Epistemic *Wa* and Negative Islands in Japanese

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1 Introduction

1.1 Negative Islands

In English degree questions, wh-movement usually cannot cross negation (e.g. Obenauer (1984), Rizzi (1990)). The same contrast holds in Japanese.

(1)   How long did Taro stay in Germany?

(2)   * How long did Taro **not** stay in Germany?

(3)   Taro-wa doitu-ni   doredake nagaku taizaisimasi-ta ka?
       Taro-TOP Germany-in how   long   stay-PAST   Q
       'How long did Taro stay in Germany?'

(4)   * Taro-wa doitu-ni   doredake nagaku taizaisimas-**en**-desi-ta ka?
       Taro-TOP Germany-in how   long   stay-not-COP-PAST   Q

1.2 Obviation by *-wa* in Japanese

In Japanese the pattern is extended by the fact that *-wa* repairs Negative Island violations. (Relevant examples appear to lack natural English translations.)

(5)   Taro-wa doitu-ni   doredake nagaku-**wa** taizaisimas-**en**-desi-ta ka?
       Taro-TOP Germany-in how   long-WA *stay-not-COP-PAST   Q*

1.3 Epistemic effect

The meaning contribution of *degree related -wa* is similar to that of English *at least* or *minimally* (e.g. Geurts & Nouwen (2007); Büring (2008); Nouwen (2010)).

(6)   Taro-wa doitu-ni   doredake nagaku-**wa** taizaisimasi-ta ka?
       Taro-TOP Germany-in how   long-WA *stay-PAST   Q*
       'How long, minimally, did Taro stay in Germany?'

(7)   Taro-wa doitu-ni   too-ka(-kan)-**wa** taizaisimasi-ta.
       Taro-TOP Germany-in ten-day-for-WA *stay-PAST*
       'Taro stayed in Germany for at least ten days.'

In particular, (7) shares with its English translation the implication stated in (8), where P marks epistemic possibility (Hara (2006); Tomioka (2009)).

(8)   P [Taro stayed in Germany for more than 10 days]

That this epistemic implication is indeed due to *-wa* is shown by (9), which suggests that Taro stayed for exactly ten days.

(9)   Taro-wa   doitu-ni   too-ka(-kan) taizaisimasi-ta.
      Taro-TOP Germany-in ten-day-for   stay-PAST
      'Taro stayed in Germany for (exactly) ten days.'

1.4   What is to come

We will explore two ways of deriving the epistemic implications *-wa* introduces within a Neo-Gricean framework, and we will attempt to relate each to the Negative Island pattern.

The first approach derives the Negative Island pattern, but builds on questionable assumptions about the semantics of gradable predicates and *-wa*; the second approach eliminates these questionable assumptions, but seems to remain silent on the Negative Island pattern.

2   Background: Fox & Hackl (2006)

2.1   Degree questions and Scale Density

Fox & Hackl (2006) assume that, wh-movement in English degree questions derives a property of degrees, which in turn determines a so-called Hamblin set (Hamblin (1973)).

(1)   How long did Taro stay in Germany?

(10)   a. λd: d is a duration. that Taro stayed d+ long in Germany
       b. {that Taro stayed d+ long in Germany: d is a duration}

Fox & Hackl posit a semantic condition on acceptability (here called "Maximality Condition") that makes reference to a presupposition carried by interrogatives.

(11)   **Maximality Presupposition** (Dayal (1996))
       A question presupposes that its Hamblin set has a most informative true element.

(12) **Maximality Condition**
The Maximality Presupposition of a question must not be contradictory.

Fox & Hackl observe that this condition derives the Negative Island effect in degree question if scales of degrees are considered dense.

(2) * How long did Taro **not** stay in Germany?

(13) a. λd: d is a duration. that Taro did **not** stay d+ long in Germany
      b. {that Taro did **not** stay d+ long in Germany: d is a duration}

(14) **Universal Density I**
The Maximality Condition is checked by a Deductive System that takes scales of degrees to be invariably dense.

2.2   Scale Density and *only*

Fox & Hackl extend their account of Negative Islands to a similar contrast involving *only*.

(15) Taro only stayed for ten days.

(16) * Taro only did**n't** stay for ten days.

