

An OT-driven Dynamic Pragmatics: high-applicatives, subject-honorific markers and imperatives in Japanese

Akitaka Yamada

Georgetown University, 37th and O Streets, N.W., Washington D.C. 20057, USA
ay314@georgetown.edu

Abstract. The relation between a sentence type and an illocutionary force is ‘one-to-many’ but not ‘one-to-any.’ The goal of this paper is to provide a formal theory capable of describing this association. The primary data for this study comes from Japanese imperatives. In this language, the illocutionary force of an imperative sentence is determined by the interaction between high-applicatives and subject-honorific markers. Inheriting important insights from Portner et al. (2019), this paper develops the idea that all of these constructions are involved in the process of determining AUTHORITY among the discourse participants. Integrating the Optimality Theory into Dynamic Pragmatics, I propose that there are pragmatic constraints which are relevant in determining (i) who is in AUTHORITY and (ii) what illocutionary force is appropriate for a given sentence, before we update the structured discourse context.

Keywords: ‘Point-of-view’ applicatives, Subject-honorific markers, Imperatives, Optimality Theory, Dynamic Pragmatics

1 Introduction

This paper examines the Japanese imperative system and its interaction with high-applicatives and subject-honorific markers. Incorporating some important insights from the phonology of Optimality Theory (OT) (Prince and Smolesky 2004 [1993]; McCarthy and Prince 1993; Kager 1999), I propose that the speech act of an utterance is determined as a consequence of interactions between pragmatic constraints.

To be more precise, this is a study of relation between the sentence type and the illocutionary force. In this study, the term SENTENCE TYPE is used to refer to a particular grammatical form of a sentence. For example, consider the sentences in (1). The sentence types of these sentences are a declarative, an interrogative and an imperative.

(1) Sentence types and sentential forces

- | | | |
|--|---------------|------------------|
| a. Bond gives every fish to Loren. | Declarative | <i>stating</i> |
| b. Does Bond give every fish to Loren? | Interrogative | <i>asking</i> |
| c. Give every fish to Loren, Bond! | Imperative | <i>directing</i> |

In order to capture both similarities and differences, it is a common practice to “distinguish two aspects of the meaning of a sentence; its content — what [(1)a-c] seem (more or less) to have in common — and *sentential force* — what the grammar assigns to the sentence to indicate how that content is conventionally presented (Chierchia and McConnell-Ginet 1990: 164).” For instance, we say that declarative sentences, such as the example in (1)a, are conventionally associated with the sentential force of *stating*,

which stands in stark contrast to both *asking* (the sentential force of an interrogative) and *directing* (the sentential force of an imperative).¹

At the most rudimentary level, these terminologies are helpful in clarifying the differences. However, the causal relation between a sentence type and its communicative effect is not so simple. Consider the following imperatives in (2).

(2) **Sentence types and illocutionary forces**

- | | | |
|-----------------------------|------------|------------|
| a. Soldiers, <u>march</u> ! | Imperative | [COMMAND] |
| b. <u>Have</u> some beer! | Imperative | [OFFER] |
| c. <u>Help</u> me! | Imperative | [ENTREATY] |

Clearly, all three share the same sentence type. First, the verb takes the bare infinitive form. Second, the subject of the main clause is not present. Therefore, we can assert that they are all imperatives. Yet, their (prototypical) communicative effects are different. For instance, (2)a is typically used as a COMMAND; (2)b is usually considered to be an OFFER; and (2)c would be most likely be used as an ENTREATY. I use the term ILLOCUTIONARY FORCE to refer to such detailed communicative effects and, in what follows, small caps are used to refer to illocutionary forces.

Traditionally, a sentential force is considered as a function associated with a particular sentence type. So, this is something that all the imperative sentences have in common (if anything). In contrast, illocutionary forces are more closely related to social actions. Hence, the relation between a sentence type and an illocutionary force is ‘one-to-many,’ as demonstrated in (2). These theoretical concepts were each proposed in different historical backgrounds. The sentential force originates from Frege’s attempt at content-force dichotomy (Frege 1918), a concept which proves useful when we assume that there is a core communicative meaning/function pertaining to all the declaratives; the notion of illocutionary force was originally proposed by researchers working on speech act theories (Austin 1962; Searle 1969; Searle and Vanderveken 1985); see also Portner (2018b) and Murray and Starr (in prep.) for the detailed review of the literature.

