

Deriving confirmation and justification — an expectative, compositional analysis of Japanese *yo-ne*

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Abstract

The Japanese epistemic particles *yo* and *ne* have received much attention in formal pragmatics, but it remains contentious whether their combination *yo-ne* can be analyzed compositionally or is an independent lexical item. The novel, expectation-based approach I propose captures the contributions of both particles in declaratives and interrogatives on discourse-oriented as well as soliloquous uses, compositionally accounts for *yo-ne* on its well-documented confirmation as well as the emerging justification use, and predicts its badness in polar, but not *wh*-interrogatives.

1 Intro: is *yo(-)ne* compositional?

While there is plenty of research on *yo* and *ne* in isolation, their combination has received somewhat less attention and there is no consensus on whether it is best analyzed as an independent expression *yone* or as compositionally derived *yo-ne*.

1.1 Issues with (un)controversiality approaches

Intuitive paraphrases typically characterize *yo* as (strongly) assertive, intending to force addressee acceptance of the prejacent; *ne* as confirming, signaling that prejacent acceptance by the addressee is likely. Implementing such intuitions in formal analysis, henceforth the “(un)controversiality approach”, tends to predict contradictory meanings and thus complementary distribution of *yo* and *ne*, precluding a compositional analysis of *yo-ne*.¹

¹Cf. McCready (2009) for discussion of issues around extant analyses of *yo* and *ne* (excluding their use in interrogatives).

An issue with the (un)controversiality approach unrelated to compositionality is the particles’ contribution in falling interrogatives (FIs), which function as exclamations or expressions of doubt felicitous in soliloquy, *i.e.* not necessarily requiring an addressee, and where the particles have markedly different contributions than in declaratives — *yo* in FIs introduces a mirative nuance rather than forcing the prejacent on the addressee; *ne* strengthens the conveyed notion of doubt rather than signaling mutual acceptance.

1.2 Extant analyses on compositionality

Oshima (2014) takes *yone* to be a lexical item which covers different types of confirmation together with *ne*², but cannot be derived from *yo* and *ne*. Najima (2014) additionally connects *yone* to *yo*, but rejects a compositional analysis in favor of describing shared features, concluding *yone* is a less determinate form of *yo* and *ne*, sharing some features with each, as well as with the interrogative marker *ka*.

Takubo and Kinsui (1997), on the other hand, propose that *yo* and *ne* are applied sequentially, thus providing a compositional account of *yo-ne* and predicting the infelicity of a sequence **ne-yo*. Their analysis is built on a mental-space rather than a belief-oriented framework, thus also being applicable to soliloquous uses, *cf.* Hasegawa (2010a). My analysis of *yo* and *ne* also applies to soliloquy as it does not involve obligatory reference to addressee belief, and has the additional advantage of compositionally accounting for combination with *ka*.

²See also Miyazaki (2002) for a taxonomy of various uses of *yo(-)ne* and *ne* used in confirming utterances.

1.3 Uses unaccounted for

Other than the occurrence of *yo* and *ne* (and the badness of *yo-ne*) in polar FIs, which remains outside the scope of some analyses, the use of *yo-ne* in *wh*-interrogatives has to my knowledge not been discussed in the application of previous analyses.

As for *yo-ne* in declaratives, my analysis not only covers the well-documented “confirmation” use accounted, but also an emerging use of *yo-ne* that I label “justification”, which, as far as I am aware of, extant analyses have not taken into account. On this use, *yo-ne* is in complementary distribution with *yo*, rather than *ne*, pointing towards functional overlap between *yo-ne* and *yo* as well as *ne*.

2 The expectative approach

I propose an analysis on which *yo* and *ne* encode the status of the prejacent as an expectation and connect it to premises in the conversational background. This accounts for both confirmation and justification and for the (in)felicity of *yo-ne* in interrogatives.

2.1 The expectative context

On the expectative view of discourse, the context, defined as the set of all propositions other than the prejacent relevant for utterance interpretation, is split into **premises** and **expectations**, differentiated by whether or not a proposition is epistemically settled. Epistemic particles like *yo* and *ne* mark the prejacent as a premise or expectation and inform about its relation to other members of the context set.

