Reversed polarity sluicing in Japanese and neg raising

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Abstract. In this paper, I document and analyze reversed polarity sluicing in Japanese. Polarity reversed sluicing, first discovered in English by Kroll (2019, 2020), are a type of sluicing where the presumed antecedent TP differs from the elliptical TP in terms of polarity. I propose that the apparent polarity mismatch problem in this construction is naturally resolved by the syntactic Neg Raising hypothesis (Fillmore 1963; Collins and Postal 2014), a hypothesis which receives independent support from the exceptional ability of neg raising predicates such as *omow* 'to think' to lift the otherwise tauto-clausal licensing requirement on so-called strong negative polarity items (McGloin 1976). I then compare my analysis with an alternative pragmatic analysis of the relevant construction based on the Excluded Middle Presupposition (Bartsch 1973; Gajewski 2005, 2007). I show that the latter analysis not only fails to capture subtle verb-sensitivities of neg raising in Japanese grammar or the cross-linguistic difference between *sinziru* 'to believe' and its English counterpart *believe* with respect to the availability of the reversed polarity reading, but also has no way of deriving the afore-mentioned syntactic requirement. I conclude the paper with a brief sketch of one important problem with my analysis from non-reversed polarity readings in clausal argument ellipsis.

Keywords: polarity reversed sluicing, neg raising, strong negative polarity item, excluded middle presupposition, verb-sensitivity

1 Introduction

In this paper, I investigate polarity reversals in Japanese sluicing. Polarity reversal sluices, first discovered and analyzed in English by

Kroll (2019, 2020), are a type of sluicing where the ostensive antecedent TP differs from the elliptical TP in terms of polarity, as shown in (1a, b). In (1a), for instance, the ellipsis of the TP with the intended negative meaning (i.e., 'California won't comply') is licensed despite the fact that its presumed antecedent TP appears to be positive (i.e., "California will comply"). See also Jacobson (2018), Crowley (2019) and Kroll (2019, 2020) for grammatical examples of polarity reversals under VP-ellipsis in English.

(1) a. I don't think that [$_{TP}$ California will comply]$_{A}$, but I don't know why [$_{TP}$ ~~California won't comply~~]$_{E}$. (Kroll 2019:2)

b. I don't think [$_{TP}$ he is going to release his tax returns]$_{A}$, and I'm pretty sure I know why [$_{TP}$ ~~he is not going to release his tax returns~~]$_{E}$. (Jacobson 2018:560)

The primary empirical contribution of this paper is to show that Japanese sluicing also exhibits polarity reversals, as illustrated in (2). The second interpretation available to the sluiced TP in (2b) illustrates the reversed polarity sluicing/interpretation.

(2) Sensei-wa [$_{TP}$ kono bunseki-ga tadasii]$_{A}$-to omottei-nai-ga,
teacher-NOM this analysis-NOM right-COMP think-NEG-but
imadani watasi-ni-wa naze [$_{TP}$…]$_{E}$ ka osietekurenai.
still me-DAT-TOP why Q don't.teach
'My teacher doesn't think that this analysis is right, but he has not taught me yet why.'

✔ a) 'why he doesn't think that this analysis is right.'

✔ b) 'why this analysis is not right.'

As already noted by Kroll (2019, 2020), polarity reversals under sluicing present a challenge for the most influential theories to date of the licensing conditions on sluicing, including Merchant's (2001) semantic identity

condition based on bi-directional semantic entailment between the antecedent and elliptical TPs, because neither the antecedent TP nor the elided TP in (2) entails the other.

In this paper, I develop a new analysis of reversed polarity sluicing in Japanese drawing on syntactic Neg Raising (NR) (Fillmore 1963; Lakoff 1969; Lakoff 1970; Ross 1973; Prince 1976; Collins and Postal 2014). The structure of this paper is as follows. In section 2, I show how the syntactic NR hypothesis resolves the apparent polarity mismatch exhibited by (2). I also present independent supporting evidence for the syntactic NR hypothesis in Japanese based on the tauto-clausal distribution of strong negative polarity items (NPIs) such as punctual *XP-made* 'until XP' (McGloin 1976) and *XP-sika* 'anything but XP' (Aoyagi and Ishii 1994). In section 3, I compare my analysis with an alternative analysis based on the so-called Excluded Middle presupposition (Bartsch 1973; Gajewski 2005, 2007; Romoli 2013; Kroll 2019, 2020). I note that the latter analysis not only fails to capture subtle verb-sensitivities of NR in Japanese grammar, as manifested by NR predicates such as *omow* 'to think' vs. non-NR predicates such as *sinziru* 'to believe' as well as the contrasting distribution between *sinziru* and its English counterpart *believe* with respect to the availability of reversed polarity sluicing; the analysis also has no way of deriving the aforementioned tauto-clausal licensing requirement on the Japanese strong NPIs, which can be stated more successfully in terms of syntactic locality. In section 4, I point out one important issue for my syntactic NR analysis of reversed polarity sluicing raised by clausal argument ellipsis in Japanese (Shinohara 2006; Saito 2007; Takita 2018). Section 5 is the conclusion.