As previously stated, the purpose of this paper is to propose a formal device with which to analyze the relation between a sentence type (or a grammatical pattern) and an illocutionary force, *not* the relation between a sentence type and a sentential force. Particularly, this paper tries to elucidate the two seemingly opposing properties of illocutionary forces. First, the relation is ‘one-to-many,’ as mentioned previously. We do not want our theory to be too specialized to explain the diversity of possible illocutionary forces. Second, the relation is not ‘one-to-any.’ For example, whereas the imperative sentence type can be linked to many different illocutionary forces, it cannot be used as a question. So, how do we capture the flexibility and limitations of the relation between the sentence type and the illocutionary force?

To consider this dilemma, this paper investigates Japanese imperatives and their interaction with subject-honorifics and high-applicatives. As shall be explained in the next section, the relation between a Japanese imperative and an illocutionary force is much more complicated than the example shown in (2); the illocutionary force assign-

¹ **Sentential force for an imperative:** For the purposes of explanation, the term *directing* refers to the sentential force of the imperative. This term could be improved, and one might propose or coin a better term. None of the information that follows depends upon the particular label give to this sentential force.

ment is sensitive not only to the sentence type but also to other grammatical profiles of a given sentence (Section 2). To account for this complexity, this paper integrates an OT-based perspective into dynamic pragmatics. The key idea is that after semantics are completed, discourse-oriented meanings are translated as ‘violable’ constraints, determining the type of combination between a sentence and an illocutionary force (Section 3). The article concludes with a summation of implications for future studies (4).

2 Data

This section provides readers with the relevant Japanese data — (i) imperative suffixes, (ii) applicative markers and (iii) subject-honorific constructions.

2.1 Imperative suffix

Form. Japanese is an SOV, agglutinative language. A verb is followed by functional suffixes in an order which is, for the most part, in agreement with Baker’s (1985) Mirror Principle. For example, observe the sentence in (3)a. The verb *nom-* ‘to drink’ is followed by a past tense marker *-ta*.²

(3) Consonant-base verb

- | | |
|-------------------------------------|-------------|
| a. <i>Watasi-wa biiru-o non-da.</i> | Declarative |
| I-TOP beer-ACC drink-PST | |
| ‘I drank beer.’ | |
| b. <i>Biiru-o nom{-e/*-ro}.</i> | Imperative |
| beer-ACC drink-IMP | |
| ‘Drink beer!’ | |

The corresponding imperative is given in (3)b. In an imperative, a tense marker is suppressed as it is in English; a verb is followed by an imperative suffix *-e* ‘IMP.’

This imperative suffix has a phonologically-conditioned allomorph. If a verb ends with a vowel, *-ro* ‘IMP’ is used in place of *-e* ‘IMP.’ For example, the verb *tabe-* ‘to eat’ is a vowel-base verb and thus the imperative form is *tabe-ro*, not **tabe-e*.

(4) Vowel-base verb

- | | |
|--------------------------------------|-------------|
| a. <i>Watasi-wa gohan-o tabe-ta.</i> | Declarative |
| I-TOP rice-ACC eat-PST | |
| ‘I ate beer.’ | |
| b. <i>Gohan-o tabe{*e/-ro}.</i> | Imperative |
| beer-ACC eat-IMP | |
| ‘Eat rice!’ | |

In general, unlike in English, a bare form of a verb cannot be used as an indicator of a directing force (though we will see some exceptions below shortly). For example, (5) is illicit.

- (5) **Gohan-o tabe!*
 beer-ACC eat
 ‘Eat rice! (intended)’

Illocutionary force. As we saw, some imperatives are ‘stronger’ than others. Despite the fact that they share the same sentence type, the sentences in (2) differ on whether the addressee is obliged to act, showing a variation in illocutionary force (Portner 2018a).

² **Assimilation:** Due to an assimilation, *-ta* becomes a voiced *-da*. In addition, the last consonant *m* in *nom-* becomes *n* to match the articulation point of the following consonant.

One peculiarity of Japanese imperatives is that an imperative suffix does *not* result in a comparable variation in illocutionary force. Observe the Japanese corresponding sentences in (6).