2.2 Contextual premises

Shared premises include propositions agreed upon in the discourse (conversational common ground³), what is conventionally considered to be a premise (world knowledge), along with external anchors like extralinguistic evidence and antecedent utterances.

Participant-specific premises sets, which are crucial to capture differing premises and for analyzing soliloquy, additionally include private beliefs. I write Π^x for the set of premises specific to participant x as in (1), where $B_x\pi$ indicates that π is epistemically settled to x (*i.e.* x believes π to be true).

³*cf.* Stalnaker (2002), among others — this is only part of the premise set, which also includes speaker-specific commitments as well as external anchors such as contextual evidence.

$$(1) \quad \Pi^x = \{\pi \mid B_x(\pi)\}$$

Within Π , epistemic and evidential premises can be distinguished. For instance, when (extralinguistic, but also hearsay) evidence constitutes a premise to an agent, only the existence of such evidence, but not necessarily the proposition it supports is epistemically settled. While I differentiate different uses of *yo* and *ne* by this distinction, I do not formally implement it as they are not sensitive to it.

2.3 Contextual expectations

Expectations can be thought of as what is normally the case, but does not necessarily hold in all cases. Assuming this is equivalent to the so-called weak epistemic necessity reading of English *ought*, I write $\text{OUGHT}(\xi)$ for “ ξ normally holds”, where OUGHT represents a normalcy or anticipative modal⁴, and define the set Ξ^x of x 's expectations ξ as in (2).

$$(2) \quad \Xi^x = \{\xi \mid B_x\text{OUGHT}(\xi)\}$$

This is to say that ξ is an expectation of x if $\text{OUGHT}\xi$ is a premise epistemically settled to x .

Expectations negotiated by epistemic particles are typically based on premises, a relation I model as restriction of OUGHT 's modal base with a premise, *i.e.* as a normalcy conditional. I label this the “expectative relation”, written as \rightsquigarrow in (3), where the participant-specific set of premise-based expectations is defined.

$$(3) \quad \Xi_{\Pi}^x = \{\xi \mid \exists \pi \in \Pi^x : \pi \rightsquigarrow \xi\}$$

It should be noted that this relation is defeasible, so that expectations can be in contrast with epistemically settled premises. If, for instance, in an expectative atypical w.r.t. p where $\text{OUGHT}(p)$ is a premise, p remains expected even if $\neg p$ is settled.

2.4 Negotiating expectations

With the expectative context in place, the crucial question is how its contents are determined and how they change during the discourse. I assume the default goal of a discourse is to maximize the set of

⁴Against analyzing OUGHT as a weaker epistemic modality, von Stechow and Iatridou (2008) and Yalcin (2016) propose normality analyses; in Rieser (2020) I label this “anticipative” modality, proposing Japanese *hazu* is of this flavor.

premises, *i.e.* to settle as many propositions as possible, while resolving epistemic inconsistencies by context update. Epistemic particles function to negotiate this process and navigate issues like beliefs differing between participants, or the emergence of evidence that counters or confirms extant beliefs.

In descriptive metalanguage, I use the phrase “ p is (not) expected (to x)” to indicate that p is (not) part of the set of x ’s expectations at a given point in the discourse, and “ p is (not) settled (for x)” to indicate that p is (not) part of x ’s premise set.

3 Particle meanings

I propose that both *yo* and *ne* mark the prejacent’s status as an expectation and impose conditions felicitous utterance contexts, henceforth (context) presuppositions, while only *yo* updates the context, making the prejacent expected. Presuppositions and updates from *yo* and *ne*, relative to prejacent p , are shown in the table below.

	presupposition	update
$ne(p)$	$p \in \Xi_{\Pi}^x$	–
$yo(p)$	$p \notin \Pi^x$	$p \cup \Xi_{\Pi}^x$

Note that the presupposition of *ne* is the same as the result of update with *yo*, crucial for deriving the meaning of *yo-ne*. Whereas *ne* requires p to be expected to an underspecified participant x , *yo* requires it not to be, and seeks to make it expected.

The various uses of the particles are differentiated by which participant x is resolved to and the of premise p is (made) expected from. Differences between interrogatives and declaratives are derived by combining each utterance type’s original felicity conditions with those introduced by the particles.