They do so by letting *only* make reference to the most informative proposition in a Hamblin set contributed by its scope.[1]

(17) $\|$only $\phi\| =$
      that $\|\phi\|$ is the most informative true element of $\|\phi\|^{\text{Hamblin}}$

(18) $\|$Taro stayed for ten days$\|^{\text{Hamblin}} =$
      {that Taro stayed d+ long in Germany: d is a duration}

(19) $\|$Taro did **not** stay for ten days$\|^{\text{Hamblin}} =$
      {that Taro did **not** stay d+ long in Germany: d is a duration}

Scale density is then predicted to result in contradictory truth conditions when *only* associates with a degree-denoting expression across negation.

(20) **Informativity Condition**
As sentence must not have contradictory truth conditions.

(21) **Universal Density II**
The Informativity Condition is checked by a Deductive System that takes scales of degrees to be invariably dense.

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1 For simplicity, we ignore the distinction between presupposed and asserted content.

3   The Epistemic Effect is not a semantic entailment

(7)   Taro-wa   doitu-ni   too-ka(-kan)-**wa** taizaisimasi-ta.
      Taro-TOP Germany-in ten-day-for-WA   *stay-PAST*
      'Taro stayed in Germany for at least ten days.'

(8)   P [Taro stayed in Germany for more than 10 days]

Degree related *-wa* is similar in meaning to *at least*, which has been analyzed as a modal operator (Geurts & Nouwen (2007)).

But such an analysis for *-wa* is excluded by the behavior of *-wa* with universals.

(22) Daremo-ga   doitu-ni   too-ka(-kan)-**wa** taizaisimasi-ta.
      everyone-NOM Germany-in ten-day-for-WA   *stay-PAST*
      'Everyone stayed in Germany for at least ten days.'

(23)   a. everyone x: P [x stayed in Germany for more than 10 days]
         b. P everyone x: [x stayed in Germany for more than 10 days]

A semantic entailment account of the epistemic effect predicts incorrectly that (22) cannot felicitously be used to report the facts in (24).[2]

(24)   a. Taro: 10 days
         b. Jiro: 11 days
         c. Saburo: 12 days

4   A Neo-Gricean Path to the Epistemic Effect

4.1   Possibility implications via Q-implicatures

In the Neo-Gricean framework, the possibility implications in question can be credited to primary (Q(uantity) based) implicatures in the sense of Sauerland (2004) by stipulating suitable Q-alternatives.[3]

(7)   Taro-wa   doitu-ni   too-ka(-kan)-**wa** taizaisimasi-ta.
      Taro-TOP Germany-in ten-day-for-WA   *stay-PAST*
      'Taro stayed in Germany for at least ten days.'

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2 Analogous English cases exclude Geurts & Nouwen's (2007) modal analysis of *at least*; they seem equally problematic for Nouwen's (2010) more recent proposal for *at least*.

3 We use "Q-alternatives" to refer to the alternative propositions feeding the calculation of Q-implicatures according to the standard Neo-Gricean recipe.

Specifically, the possibility implication suggests a Q-alternative where "10 days +" is replaced by "exactly 10 days".

(25) ASSERTION
      (N) [Taro stayed in Germany for 10 days +]

(26) Q-ALTERNATIVE 1
      Taro stayed in Germany for exactly 10 days

(27) PRIMARY IMPLICATURE 1
      ¬ N [Taro stayed in Germany for exactly 10 days]

The possibility implication in question then follows from the conjunction of the (epistemically modalized) assertion and the primary implicature.

(8) POSSIBILITY IMPLICATION 1
     P [Taro stayed in Germany for more than 10 days]

4.2   Back to the universal quantification case

(22) Daremo-ga   doitu-ni   too-ka(-kan)-**wa** taizaisimasi-ta.
      everyone-NOM Germany-in ten-day-for-WA   *stay-PAST*
      'Everyone stayed in Germany for at least ten days.'

For the universal case, the Neo-Gricean account also derives a possibility implication, but one that is sufficiently weak to be consistent with intuitions.

(28) ASSERTION
      (N) [everyone stayed in Germany for 10 days +]

(29) Q-ALTERNATIVE 1
      everyone stayed in Germany for exactly 10 days

(30) PRIMARY IMPLICATURE 1
      ¬ N [everyone stayed in Germany for exactly 10 days]

(31) POSSIBILITY IMPLICATION 1
      P [**someone** stayed in Germany for more than 10 days]

The account correctly allows for (22) to be used as a felicitous description of the facts in (24) above.

4.3   More on the epistemic effect: ignorance implications

The epistemic effect associated with *-wa* seems to go beyond the possibility implication described so far: (7) suggests that the speaker does not know how long exactly Taro stayed in Germany.