- (6) a. *Koosinsi-ro!*
 march-IMP
 ‘March!’ [COMMAND]
- b. *Biiru-o nom-e!*
 beer-ACC drink-IMP
 ‘Drink beer!’ [COMMAND/*OFFER]
- c. *Watasi-o tasuke-ro!*
 me-ACC help-IMP
 ‘Help me!’ [COMMAND/*ENTREATY]

They are all interpreted as a COMMAND rather than an OFFER or an ENTREATY. These sentences are typically used by a person of high social status, taking the addressee’s obedience for granted.

2.2 Applicatives

But what procedure do we employ if we want to make an ENTREATY or an OFFER? In such cases, a ‘point-of-view’ applicative morpheme must be present in the sentence.

Form. A ‘point-of-view’ applicative is an applicative construction that has a point-of-view restriction on its argument.³ Here, let us see two such examples. First, observe the sentences in (7).

- (7) **Low applicative (non-honorific form)**
- a. *Sensei-ga {watasi/*siranai hito}-ni ringo-o kure-ta.* Declarative
 teacher-NOM me/*stranger-DAT apple-ACC give-PST
 ‘The teacher gave me an apple.’
- b. *Watasi-ni ringo-o kure{*e/*-ro/∅}.* Imperative
 me-DAT apple-ACC give(*-IMP)
 ‘The teacher gave me an apple.’

The verb *kure-* ‘to give (me)’ in (7)a is a low applicative denoting a giving-receiving relation among the event participants. In addition, this verb has a point-of-restriction that the referent of the indirect object (the recipient) must be the speaker or his associate(s). Therefore, *watasi* ‘I’ is a felicitous indirect object while *siranai hito* ‘stranger’ is ruled out because it is difficult to conceive of a stranger as a speaker’s associate.

The corresponding imperative sentence is given in (7)b. Importantly, no imperative morpheme can be used in this imperative sentence. Even though *kure-* ‘to give’ is a vowel-base verb, it cannot be accompanied by *-ro*. *Kure-* must be used in the bare form.

Second, this verb also has a high-applicative use. Consider the sentences in (8) and (9). The baseline sentence is (8), which contains no applicative marker.

³ **Non-‘point-of-view’ applicatives:** There are other applicatives that do not have this type point-of-view restriction. For example, the verb *watas-* ‘give’ is a ditransitive predicate which can take *a stranger* as its indirect object. This verb takes *-e* when used in an imperative (*i.e.*, *watas-e* ‘give-IMP’).

- (8) *Sensei-ga hasit-ta.*
 teacher-NOM run-PST
 ‘The teacher ran.’

If one wishes to express an applied argument, (9)a is used instead. In this sentence, the main verb *hasir* ‘to run’ is followed by the converb suffix *-te* and the applicative element *kure-*. As a result, a beneficiary is introduced. As in the case of low applicative usage, there is a ‘point-of-view’ restriction: the newly introduced individual must be either the speaker himself or his associate(s).

- (9) **High applicative (non-honorific form)**
- | | | |
|----|--|-------------|
| a. | <i>Sensei-ga watasi-notameni hasit-te kure-ta.</i> | Declarative |
| | teacher-NOM me-for run-CV APPL _H -PST | |
| | ‘The teacher ran for me.’ | |
| b. | <i>Watasi-notameni hasit-te kure</i> {*-e/*-ro/∅}. | Imperative |
| | me-for run-CV APPL _H (*-IMP) | |
| | ‘Please run for me!’ | |

As shown in (9)b, an imperative suffix is disallowed in this construction. The applicative morpheme must take the bare form to encode the *directing* sentential force.

Illocutionary force. The bare form of the ‘point-of-view’ applicative is dedicated to the weak imperative in Japanese (Kikuchi 1997; Yamada to appear). Unlike in (6), the sentences in (10) are compatible with different illocutionary acts, akin to the variation in (2) (except for COMMAND).

- (10) a. *Koosinsi-te kure!*
 march-CV APPL_H
 ‘March (for me)!’ [WEAK ORDER/GIVING A CUE/ENTREATY/...]
- b. *Non-de kure!*
 drink-CV APPL_H
 ‘Enjoy (for me)!’ [WISH/ENTREATY/OFFER/...]
- c. *Tasuke-te kure!*
 help-CV APPL_H
 ‘Help me (for me)!’ [ENTREATY/WISH/WEAK ORDER/ ...]

2.3 Subject-honorifics

In Japanese, subject-honorific constructions exhibit an interaction with an imperative suffix.