3.1 In declaratives

Recall that *ne* in declaratives asserting a prejacent is often described as confirming, that of *yo* as strongly assertive. Without going into detail on their various declarative uses, the following example of a prejacent clearly not expected by the addressee illustrates the difference between *yo* and *ne* reflected in the proposed analysis. Consider a situation where the speaker is observing the addressee walking dangerously close to a fall but being oblivious of the danger and utters (4) to warn them.

- (4) Abunai {yo / #ne}!
 dangerous SFP SFP
 “Careful!”

It should be noted that *yo* is preferred in (4) over no particle at all. This is expected, considering the presupposition $p \notin \Pi^A$ with x resolved to A is a perfect fit for prompting the addressee to add extralinguistic evidence as a premise π from which p is expected, resulting in $p \in \Xi_{\Pi}^A$. Figure 1 illustrates how this leads to revision of a possible extant expectation $\neg p$ and prepares addressee settlement of p .

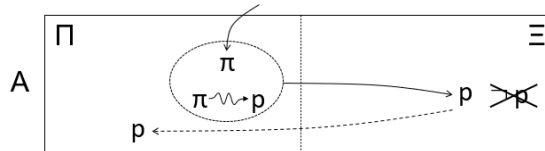


Figure 1: addressee update from *yo*-declarative

The premise π anchoring prejacent p as an expectation can be extralinguistic evidence as in the scenario sketched for (4) above, but also the speaker’s assertion of the prejacent as such, constituting hearsay evidence⁵, as in example (5) below.

Discourse-oriented *ne*, on the other hand, presupposes p to be addressee-expected ($p \in \Xi_{\Pi}^A$), *i.e.* the speaker anticipates that the prejacent is either believed by the addressee, or already expected so that it can be readily settled, as Figure 2 illustrates.

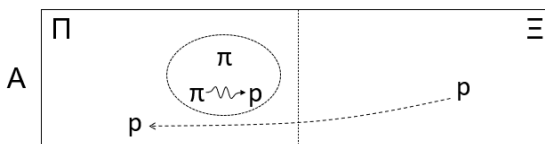


Figure 2: addressee update from *ne*-declarative

The acceptability of *yo* and *ne* in (4) can be reversed by manipulating the scenario. Assuming, for instance, the participants are watching a movie where a character is precipitously close to a fall, (4) with *ne* would be felicitous, with *yo* clearly degraded.

Without an external evidential anchor as in (4), *yo* and *ne* bring out rather different readings, as in (5).

- (5) Ii {yo / ne}!
 good SFP SFP
 {“Sure!”/“Nice!”}

⁵Gunlogson (2008) implements a similar idea of participant commitments as source-specific premises within the context.

The evaluative predicate *ii* ‘good’ has a wide range of uses in Japanese. As indicated in the paraphrases, (5) with *yo* can e.g. be used to give permission to the addressee (“Sure!”), which is not possible with *ne*. With *ne*, on the other hand, (5) can be used to comment on the desirability of some state of affairs (“Nice!”), for which *yo* is unsuitable.

In the former case (“Sure!”) it is the speaker’s (performative) assertion of positive evaluative *ii* rather than external evidence that serves as a premise to make the prejacent addressee-expected. In the latter case (“Nice!”) the prejacent is already presumed addressee-expected based on their knowledge of the evaluated state of affairs.

3.2 Discourse orientation vs. soliloquy

In addition to such addressee-oriented readings, *ne*, but not *yo*, in declaratives has a productive “soliloquous” reading in the sense of the agent variables being resolved to the speaker, rather than the addressee.⁶ In contrast to this, *yo* in interrogative is by default soliloquous, while *ne* has both a discourse-oriented and a soliloquous use, cf. section 3.3.

Back to declaratives, Hasegawa (2010a) points out the following example from Takubo and Kinsui (1997), where *ne* implies “computation or confirmation on the part of the speaker”, as an instance of *ne* in soliloquy. The utterance situation is one in which the speaker is checking the time on their watch, the utterance being made while reading the dial.

- (6) Eeto, shichi-ji desu ne.
 well 7-o’clock COP SFP
 “It’s seven o’clock.”

While in the example, the speaker is also conveying the time to an addressee, the utterance is soliloquous in the sense of narrating the speaker’s internal belief-formation process based on an external premise, which I analyze as resolving *ne*’s participant variable to the speaker, rather than the addressee. I will use the terms “discourse-oriented” and “soliloquous” in this sense.⁷

This function of *ne* will be crucial for explaining the variation in uses of compositionally derived

⁶The soliloquous use of *ii-ne* is, incidentally, the Japanese translation of the “like” button on Facebook.