(7)   Taro-wa   doitu-ni   too-ka(-kan)**-wa** taizaisimasi-ta.
      *Taro-TOP Germany-in ten-day-for-*WA   *stay-PAST*
      'Taro stayed in Germany for at least ten days.'

(25)   ASSERTION
       (N) [Taro stayed in Germany for 10 days +]

A Neo-Gricean account of this ignorance implications calls for an additional Q-alternative to (25), one where "10 days +" is replaced by "more than 10 days".[4]

(26)   Q-ALTERNATIVE 1
       Taro stayed in Germany for exactly 10 days
       Q-ALTERNATIVE 2
       Taro stayed in Germany for more than 10 days

(32)   PRIMARY IMPLICATURE 1
       $\neg$ N [Taro stayed in Germany for exactly 10 days]
       PRIMARY IMPLICATURE 2
       $\neg$ N [Taro stayed in Germany for more than 10 days]

(33)   POSSIBILITY IMPLICATION 1
       P [Taro stayed in Germany for more than 10 days]
       POSSIBILITY IMPLICATION 2
       P [Taro stayed in Germany for exactly 10 days]

Note that (32) and (33) deliver two ignorance implications, implications of the form $[\neg N\phi$ & $\neg N\neg\phi]$), or equivalently, $[\neg N\phi$ & $P\phi]$.[5]

4.4   No ignorance implicature with universals

The account predicts, again correctly, that no ignorance implications are attested in cases where *-wa* occurs below a universal quantifier.

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4 Büring (2008) proposes this very analysis for English "at least". Tomioka (2009) makes a similar proposal for *-wa*.

5 Note that these ignorance implications are consistent with the speaker knowing an upper bound for Taro's stay in Germany. We expect (correctly, it seems) that (7) can be used felicitously by a speaker who believes that Taro's stay in Germany lasted between 10 and 20 days.

(22) Daremo-ga   doitu-ni   too-ka(-kan)-**wa** taizaisimasi-ta.
      everyone-NOM Germany-in ten-day-for-WA *stay-PAST*
      'Everyone stayed in Germany for at least ten days.'

(34) ASSERTION
      (N) [everyone stayed in Germany for 10 days +]

(35) Q-ALTERNATIVE 1
      everyone stayed in Germany for exactly 10 days
      Q-ALTERNATIVE 2
      everyone stayed in Germany for more than 10 days

In this case, asserted content and Primary Implicatures do not combine to derive any ignorance implications.

(36) PRIMARY IMPLICATURE 1
      ¬ N [everyone stayed in Germany for exactly 10 days]
      PRIMARY IMPLICATURE 2
      ¬ N [everyone stayed in Germany for more than 10 days]

(37) POSSIBILITY IMPLICATION 1
      P [**someone** stayed in Germany for more than 10 days]
      POSSIBILITY IMPLICATION 2
      P [**someone** stayed in Germany for exactly 10 days]

4.5   Scalar/Secondary Implicature

In Neo-Gricean accounts such as Sauerland's (2004), Primary Implicatures of the form ¬Nϕ are routinely strengthened to Secondary/Scalar Implicatures of the form N¬ϕ. This is indeed how (22) is likely to be understood.

(38) SECONDARY IMPLICATURE 1
      N ¬ [everyone stayed in Germany for exactly 10 days]
      SECONDARY IMPLICATURE 2
      N ¬ [everyone stayed in Germany for more than 10 days]

Sauerland proposes that Secondary Implicatures will not be derived if they are inconsistent with the conjunction of asserted content and all Primary Implicatures. This explains why no Secondary Implicatures are attested in (7).[6]

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6 See Fox (2007a) for parallel data and analysis in his discussion of disjunction. See also Büring (2008) for a similar point regarding *at least* under universal modals.

4.6 Deriving Q-alternatives

In Neo-Gricean accounts, what Q-alternative are determined by grammar, which provides certain sets of expressions, so-called Horn sets.

(7) Taro-wa doitu-ni   too-ka(-kan)-**wa** taizaisimasi-ta.
*Taro-TOP Germany-in ten-day-for-*WA *stay-PAST*
'Taro stayed in Germany for at least ten days.'

4.6.1 Horn sets: numerals

Under the assumption that stay in Germany is measured in full days only, one Q-alternative for each relevant example can be credited to the standard assumption that numerals form a Horn set.