Form. Japanese subject-honorific markers are divided into two clusters; (i) those that can never be used in an imperative and (ii) those that can be used in an imperative. First, some subject-honorific expressions are completely illicit in an imperative sentence. For example, the suffix *-are* is a subject-honorific suffix with which the speaker shows his respect for the referent of the subject noun phrase; in (11)a, the subject-honorific suffix *-are* is used to encode the speaker’s respect for *the teacher*. Since this suffix ends with a vowel, it seems appropriate that *-ro* would be used when making the imperative. However, as shown in (11)b, neither *-e*, *-ro* nor ∅ is permissible.

- (11) a. *Sensei-ga koosins-are-ta.* Declarative
 teacher-NOM march-HONS-PST
 ‘(i) The teacher marched; (ii) the speaker respects the referent of the subject.’
 b. **Koosins-are-{-e/*-ro/*∅}!* Imperative
 march-HONS-IMP
 ‘(i) March!; (ii) the speaker respects the referent of the subject (intended).’

Likewise, there is a periphrastic subject-honorific construction *go/o-*(nominalized verb)-*ni nar.* (12)a is a declarative example. As shown in (12)b, with or without an imperative suffix, this subject-honorific construction cannot be associated with the *directing* sentential force.

- (12) a. *Sensei-ga go-koosin-ni nat-ta.* Declarative
 teacher-NOM HON-march-DAT become-PST
 ‘(i) The teacher marched; (ii) the speaker respects the *teacher*.’
 b. **Go-koosin-ni nar-{-e/*-ro/*∅}!* Imperative
 HON-march-DAT become-IMP
 ‘(i) March!; (ii) the speaker respects the *teacher* (intended).’

Second, another subject-honorific morpheme (*nasar-*) can be used in an imperative. Consider the three sentences in (13). (13)a is a declarative example. As shown in (13)b, an imperative suffix cannot be attached to this suffix, just as (11)b and (12)b are unacceptable.⁴ But this construction has a remedy. If *nasar-* is used without an imperative suffix or a tense marker (i.e., in the bare form), the sentence can be associated with the *directing* sentential force. This is illustrated in (13)c. Presumably due to a phonological constraint, namely, that CVC syllable structure must be avoided, the consonant *r* in *nasar-* changes to *i*.⁵

- (13) a. *Sensei-ga koosin-nasar-u.* Declarative
 teacher-NOM march-HONS-PRS
 ‘(i) The teacher march; (ii) the speaker respects the referent of the subject.’
 b. *Koosin-nasar{-e/*-ro}!* Imperative (with a suffix)
 march-HONS-IMP
 c. *Koosin-nasai!* Imperative (in the bare form)
 march-HONS
 ‘(i) March!; (ii) the speaker thinks that the addressee is subordinate to the speaker.’

Illocutionary force. An important restriction of this *nasai*-imperative is that it cannot be used when the referent of the subject is someone the speaker respects, despite the fact that *nasar-* itself is a subject-honorific morpheme. Rather, the addressee is supposed to be subordinate to the speaker and the speaker assumes that the addressee should take the requested action. For example, the sentence in (14) cannot be used when a speaker is talking to a teacher he respects. In previous studies, honorific meanings have been characterized by a non-at-issue, expressive meaning, which does not interact with

⁴ **Historical change:** In the past, an imperative suffix could be attached to *nasar-* (i.e., *nasar-e*). Native speakers of contemporary Japanese can recognize the intended meaning, but this usage sounds archaic and is no longer widely used.

⁵ **A change in syllable-ending consonants:** A comparable phonological change is observed in *nak-* ‘NEG’ to *nai*.

other semantic operators (Potts and Kawahara 2004; Potts 2007; McCready 2014, 2019; Portner et al. 2019; Yamada to appear). But the fact that the subject-honorific meaning is ‘switched off’ with a *directing* sentential force seems to suggest that it does interact with other meanings, challenging the common assumption.

The only illocutionary force compatible with this construction is COMMAND, not REQUEST or OFFER. For instance, although *help me* is typically used as an ENTREATY in English, the sentence in (14) can never be used in this manner. It *must* be a COMMAND from a speaker who (arrogantly) assumes that the addressee should obediently take action to help him (e.g., the utterance of an arrogant princess).

- (14) *Watasi-o tasuke-nasai!* Imperative [COMMAND/*OFFER/*ENTREATY]
 I-ACC help-HONs
 ‘(i) Help me!; (ii) the speaker thinks that the addressee is subordinate to the speaker.’