⁷For more detailed discussion on the definition of soliloquy, see Hasegawa (2010b)

yo-ne. Rather than “computation or confirmation” in particular, I take soliloquous *ne* to more generally anchor assertion of the prejacent in some extant premise, such as the external evidence provided by the watch in this example. Figure 3 illustrates the variable in the presupposition of *ne* resolved to the speaker, yielding $\varphi \in \Xi_{\Pi}^S$.

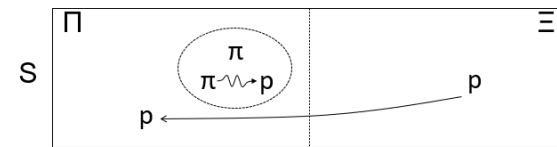


Figure 3: soliloquous *ne* in declaratives

The discourse-orientation of *yo* is even stronger than that of *ne*. When (7), a COMP-exclamative, is uttered in soliloquy, adding *yo* is infelicitous.

- (7) A, soko-ni atta n da (#yo)!
 oh here-LOC was COMP COP
 “Oh, there it was!”

Mirativity, i.e. marking of the prejacent as unexpected, can also be conveyed by *yo* in FIs, as discussed below, but does not license *yo* in exclamatives like (7), or other declaratives. When the utterance is not purely soliloquous, *yo* can be added under the assumption that the addressee was also wondering where the item in question had been, thus making the prejacent unexpected. In sum, only when there is (also) an addressee expectation to be revised, *yo* can be added to declaratives.

3.3 In interrogatives

The perspective from final falling interrogatives (FIs) is crucial to fully capture the contribution of *yo* and *ne*, and, building on this, the compositional derivation of *yo-ne*. FIs, a particularly productive class of utterances in Japanese, are often characterized as rhetorical questions expressing their prejacent is not epistemically settled and can be used in soliloquy. Considering this, the contribution of *yo* and *ne* in FIs should be observable within the speaker context.

Yo in FIs indicates that the prejacent has become expected based on evidence that has just become available in the utterance situation, whereas FIs with *ne* convey the speaker’s sustained doubt over whether the prejacent holds in spite of there being grounds to expect this. Consider (8) in a context

where the speaker notices some people out of a party appear to be gathering their belongings.

- (8) Kaeru ka {yo! / ne...}
 good SFP SFP
 {“What, they’re leaving!?”/
 “Are they really leaving...”}

The salient reading of (8) with *yo* is translated as an exclamation, that with *ne* as an expression of doubt. Note that this is in stark contrast with the contribution of the particles in declaratives.

The schemata in Figure 4 illustrate how the present proposal accounts for *yo* and *ne* in FIs. Both utterances narrate (potential) change in the speaker context, the interrogative speech act coming with the presupposition $p \notin \Pi^S$.

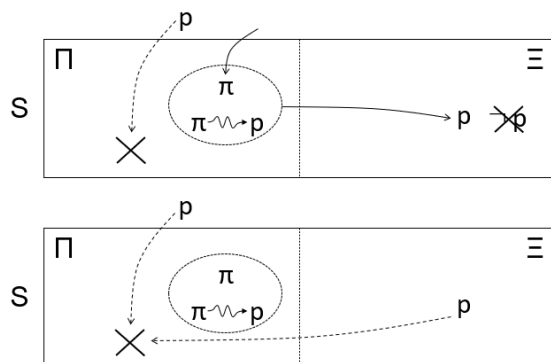


Figure 4: update of speaker context set as narrated by *ka-yo* (top) and *ka-ne* (bottom)

Yo-FIs mark possible revision of a speaker expectation $\neg p$ ($\neg p \in \Xi^S$) is revised based on the premise of newly available evidence for p ($\exists \pi \in \Pi^S : \pi \rightarrow p$). While this does not necessarily coincide with epistemic settlement p ($p \cup \Pi^S$), this is on the table and potentially imminent, given sufficient strength of the newly available evidence.⁸

Purely soliloquous *ne*-FIs indicate that even though p is, or has become, expected to the speaker ($p \in \Xi^S$), they forgo settling for it. The reasons for this can be varied, for instance a previous settlement for $\neg p$ ($\neg p \in \Pi^S$), or doubt over the sufficient strength of π as a premise.