2 Reversed Polarity Sluicing in Japanese and Syntactic Neg Raising

There is a class of clause-embedding predicates in English and other languages which, when negated, may imply a corresponding sentence in which the matrix negation behaves as if it took scope in the embedded clause. Thus, (3a) is typically understood to express (3b).

(3) a. I don't think this book is interesting.
b. I think that this book is not interesting.

The syntactic NR hypothesis (Fillmore 1963; Lakoff 1969; Lakoff 1970; Ross 1973; Prince 1976; Collins and Postal 2014) states that the embedded negation reading of (3a) is due to a syntactic operation that raises the negation from an embedded position where it is interpreted to the matrix position where it is pronounced. As first noted by Lakoff (1969), who attributes this observation to her personal communication with Masaru Kajita, the hypothesis is supported by the exceptional ability of NR predicates to lift the otherwise strict tauto-clausal licensing requirement on strong NPIs, as illustrated by the contrast between (4a) and (4b).

(4) a. Calvin did not believe [$_{CP}$ that Mona would move in until June].
b. *Calvin did not claim [$_{CP}$ that Mona would move in until June].
(Collins and Postal 2014:6)

Strong NPIs such as punctual *until XP*, *a damn thing* and *lift a finger* require a negative licenser in the same clause. This condition is satisfied in (4a) by the negation being interpreted in the lower clause before it moves across the NR predicate *believe* to the matrix clause, a derivational option unavailable in (4b) due to the intervention of the non-NR predicate *claim*.

McGloin (1976) develops the same argument for the syntactic NR hypothesis in Japanese. Examples (5a, b) show that *raigetu-made* 'until next month' is a strong NPI that must be licensed by a clausemate negation.

(5) a.* Hunabin-no kozutumi-wa raigetu-made tuku.
sea.mail-GEN package-TOP next.month-until arrive
'*The sea mail package will arrive until next month.'

b. Hunabin-no kozutumi-wa raigetu-made tuk-anai.
sea.mail-GEN package-TOP next.month-untilarrive-NEG
'The sea mail package won't arrive until next month.'
(McGloin 1976:38)

Keeping this clausemate requirement in mind, the contrast between (6b) and (7b) now shows that the verb *omow* 'to think', but not the verb *iw* 'to say', allows long-distance licensing of the strong NPI in question.

(6) a. [$_{S1}$ [$_{S2}$ Hunabin-no kozutumi-wa raigetu-made
sea.mail-GEN package-TOP next.month-until
tuk-anai-to] omou].
arrive-NEG-COMP think
'I think that the sea mail package won't arrive until next month.'
b. [$_{S1}$ [$_{S2}$ Hunabin-no kozutumi-wa raigetu-made
sea.mail-GEN package-TOP next.month-until
tuku-to] omow-anai.
arrive-COMP think-NEG
'I don't think that the sea mail package will arrive until next month.'
(McGloin 1976:386)

(7) a. [$_{S1}$ [$_{S2}$ Hunabin-no kozutumi-wa raigetu-made
sea.mail-GEN package-TOP next.month-until
tuk-anai-to] itta].
arrive-NEG-COMP said
'I said that the sea mail package won't arrive until next month.'
b.* [$_{S1}$ [$_{S2}$ Hunabin-no kozutumi-wa raigetu-made
sea.mail-GEN package-TOP next.month-until
tuku-to] iw-anak-atta.
arrive-COMP say-NEG-PST
'*I didn't say that the sea mail package will arrive until next month.'
(McGloin 1976:386)

The contrast falls into place if the negation originates in the embedded clause of the NR predicate *omow* before it undergoes NR to the matrix clause position in the derivation of (6b), an option unavailable in (7b).