Yet (14) is not as blunt as (6)c. The speaker of (14) is more respectful to their addressee compared to the speaker of (6)c. In this sense, the original honorific meaning is still active (though attenuated to a substantial degree).

2.4 Subject-honorific applicatives

If a speaker wants to make a weak imperative with a subject-honorific expression, he must also use the ‘point-of-view’ applicative element.

Form. The high-applicative suffix *kure-* ‘APPL_H’ has the suppletive subject-honorific form *kudasar-* ‘APPL_H.HONs.’ A declarative example is given in (15)a. Similarly to *kure-*, it cannot be used with an imperative suffix, as shown in (15)b.⁶ As in (15)c, it must be used in the bare form.

- (15) a. *Sensei-ga koosinsi-te kudasar-u.* Declarative
 teacher-NOM march-CV APPL_H.HONs-IMP
 ‘(i) The teacher marches for me; (ii) the speaker respects the *teacher*.’
 b. *Koosinsi-te kudasar{*e/*ro}!* Imperative (with a suffix)
 march-CV APPL_H.HONs-IMP
 c. *Koosinsi-te kudasai!* Imperative (in the bare form)
 march-CV APPL_H.HONs
 ‘(i) Please march!; (ii) the speaker respects the referent of the subject.’

Illocutionary force. Subject-honorific applicative forms are associated with an illocutionary act other than a COMMAND in which the speaker respects the addressee. For example, the following sentence can be used as an OFFER and as an ENTREATY.

- (16) *Kyuusoku-o tot-te kudasai!* Imperative [*COMMAND/OFFER/ENTREATY]
 rest-ACC take-CV APPL_H.HONs
 ‘(i) Please take a rest!; (ii) the speaker respects the referent of the subject.’

2.5 Interim summary

The relation between a sentence type and an illocutionary force in Japanese is much more complicated than in English. The data can be summarized thusly:

⁶ **Historical change:** In the past, *-e* can be added to the verb; *kudasar-e*. In fact, native speakers in contemporary Japanese can still understand the intended meaning of *kudasar-e* but they judge this sequence as an archaic and/or an obsolete expression.

- First, there are two distinct grammatical strategies to mark an imperative sentence (a sentence type); (i) to have an imperative suffix, which is associated with a COMMAND, and (ii) a bare form, which cannot be used with a simple verb.
- Second, the imperative suffix *-e/-ro* is associated with an illocutionary force of COMMAND.
- Third, in order for a sentence to be used as a weak imperative, (i) the imperative suffix must not be used and (ii) a ‘point-of-view’ applicative must be present.
- Fourth, subject-honorific meaning disappears or is attenuated when the sentential force is *directing*, irrespective of the presence/absence of the imperative suffix.

3 Proposal

The data presented in Section 2 would be difficult, if not impossible, to explain under the assumption that all the variations are due to semantics. In terms of descriptive adequacy, the denotation in (17) might be correct (n.b., a black circle separates meanings in different dimensions, aka., multidimensional semantics; Potts and Kawahara 2004; Potts 2005, 2007; McCready 2014, 2019; Yamada to appear). But this kind of conditional denotation brings a conceptually unmotivated complexity into semantics.

$$(17) \llbracket \text{HONS} \rrbracket \\ = \begin{cases} \lambda p. p \bullet \text{the addressee is subordinate to the addressee (if it is in an imperative)} \\ \lambda p. p \bullet \text{the speaker respects the addressee (otherwise)} \end{cases}$$

In order to reconcile the dilemma, this study assumes that the interaction takes place not in the semantic derivation but in the pragmatics.

3.1 Backgrounds

Dynamic pragmatics. The framework in which pragmatic rules play a pivotal role in context update is called DYNAMIC PRAGMATICS (Stalnaker 1978; Gazdar 1981; Lewis 1979; Roberts 1996; Portner 2004). Deferring to Portner (2018a), who presents the most articulated characterization of Dynamic Pragmatics, I assume that (i) sentences have standard static semantic values; (ii) the communicative effect of an utterance is modeled as the effect they have on the discourse context; and (iii) the effect of a particular sentence is determined by pragmatic principles on the basis of the sentence’s form or semantics (Portner 2018a).