(39) HORN SET
{..., nine, ten, eleven, ...}

(40) Q-ALTERNATIVE 2
Taro stayed in Germany for 11+ days

(41) PRIMARY IMPLICATURE 2
¬ N [Taro stayed in Germany for 11+ days]

(42) POSSIBILITY IMPLICATION 2
P [Taro stayed in Germany for 11+ days]

If stay in Germany is measured in complete days only, staying eleven or more days is equivalent to staying more than ten days.

4.6.2 Horn sets: *wa* and its absence

The second Q-alternative could be credited to a Horn set containing *-wa* and a phonetically and semantically vacuous expression ∅.

(43) HORN SET
{wa, ∅}

(9) Taro-wa doitu-ni   too-ka(-kan) taizaisimasi-ta.
Taro-TOP Germany-in ten-day-for   stay-PAST
'Taro stayed in Germany for (exactly) ten days.'

Suppose lexical gradable predicates in Japanese have an "exactly" semantics.

(44) $\|nagaku\ (\emptyset)\| = \lambda d.\lambda e.\lambda w.$ e's duration in w = d

Suppose moreover that the measure phrase in (7) is an argument of a silent gradable predicate *nagaku* 'long'.

(45) [[ten days] ~~nagaku~~] stay

This will derive the intended Q-alternative if the external argument of the degree predicate is maximized in a sense familiar from e.g. Landman (2004).

(46) Q-ALTERNATIVE 1
      $\lambda w.\|nagaku\ (\emptyset)\|(10\ days)$
      (max{e: e is past state of Taro staying in Germany})(w)

Suppose now that *-wa* combines with a lexical gradable predicate to return a new gradable predicate with an "at least" interpretation.

(47) $\|nagaku\ wa\| = \lambda d.\lambda e.\lambda w.$ e's duration in w $\geq$ d

This yield the intended truth conditions for the asserted content of (7) (even under argument maximization).

(48) ASSERTION
      $\lambda w.\ \|nagaku\ wa\|(10\ days)$
      (max{e: e is past state of Taro staying in Germany})(w)

4.6.3 The universal case

(22) Daremo-ga   doitu-ni   too-ka(-kan)-**wa** taizaisimasi-ta.
      *everyone-NOM Germany-in ten-day-for-*WA *stay-PAST*
      'Everyone stayed in Germany for at least ten days.'

(49) Daremo-ga   doitu-ni   too-ka(-kan) taizaisimasi-ta.
      everyone-NOM Germany-in ten-day-for   stay-PAST
      'Everyone stayed in Germany for (exactly) ten days.'

For the universal case, the intended interpretations arise in the same way, provided that argument maximization applies within the scope of the universal quantifier.

(50) Q-ALTERNATIVE 1
      $\lambda w.$ for every person x: $\|nagaku\|(10\ days)$
      (max{e: e is past state of x staying in Germany})(w)

4.7 Back to degree questions and Negative Islands

(11) **Maximality Presupposition** (Dayal (1996))
A question presupposes that its Hamblin set has a most informative true element.

(12) **Maximality Condition**
The Maximality Presupposition of a question must not be contradictory.

4.7.1 The basic effect

The proposal under consideration results in an account for the basic Negative Island effect considered (though dismissed) for English in Abrusán (2007).

(3) Taro-wa doitu-ni   doredake nagaku taizaisimasi-ta ka?
Taro-TOP Germany-in how   long   stay-PAST   Q
'How long did Taro stay in Germany?'

(51) {that Taro stayed **exactly** d long in Germany: d is a duration}

The Hamblin set in (51) is guranteed to have a unique true answer, hence will satisfy the Maximality Condition.

(4)   * Taro-wa doitu-ni   doredake nagaku taizaisimas-**en**-desi-ta ka?
     Taro-TOP Germany-in how   long   stay-not-COP-PAST   Q

(52) {that Taro did **not** stay **exactly** d long in Germany: d is a duration}

The Hamblin set in (52) is guaranteed to contain many true propositions not related by entailment, and hence will violate the Maximality Condition.

4.7.2 Obviation by *wa* and (non-)density

(5) Taro-wa doitu-ni   doredake nagaku-**wa** taizaisimas-**en**-desi-ta ka?
Taro-TOP Germany-in how   long-WA   stay-not-COP-PAST   Q

(53) {that Taro did **not** stay d+ long in Germany: d is a duration}

As long as the Maximality Condition makes reference to a discrete scale of possible durations of stay, the Hamblin set in (53) will satisfy it. Obviation by *-wa*, then, can be taken to show that the density assumption is not operative in Japanese.