Additionally, *ne*-FIs have a discourse-oriented use indicating p is not settled to the speaker as required

⁸When the evidence is strong enough for the speaker to tend to settle p , this is conventionally marked with the evidential particle *no*, cf. Rieser (2017b), Taniguchi (2016).

by the bare FI ($p \notin \Pi^S$), but the expect the addressee to have grounds for expecting it as conveyed by *ne* ($\exists \pi \in \Pi^A : \pi \rightarrow p$). The effect is a bias towards a positive answer, or a confirmation use with stronger speaker doubt than a *ne*-assertion.

Interim summary The current proposal not only accounts for *yo* and *ne* in declaratives but also in interrogatives, where they make contributions that cannot be predicted based on the extant generalizations of *yo* being “strongly assertive”, *ne* “confirming” in nature. This is achieved by assuming particles meaning that do not involve obligatory addressee-reference, in contrast to (un)controversiality approaches, and deriving utterance meaning by modification of each utterance type’s basic felicity conditions.

4 Deriving the meaning of *yo-ne*

I follow Takubo and Kinsui (1997) in proposing that *yo-ne* can be derived as sequential application of the two particles — *yo* makes the prejacent expected, which *ne* presupposes. In order to account for the full range of uses, my analysis allows distinct premises and/or participant resolution for each particle. This is crucial to account for a subset of confirming uses of *yo-ne* as well as the emergent justification use, which is excluded from the scope of analyses that take *yone* to essentially be a confirmation marker.

4.1 *Yo-ne* in confirmations

Yo(-)ne is frequently described as a confirmation marker similar in function to *ne*, cf. Miyazaki (2002). Before moving on its emerging justification use which relates it to *yo* rather than *ne*, this section accounts for the distribution of *yo-ne* and *ne* in confirmations with reference to Oshima (2014)’s classification of *yone*-utterances summarized below.

	<i>ne</i>	<i>yone</i>
a. Confirmation of A’s utterance or checking for A’s understanding	✓	#
b. Elsewhere (not a.): Prejacent is preparatory condition for S’s subsequent utterance, or S is “questioner”	✓	✓
c. Elsewhere (neither a. nor b.):	#	✓

Consider first (9) in a context where the speaker recalls wondering about the preagent, and the addressee’s preparing to leave reminds them of it.

- (9) Ashita asa hayai yo ne.
tomorrow morning early SFP SFP
“Early start tomorrow, right?”

(9) is an instance of Oshima’s category c, favoring the use of *yo-ne*, and comes in two varieties Oshima labels “call for confirmation” (seeking addressee’s confirmation), and “shared information” (marking p as mutually expected or settled).⁹ I suggest that on both uses, *yo* is discourse oriented, and, in absence of extralinguistic evidence, the speaker’s assertion of p is added as π to the addressee premise set.

Call for confirmation On the reading illustrated in Figure 5, *ne* is soliloquous¹⁰, indicating that the speaker has grounds to expect p ($p \in \Xi^S$).

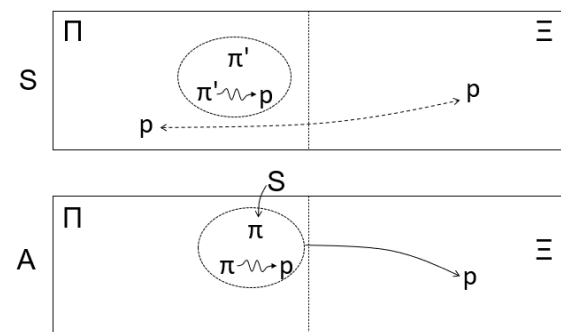


Figure 5: call for confirmation use of *yo-ne*

The degree of speaker certainty w.r.t. p as a shared expectation is relatively low, *ne* indicating the speaker has access to a premise π' : $\pi' \rightsquigarrow p$, and prompts the addressee to add the speaker’s assertion of p to their evidential premise set as π .