To be more precise, I assume the relation between the imperative sentence type and its illocutionary force as shown in Fig. 1. First, Japanese employs two distinct forms for the imperative sentence type (i.e., (i) with an imperative suffix and (ii) the bare form⁷). Second, the mapping of the sentence type to illocutionary forces is specified via pragmatic principles. Finally, based on the given illocutionary force, the context is updated in an appropriate way. In this framework, the context is seen as a tuple of objects representing the relevant information in the discourse. For example, it can be structured as in (18), where *cg*, *qs*, *tdl* and *h* refer to the context set, the question set, the to-do list and the hierarchy relation. When COMMAND is picked up as the illocutionary force of the given sentence, we update *tdl* and *h*, in such a way that (i) the content of the sentence is added to the to-do list of the addressee and (ii) the speaker exerts power over the addressee.

$$(18) c = \langle cg, qs, tdl, h \rangle$$

⁷ **Morphology:** I also assume that the choice of these strategies is a matter of morphology.

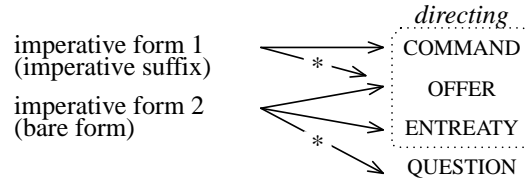


Fig. 1. Sentence type and illocutionary force

Authority. The idea that the structured discourse context contains such a power hierarchy is extensively discussed in Portner et al. (2019). Examining the Korean addressee-honorification system, the idea that honorific expressions are involved with a power hierarchy is developed; there is a hierarchy among individuals and the job of honorific markers is to update this hierarchy structure.⁸ For example, if the speaker uses an honorific marker to refer to person x , the context is updated to reflect that x is superior to the speaker.

The details of their analysis are rather technical, so for the sake of brevity, I will opt to use a simplified model which captures the same intuition, by proposing the notion of **AUTHORITY**. First, authority here refers to the individual who dominates the conversation and is, thus, higher in the power hierarchy than the other discourse participants.

Second, each illocutionary force has a specification of authority. For example, in **COMMAND**, it is the speaker who has a power over the addressee; hence, the speaker is in authority. But in **ENTREATY** (e.g., *please help me!*), the addressee is in authority and the speaker conceives of himself as being subordinate to the addressee. In a similar vein, Japanese high-applicatives (*-tekure* and *-tekudasar*) are also involved with establishing authority; the referent of the applied argument is in authority, thanks to whom the speaker receives a benefit.

Third, h in (18) is an ordered pair taking two possible states, as in (19). The referent of the first element is seen as the person in authority and the referent of the second individual is the person subordinate to the referent of the first element. For example, $\langle sp, addr \rangle$ means that the speaker is superior to the addressee in the power hierarchy.⁹

(19) $h \in \{ \langle sp, addr \rangle, \langle addr, sp \rangle \}$

⁸ **Pragmatic contribution of honorific markers:** In Yamada (to appear), I mention the possibility that the pragmatic effect of content-oriented honorifics may be different that of utterance-oriented honorifics. Content-oriented honorifics (subject-honorifics and object-honorifics) seem more related to the power hierarchy at least in Japanese, whereas utterance-honorifics are less clearly related to the hierarchy although the social hierarchy relation is one important factor (Shibatani 1998; McCready 2014, 2019). I leave the issue to future studies as to whether all honorifics are involved in such a hierarchy. For studies that examine the Japanese honorification system which do not excessively rely on the idea of social hierarchy, see Yamada (to appear) and Oshima (forthcoming).

⁹ **More individuals:** If we attempt to specify the relation of individuals beyond the speaker and the addressee, we need an elaborated model; see Portner et al. (2019).

In addition to *cs*, *qs* and *tdl*, this *h* is updated every time the utterance occurs.¹⁰

3.2 An OT-driven dynamic pragmatics

An important property of this *h* is its consistency; it cannot take both $\langle sp, addr \rangle$ and $\langle addr, sp \rangle$ simultaneously. We must select one of the states.

(20) **Consistency:** after the context update, the new *h* must be either $\langle sp, addr \rangle$ or $\langle addr, sp \rangle$, but it cannot take both simultaneously.

However, suppose that a sentence contains expressions relevant to the update of *h* which suggest different power hierarchy. For instance, a sentence contains expression A, which suggests that the speaker is in authority, and expression B, which proposes that the addressee is in authority. If we respect the meanings of these expressions, we would update *h* in such a way that the new state *h'* is both $\langle sp, addr \rangle$ and $\langle addr, sp \rangle$, which is ruled out by the principle in (20).