(14) **Universal Density I**
The Maximality Condition is checked by a Deductive System that takes scales of degrees to be invariably dense.

4.8 Interim summary

Epistemic effects in simple and universally quantified cases have been derived correctly from assumptions about gradable predicates and *-wa* that also help explain the Negative Island effect and its obviation by *-wa*.

The analysis is inconsistent with Universal Density.

Costs for this analysis include: (i) the necessity of postulating silent degree predicates in degree questions; (ii) the need for maximizing the non-degree argument of gradable predicates.

5 *Wa* and anti-exhaustivity

Unfortunately, additional data concerning both gradable predicates and *-wa* add to the doubts about the feasibility of the account in the previous section.

Inspired by Tomioka (2009) We will consider a conservative modification of the account of the epistemic effect that credits "exactly" alternatives to an exhaustivity operator (Fox (2007b); **?**).

Unfortunately, this improved account of the epistemic effect remains silent on the Negative Island affect and its obviation.

5.1 Problems

5.1.1 Inadequacy of *exactly* meanings

Unmodified degree predicates in Japanese do not seem invariably give rise to 'exactly' interpretations. Like (55), (54) can be taken to merely specify the shortest acceptable duration of stay.[7]

(54)   Taro-wa   too-ka(-kan) doitu-ni   taizaisi-nakerebanarimasen
      Taro-TOP ten-day-for   Germany-in stay-must
      'Taro is required to stay in Germany for ten days.'

(55)   Taro-wa   too-ka(-kan)**-wa** doitu-ni   taizaisi-nakerebanarimasen
      *Taro-TOP ten-day-for-*WA *Germany-in stay-must*
      'Taro is required to stay in Germany for at least ten days.'

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7 Analogous English data led Abrusán (2007) to abandon an attempt of crediting English Negative Islands to an 'exactly' semantics for gradable predicates.

Similarly, neither (57) nor (56) must be read as presupposing that there is exactly one acceptable duration of Taro's stay in Germany.

(56) Taro-wa   doredake nagaku doitu-ni   taizaisi-nakerebanarimasen ka
     Taro-TOP how   long   Germany-in stay-must   Q
     'How long is Taro required to stay in Germany?'

(57) Taro-wa   doredake nagaku-wa doitu-ni   taizaisi-nakerebanarimasen
     Taro-TOP how   long-WA   Germany-in stay-must
     ka
     Q
     'How long, minimally, is Taro required to stay in Germany?'

5.1.2 Non-degree related epistemic *Wa*

Another problem for the proposed analysis is that (much like *at least*) epistemic *-wa* does not seem to be limited to degree related occurrences.

(58) Nanninka-wa   ki-ta
     some-people-wa come-Past
     'At least some people came.'

(59) Q-ALTERNATIVE 1
     Someone but not everyone came
     Q-ALTERNATIVE 2
     Everyone came

(60) Minna-ga   ki-ta
     Everyone-NOM come-Past
     'Everyone came.'

The current proposal does not provide a source for the first Q-alternative needed to derive an ignorance implication.

5.2 Introducing Exh

(61) HORN SET
     {wa, Exh}

(62) a. $\|wa\ \phi\| = \|\phi\|$
     b. $\|Exh\ \phi\| =$ that $\|\phi\|$ is the most informative true element of $\|\phi\|^{\text{Hamblin}}$

While *-wa* is semantically vacuous, Exh has the semantics of *only*, accessing Hamblin sets to derive 'exactly' meanings.

(63) ‖Taro in Germany for ten days stayed‖^{Hamblin} =
{that Taro stayed d+ long in Germany: d is a duration}

(64) ‖ Exh[Taro in Germany for ten days stayed] ‖ =
that Taro stayed in Germany for exactly 10 days

The assumption to be explored is that Exh is a "ghost" in the sense that it cannot appear in structures for asserted content (cf. Sauerland's (2004) ghosts L and R).

(65) DISTRIBUTION OF Exh[8]
Exh only occurs in logical forms for non-asserted Q-Alternatives.

5.2.1 *Exactly* alternatives still derived

We revert to 'at least' interpretations of lexical gradable predicates.

(66) ‖*nagaku*‖ = λd.λe.λw. e's duration in w $\geq$ d

'Exactly' alternatives can be derived by assigning *-wa* clausal scope.