I propose the lack of reference to extant addressee premises prompts them to disclose their epistemic state w.r.t. p . While this interpretation may not be immediately obvious from the particle meanings alone, the marked intonation pattern of the call for confirmation use (also observed by Oshima) makes it plausible that this interpretation arises in contrast with the shared information use.

⁹The two varieties are differentiated by intonation, a compositional analysis of which is beyond the scope of this paper.

¹⁰This is not to say the entire utterance is not discourse-oriented.

Shared information On the reading Figure 6 illustrates, both *yo* and *ne* are discourse-oriented, indicating the speaker assumes there is another addressee- or shared premise π' also supporting p .

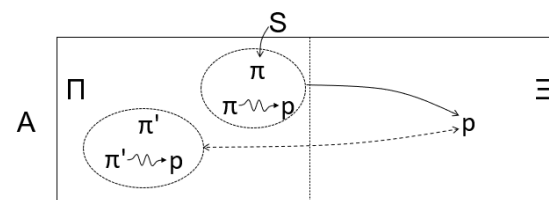


Figure 6: shared information use of *yo-ne*

In contrast to *ne*-declaratives of Oshima’s category a, the speaker is not necessarily anticipating p to be addressee-settled, but can also merely confirm sufficient (shared) grounds to expect p .

Ne vs. yo-ne In sum, adding *yo* to *ne* on confirming use is dispreferred whenever it is implausible that the premise is not already settled for the addressee as required by *yo* ($p \notin \Pi^A$). $p \in \Pi^A$ holds in Oshima’s class a, where the addressee has either asserted p or is committed to accept what was asserted by the speaker, merely checking for understanding, making *yo* illicit.

Finally, Oshima’s category b is characterized by turn-holding on part of the speaker, *i.e.* subsequent acceptance of p by the addressee is anticipated. I propose that in this (addressee-oriented) case, addition of *yo* indicates that the speaker deems is not sure whether the addressee does not have (sufficient) grounds to accept p , but maintains that their own assertion of it constitutes such a premise.

4.2 Yo-ne in justifications

The use of *yo-ne* in what I label “justifications” is observable in younger speakers and intuitively serves to soften rejections. They can thus be considered a cases of *ne* being added to a *yo*-assertion. Consider the following variation of the confirmation example in a situation where the speaker is indirectly refusing an offer to join a second round of drinks.

Reacting to: “Are you joining us for another round?”

- (10) Ashita asa hayai n da yo ne.
tomorrow morning early COMP COP PRT PRT
“I kinda have an early start tomorrow...”

The discourse-connective COMP-COP construction is used to indicate a causal relation with the (im-

plicit) refusal (a strategy available as “It’s that. . .” in English). In contrast to confirmations, the addressee is previously unaware of p , and a *yo*-assertion is an alternative. Some speakers report this would feel harsh, so they choose adding *ne* to soften the rejection’s blow. Note that a *ne*-assertion would be infelicitous assuming the addressee does not expect p to hold (hence inviting the speaker to drink more).

I propose analyzing this use of *yo-ne* as purely discourse-oriented, where *yo* prompts expectation revision, and *ne* subsequently ensure this revision has been successful by marking p as addressee-expected. This is schematically shown in Figure 7, where the previous utterance’s prejacent (roughly “S joins for more drinks.”) is written as ξ .

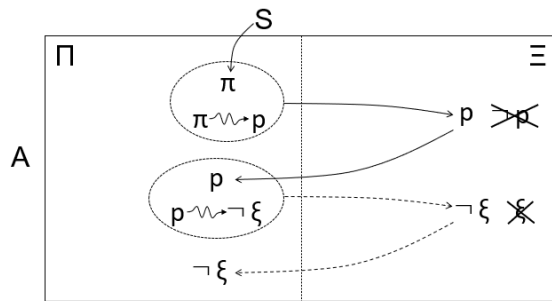


Figure 7: justification use of *yo-ne*

The utterance connects to an additional expectation ξ (the speaker joining a second round), as indicated by the COMP-COP construction. This expectation is indirectly negated by assertion of p , which the addressee is prompted to accept, *i.e.* settle, based on the speaker’s utterance. This, in turn, gives rise to an expectation $\neg\xi$, thereby rejecting the proposal in a roundabout way.