If such a problematic situation occurs, a pragmatic negotiation should take place, before the context, so that we can decide to whom the authority is attributed. I propose that this decision is made as a consequence of interaction among ‘violable’ constraints à la OT-phonology (Prince and Smolesky 2004 [1993]; McCarthy and Prince 1993; Kager 1999).

The summation of the analysis is as follows. First, a sentence can be potentially associated with any illocutionary force (aka., Richness of the Base in the OT-phonology). At the outset, we prepare combinations between the sentence, for example, *march!* and a variety of illocutionary forces which we refer to by using an ordered pair $\langle SentM, IllocF \rangle$. They are potential candidates for the relation. Second, these pairs are assessed by several pragmatic constraints which exclude some illicit combinations (or, we can put a weight to each constraint; Harmonic Grammar, Boersma and Pater 2016). As a result of this assessment, only a few prototypical, felicitous illocutionary forces are selected as the best combinations. More specifically, I assume that the assessment is based on the following pragmatic constraints:

(21) **Pragmatic constraints**

- a. Imperative sentence type (both *-e/ro* and \emptyset)
 - ↔ The speaker is in AUTHORITY binding the addressee to take the action expressed by the content of the sentence.
- b. Semantics of APPL_H
 - ↔ The referent of the applied argument (= the addressee if used in an imperative) is in AUTHORITY who gives the speaker a benefit.
- c. Semantics of HONs
 - ↔ The addressee is the AUTHORITY who speaker respects.

3.3 Examples of illocutionary force assignment

Example 1. Let us consider the sentence in (6)a, which contains an imperative suffix. First, we make pairs of the sentence form and the illocutionary force. For example, the sentence can be paired with COMMAND, $\langle (6)a, COMMAND \rangle$, or with WISH, $\langle (6)a, WISH \rangle$. Consider the tableau in (22). Each row represents one such pair. Second, the columns express the constraints and their ranking. The most important constraint

¹⁰ **Maintaining the hierarchy:** In some cases, the update to *h* is vacuous (e.g., *h* in the previous context is $\langle sp, addr \rangle$ and *h'* is also $\langle sp, addr \rangle$).

in this language is (21)b (APPL_H) (i.e., the referent of the applied argument must be in AUTHORITY). But the sentence in (6)a does not contain a ‘point-of-view’ applicative, so this constraint is not relevant in our current example. IMP is the next highest constraint (= (21)a), which requires that the speaker is in authority. Consequently, weak imperatives — ⟨(6)a, ENTREATY⟩ and ⟨(6)a, WISH⟩ — are ruled out.

(22)

(a) <i>koosinsi-ro</i>	APPL _H	IMP	HONS
☞ ⟨(6)a, COMMAND⟩			
☞ ⟨(6)a, ENTREATY⟩		*!	
☞ ⟨(6)a, WISH⟩		*!	

Example 2. Consider the sentence in (10)a. This sentence has a ‘point-of-view’ applicative morpheme and it is, thus, not allowed to be paired with a COMMAND. The same tableau makes the expected prediction. Observe the results in (23). First, we prepare all the pairs between this given sentence and an illocutionary force. Second, each pair is assessed by the constraints. As the first row shows, ⟨(10)a, COMMAND⟩ is ruled out, because COMMAND requires that the speaker is in authority, which has a conflict with the constraint in (21)b (APPL_H); the ‘point-of-view’ applicative makes it so that the speaker is a benefit-recipient, who is therefore subordinate to the benefit-giver (the addressee). Other combinations are deemed appropriate as long as the authority is on the addressee’s side. This is the answer to the problem of *one-to-many* property.

(23)

(b) <i>koosinsi-tekure</i>	APPL _H	IMP	HONS
☞ ⟨(10)a, COMMAND⟩	*!		
☞ ⟨(10)a, ENTREATY⟩		*	
☞ ⟨(10)a, WISH⟩		*	

Example 3. Let us observe an example with a subject-honorific marker. Consider the sentence in (13)b and the tableau in (24). First, the pairs of the sentence and illocutionary forces are generated. Second, APPL_H does not play a role, because the sentence does not contain an applicative suffix. Third, the bare form of the verb indicates that it is an imperative. The imperative sentence type requires the authority to be on the speaker’s side. Therefore, neither ENTREATY, WISH nor any other illocutionary force in which the authority is on the addressee’s side is a valid choice.