(7) Taro-wa doitu-ni too-ka(-kan)-**wa** taizaisimasi-ta.
*Taro-TOP Germany-in ten-day-for-*WA *stay-PAST*
'Taro stayed in Germany for at least ten days.'

(67) wa [Taro in Germany for ten days stayed]

(68) ‖Taro in Germany for ten days stayed‖^{Hamblin} =
{that Taro stayed d+ long in Germany: d is a duration}

(69) Q-ALTERNATIVE 1
‖ Exh[Taro in Germany for ten days stayed] ‖ =
that Taro stayed in Germany for exactly 10 days

(22) Daremo-ga doitu-ni too-ka(-kan)-**wa** taizaisimasi-ta.
*everyone-NOM Germany-in ten-day-for-*WA *stay-PAST*
'Everyone stayed in Germany for at least ten days.'

(70) everyone λx [wa [x in Germany for ten days stayed]]

(71) ‖x in Germany for ten days stayed‖^{Hamblin} =
{that x stayed d+ long in Germany: d is a duration}

(72) Q-ALTERNATIVE 1
‖everyone λx [Exh[x in Germany for ten days stayed]]‖ =
that everyone stayed in Germany for exactly 10 days

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8 This departs from Tomioka (2009), who posits Exh in asserted content, moving beyond the Neo-Gricean framework.

5.2.2 *Exactly* meanings generalized

If relevant Hamblin sets can be generated by types of alternative semantic values other than degrees, as envisioned in Fox (2007b) and **?**, non-degree related epistemic -*wa* can be accommodated.

(58) Nanninka-wa   ki-ta
some-people-wa come-Past
'At least some people came.'

(73)   wa [some people came]

(74) ||some people came||^Hamblin =
{that someone came, that everyone came}

(75)   Q-ALTERNATIVE 1
||Exh [some people came]|| =
that someone but not everyone came

5.2.3 *At least* meanings permitted

Since lexical gradable predicates are now assigned an 'at least' interpretation, and since gradable predicates need not occur under Exh, the data in (54) to (57) are unproblematic.

5.3 The scope of exaustification: negation and density

Degree related epistemic -*wa* in declaratives is also found in the company of negation.

(76)   Taro-wa   doitu-ni   too-ka(-kan)-**wa** taizaisimas-**en**-desi-ta.
*Taro-TOP Germany-in ten-day-for-*WA   *stay-not-COP-PAST*

Like its positive counterpart (7), (76) comes with an ignorance implication, again suggesting that the speaker does not know Taro's exact length of stay.

Under present assumptions, this ignorance cannot be credited to a logical form where -*wa* scopes under negation.

(77)   **not** [**wa** [Taro in Germany for ten days stayed]]

The reverse scope order has the intended effect - provided the truth conditional contribution of Exh is not calculated under the assumption that scales of degrees are dense.

(78) **wa** [**not** [Taro in Germany for ten days stayed]]

(79) ‖not [Taro in Germany for ten days stayed] ‖^Hamblin =
{that Taro did not stay d+ long in Germany: d is a duration}

(80) Q-ALTERNATIVE 1
‖ Exh [not [Taro in Germany for ten days stayed]] ‖ =
Taro stayed in Germany for exactly 9 days

(81) Q-ALTERNATIVE 2
Taro did not stay in Germany for 9+ days

5.4   The negative island puzzle remains

Disappointingly, the improved account of the epistemic effect does not shed any light on the Negative Island pattern. Specifically, *-wa* being semantically vacuous, it is not expected to help obviate a violation of the Maximality Condition.

(3) Taro-wa   doitu-ni   doredake nagaku taizaisimasi-ta ka?
Taro-TOP Germany-in how   long   stay-PAST   Q
'How long did Taro stay in Germany?'

(4) * Taro-wa   doitu-ni   doredake nagaku taizaisimas-**en**-desi-ta ka?
Taro-TOP Germany-in how   long   stay-not-COP-PAST   Q

(5) Taro-wa   doitu-ni   doredake nagaku-**wa** taizaisimas-**en**-desi-ta ka?
Taro-TOP Germany-in how   long-WA   *stay-not-COP-PAST   Q*

6   Summary

We have presented two Neo-Gricean accounts of the epistemic effects associated with *-wa*. The first accounted for the Negative Island pattern, but rested on untenable assumptions about gradable predicates and the syntax-semantics of *-wa*. The second account eliminates these assumptions but fails to shed light on Negative Islands and their obviation.

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