In this example, *ne* functions to ensure that the justifying grounds for rejection have been accepted. I propose that *yo* in confirmations of Oshima’s class b has a parallel, seemingly superfluous use, where it functions to ensure that a shared premise indicated by *ne* is actually present. I assume that face-saving strategies like adding *yo* to turn-holding utterances or *ne* to justifications also occur elsewhere.

In sum, the current proposal’s flexibility in terms of speech-act type and discourse-orientation allows for derivation of *yo-ne* and accounting for its various uses in declaratives. Next, it can also account for its (in)felicity in (*wh*)-interrogatives.

4.3 *Yo-ne* in (*wh*)-interrogatives

While polar *yo-ne* interrogatives are degraded to the point of being labeled ungrammatical (Najima, 2014), *yo-ne* is perfectly fine in a subclass of *wh*-interrogatives which have so far not received due attention in the literature. In (11)¹¹, the speaker is certain that the object in question points to a treasure, but is uncertain what location it indicates.¹²

- (11) Doko-o simeshiteiru no ka, yo ne.
 where-ACC indicate COMP INT PRT PRT
 lit.: “Where is it it really indicates. . .”

Figure 8 illustrates my account of *yo-ne*’s acceptability in some *wh*-interrogatives. The prejacent of a *wh*-interrogative is a proposition of the form $p(x)$, x being the *wh*-expression’s referent. While an existential statement $\exists x : p(x)$ is settled, settling $p(x)$ is not possible due to ignorance w.r.t. x . On this background, discourse-oriented *yo* in *wh*-interrogatives prompts addition of a premise supporting $p(x)$ to the addressee context (as confirmed by *ne*) rather than conveying mirativity as in polar FIs.

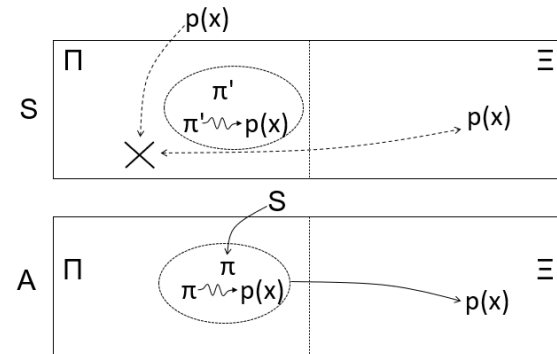


Figure 8: *yo-ne* in *wh*-interrogatives

As for the combination of *yo* and *ne* in polar FIs, I assume it is unacceptable due to complementary conveyed meanings — in light of newly available evidence, *yo*-FIs conventionally indicate belief revision, *ne*-FIs suspension of judgment. *Yo-ne* would thus represent considering, but then suspending belief revision — a process too complex for soliloquy narrating the speaker’s immediate reaction.

¹¹Found in the 1989 novel *Koto Pazuru* by Alice Arisugawa.

¹²As indicated by the comma, there is an obligatory pause between *ka* and *yo-ne*, presumably due to discourse-oriented *yo* being highly uncharacteristic in interrogatives.

5 Formalization

This section sketches formalization of the proposal within a CCP-model of utterance meaning,¹³ taking utterances to be sets of admissible context pairs.

Premise and expectation sets (repeated)

$$(12) \quad \Pi^x = \{\pi \mid B_x(\pi)\}$$

$$(13) \quad \Xi^x = \{\xi \mid B_x \text{ OUGHT}(\xi)\}$$

$$(14) \quad \Xi_{\Pi}^x = \{\xi \mid \exists \pi \in \Pi^x : \pi \rightsquigarrow \xi\}$$

Expectative context set

$$(15) \quad c_x = \Pi^x \cup \Xi^x$$

Utterances as CCPs, modification by particles

$$(16) \quad \llbracket U(p) \rrbracket = \{\langle c, c' \rangle \mid F^U\}$$

$$(17) \quad \llbracket \text{PRT}[U(p)] \rrbracket = \{\langle c, c' \rangle \mid F^U \cup F^{\text{PRT}}\}$$

Where c and c' represent input and output contexts (including all participants), respectively, F^U the characteristic felicity conditions for utterance type U , which may include agent- and partition specific restrictions on c as well as c' .