(24)

(c) <i>koosin-nasai</i>	APPL _H	IMP	HONS
☞ ⟨(13)b, COMMAND⟩			*
☞ ⟨(13)b, ENTREATY⟩		*!	
☞ ⟨(13)b, WISH⟩		*!	

Example 4. Finally, when a high-applicative is present, the speaker is lower in the power hierarchy and the addressee is in authority, allowing for COMMAND, but not other illocutionary acts.

(25)

(d) <i>Koosinsi-tekudasai</i>	APPL _H	IMP	HONS
☞ ⟨(15)a, COMMAND⟩	*!		*
☞ ⟨(15)a, ENTREATY⟩		*	
☞ ⟨(15)a, WISH⟩		*	

4 Conclusion and implications

In order to explain the ‘one-to-many’ and the ‘*one-to-any’ property of illocutionary force assignment, this study has presented an OT-driven dynamic pragmatics. By assuming that there are a set of ‘violable’ pragmatic constraints, the variation and the convergence in illocutionary force are easily explained. It should be emphasized that the ‘one-to-many’ property and the cancellation of subject-honorific meaning in (13) is hard to explain if the context update is automatically triggered by the subject-honorific morpheme.

If the proposed analysis is on the right track, the relation between the semantics and the pragmatic update is considered as in (26).

(26) form/meaning → AUTHORITY/illocutionary force assignment → context update
 First, the form of the sentence and the semantics are recognized. For example, the imperative suffix and the bare form tell us that the sentence is an imperative. Second, before updating the context, there is an interaction between constraints which reflect the form and the meaning of the given sentence. In our case, we check (i) the sentence type, (ii) presence/absence of a ‘point-of-view’ applicative, and (iii) presence/absence of a subject-honorific marker. The constraints are ranked, and based on the interaction between these constraints, we determine two things: (i) which discourse participant is in AUTHORITY and (ii) an appropriate illocutionary force for that sentence. Finally, based on this decision, the context is appropriately updated. Lack or attenuation of honorific meaning in (13) is possible because of the intermediate negotiation stage before the context update. This kind of interaction among pragmatic constraints is seen as a development of the spirit of dynamic pragmatics, and the objective of this paper is to formalize this pragmatic interaction within the framework of Optimality Theory.

In future studies, it would be valuable to ask whether the ranking among constraints is language-dependent, or universal, or whether it is better conceived of as a weight assignment (as in Harmonic Grammar; Boersma and Pater 2016). An important phenomenon that is not discussed in this paper is the addressee-honorification (Yamada to appear, Section 3.2.4). Even though the subject-honorific marker can be present in an imperative as shown in (13), the addressee-honorific marker is disallowed in contemporary Japanese. Observe the contrast below.¹¹

- (27) Addressee-honorific markers in imperatives Japanese
- a. *Ie-de odor-e!*
 house-at dance-IMP
 ‘Dance at home!’ (a strong imperative)
- b. **Ie-de odori-mas-e!*
 house-at dance-HON_A-IMP
 ‘Dance at home!’ (a weak imperative reading is intended).

Conversely, an addressee-honorific marker is preferred in an imperative in Burmese. When people are conversing with friends, *-pà/bà* is not used in a declarative clause. However, an addressee-honorific marker is commonly used (despite interpersonal closeness) in imperative sentences (p.c., with Atsuhiko Kato on 07/04/2018); n.b., the sentence in (28)a is not ungrammatical.

¹¹ **Edo period Japanese:** In Edo period Japanese, the sentence in (27) is grammatically sound (Yamada to appear).

- (28) Burmese imperatives (Kato 2018: 574)
- a. *ʔèiN-hmà kâ.*
house-at dance
'Dance at home!'
- b. *ʔèiN-hmà kâ-bâ.*
house-at dance-HON_A
'Dance at home!'

Wheatley states that Burmese imperatives “can be softened by the addition of polite particle the ‘polite’ Pv, /-pa/, or ‘tags’, such as /-no/ or /-là/ ‘won’t you’ (Wheatley 1982: 292).” This observation suggests that Burmese addressee-honorific markers play a similar role as Japanese ‘point-of-view’ applicatives. Examination of the way languages vary in strong/weak imperative distinction should shed new light on the relation between the sentence type and the illocutionary force and the relevant mechanism that intervenes between the syntax/semantics and the context update mechanism, providing a new direction in the study of dynamic pragmatics.

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