *Interfaces in linguistics: new research perspectives*, ed. Rafaella Folli and Christiane Ulbrich, volume 31 of *Oxford Series in Theoretical Linguistics*, 135–148. Oxford University Press.

Vermeulen, Reiko. 2013. On the position of topics in Japanese. *The Linguistic Review* 30:117–159.

Wagner, Michael. 2012. Contrastive topics decomposed. *Semantics & Pragmatics* 5:1–54.

Williams, Edwin. 1981. On the notions 'lexically related' and 'head of a word'. *Linguistic Inquiry* 12:245–274.

Wiltschko, Martina, and Johannes Heim. 2016. The syntax of confirmationals. a neo performative analysis. In *Outside the clause: Form and function of extra-clausal constituents*, ed. Gunther Kaltenböck, Evelien Keizer, and Arne Lohmann, 305–340. Amsterdam: John Benjamins.

Yamada, Akitaka. To appear. A distributed morphology approach to Japanese phrase-final particles. *Proceedings of NELS 52* .

Yang, Merlin, and Martina Wiltschko. 2016. The confirmational marker *ha* in northern mandarin. *Journal of Pragmatics* 104:67–82.

Yatsushiro, Kazuko. 2009. The distribution of quantificational suffixes in Japanese. *Natural Language Semantics* 17:141–173.

Zanuttini, Raffallela, Miok Pak, and Paul Portner. 2012. A syntactic analysis of interpretive restrictions on imperative, promissive, and exhortative subjects. *Natural Language and Linguistic Theory* 30:1231–1274.