Felicity conditions of INT and DEC¹⁴

$$(18) \quad F^{\text{INT}}(p) = \{p \notin \Pi^{c_s}\}$$

$$(19) \quad F^{\text{DEC}}(p) = \{p \in \Pi^{c_s}\}$$

Particle meanings of *yo* and *ne*

$$(20) \quad F^{yo} = \{p \notin \Pi^{c_x}, p \in \Xi_{\Pi}^{c'_x}\}$$

$$(21) \quad F^{ne} = \{p \in \Xi_{\Pi}^{c_x}\}$$

Yo and *ne* in assertions

$$(22) \quad \llbracket yo[\text{DEC}(p)] \rrbracket = \{\langle c, c' \rangle \mid p \in \Pi^{c_s} \wedge p \notin \Pi^{c_x} \wedge p \in \Xi_{\Pi}^{c'_x}\}$$

$$(23) \quad \llbracket ne[\text{DEC}(p)] \rrbracket = \{\langle c, c' \rangle \mid p \in \Pi^{c_s} \wedge p \in \Xi_{\Pi}^{c_x}\}$$

Yo and *ne* in interrogatives

$$(24) \quad \llbracket yo[\text{INT}(p)] \rrbracket = \{\langle c, c' \rangle \mid p \notin \Pi^{c_s} \wedge p \notin \Pi^{c_x} \wedge p \in \Xi_{\Pi}^{c'_x}\}$$

$$(25) \quad \llbracket ne[\text{INT}(p)] \rrbracket = \{\langle c, c' \rangle \mid p \notin \Pi^{c_s} \wedge p \in \Xi_{\Pi}^{c_x}\}$$

¹³Cf. Rieser (2017b), Rieser (2017a), Davis (2011) for CCP-analyses of Japanese particles, building on Gunlogson (2003) and Heim (1983), among others.

¹⁴More precisely, the DEC(p) speaker should have grounds to expect p and not have settled for $\neg p$ as a premise, reflecting Gricean Quality, cf. Grice (1975). For the purposes of illustrating the role of particles, the simplified condition suffices.

(Note that the discourse-orientation and soliloquous nature of *yo* in declaratives and interrogatives respectively follows from incompatibility of a speaker-oriented presupposition $p \notin \Pi_S^c$ with the declarative condition and congruence of the same presupposition with the interrogative condition. *Ne* is more flexible in terms of orientation.)

Composing *yo-ne* assertions (sequential update)

$$(26) \quad \llbracket ne[yo[\text{DEC}(p)]] \rrbracket = \{\langle c, c' \rangle \mid p \in \Pi^{c_s} \wedge p \notin \Pi^{c_x} \wedge p \in \Xi_{\Pi}^{c'_x} \wedge p \in \Xi_{\Pi}^{c'_y}\}$$

Note that *ne* constrains the context updated by *yo*, which in case of identity $x = y$ satisfies *ne*'s presupposition, but targets another partition in case of split participant resolution.

Predicting (il)licit uses The present proposal predicts limits of particle felicity *e.g.* as follows:

- *Yo* is illicit where: $\neg \exists x : p \notin \Pi^{c_x}$
- *Ne* is illicit where: $\neg \exists x : p \in \Xi_{\Pi}^{c_x}$

With discourse-orientation (x is resolved to A):

- *Yo* is illicit where: $p \in \Pi^{c_A}$
- *Ne* is illicit where: $p \notin \Xi_{\Pi}^{c_A}$
- *Yo-ne* is illicit where: $\neg \exists \pi : \pi \rightsquigarrow p \wedge \pi \notin \Pi^{c_A}$

This predicts that *yo-ne* is quite widely acceptable (while other particles may be chosen in its stead as they are more informative w.r.t. the prejacent's epistemic status), except for cases where the speaker has no new grounds for settling the prejacent to provide to the addressee. This corresponds to Oshima's condition a, where the addressee has already or intend to commit to p , *yo-ne* thus being dispreferred.

6 Summary

I have proposed an analysis of *yo* and *ne* that is flexible enough to capture their contributions in both interrogatives and declaratives, on both discourse-oriented and soliloquous uses, but specific enough to predict the limits of their acceptability, as well as their combination *yo-ne*, in various speech-act types. The lack of obligatory reference to shared or addressee belief makes a compositional analysis of *yo-ne* possible, where the possibility of split participant resolution for each particle, or particle and host utterance, as well as flexible premise resolution, allow to account for a wide range of uses.

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