The same locality-based argument for the syntactic NR hypothesis in Japanese can be constructed on the basis of the distribution of another strong NPI *XP-sika* 'anything but XP'. Aoyagi and Ishii (1994) observe that this NPI normally cannot be licensed long-distance, as shown in (8a). Interestingly, though, they observe that (8b) is more acceptable than (8a) for many speakers and suggest that this is due to the NR status of *omow* in contrast to the non-NR status of *iw*.

(8) a.* [$_{S1}$ John-ga [$_{S2}$ Mary-ga ringo-sika tabe-ru-to]
John-NOM Mary-NOM apple-SIKA eat-NPST-COMP
iw-ana-katta].
say-NEG-PST
'John didn't say that Mary would eat anything but apples.'

b. ??[$_{S1}$ John-ga [$_{S2}$ Mary-ga ringo-sika tabe-ru-to]
John-NOM Mary-NOM apple-SIKA eat-NPST-COMP
omow-ana-katta].
think-NEG-PST
'John didn't think that Mary would eat anything but apples.'
(Aoyagi and Ishii 1994:307)

The syntactic NR hypothesis resolves the apparent identy-related problem raised by (2). The hypothesis states that the negation starts its life in the embedded clause where it is interpreted before it moves to the surface matrix position. As such, the antecedent TP is syntactically negative in the pre-NR structure, at which point the mutual entailment condition à la Merchant (2001) is satisfied.

Note, furthermore, that my present analysis also correctly predicts that the reversed polarity sluicing configuration/reading is blocked when the NR verb *omow* in (2) is replaced with the non-NR verb *iw*, as

witnessed in (9).

(9) Sensei-wa [$_{TP}$ kono bunseki-ga tadasii]$_{A}$-to iw-ana-katta-ga,
teacher-NOM this analysis-NOM right-COMP say-NEG-PST-but
imadani watasi-ni-wa naze [$_{TP}$...]$_{E}$ ka osietekurenai.
still me-DAT-TOP why Q don't.teach
'My teacher did not say that this analysis is right, but he has not taught me yet why.'
✔ a) 'why he did not say that this analysis is right.'
* b) 'why this analysis is not right.'

3 An Alternative Analysis based on the Excluded Middle Presupposition

A connoisseur of the extensive literature on NR in languages like English should counter at this point that an alternative analysis of (2) is available which draws on the so-called Excluded Middle (EM) presupposition, an analysis originally due to Bartsch (1973) and elaborated in Horn (1978, 1989), Horn and Bayer (1984), Gajewski (2005, 2007), and Romoli (2013), among others. According to this analysis, NR predicates such as *think p* are assumed to come along with the presupposition (either as the result of a general pragmatic application condition, as originally proposed by Bartsch 1973, or as a soft presupposition trigger, as proposed by Gajewski 2005, 2007) that the subject either thinks *p* or thinks ~*p*. This presupposition is expressed in (10a). F and *x* stand for a given NR predicate and its subject, respectively.

(10) a. $F(x, p) \vee F(x, \sim p)$
b. $\sim F(x, p)$
c. $F(x, \sim p)$ (adopted from Collins and Postal 2014:10)

Let us see how this analysis works, using (11a) as a concrete example.

(11) a. I don't think it will rain today.
b. I think it won't rain today. (Collins and Postal 2014:9)

Applied to (11a), the EM property of the NR verb *think* creates the presupposition that the speaker thinks either that it will rain today (i.e., *think* (*x*, *p*)) or that it will not rain today (i.e., *think* (*x*, ~*p*)), namely, (10a). (11a) asserts, in addition, that it is not the case that the speaker thinks that it will rain today (i.e., ~*think* (*x*, *p*)) along the lines of (10b). Consequently, this assertion negates the first disjunct of the EM presupposition in (10a), rendering the second disjunct true and yielding (10c). This way, the EM-based approach ensures that (11a) entails (11b) without assuming any literal syntactic operation pulling the negation out of the embedded clause to the matrix clause. Note that this approach provides us with another analytical solution to the identity paradox posed by the Japanese reversed polarity sluicing case in (2). Assuming as natural that *omow* comes with the EM presupposition, just like its English translational correspondent *think*, the antecedent TP in (2) is semantically negative. As such, the antecedent and elided TPs entail each other, satisfying Merchant-style identity condition on sluicing. In the rest of this section, however, I will present two arguments for the syntactic NR analysis of reversed polarity sluicing in Japanese over the EM-based pragma-semantic alternative.

My first argument supporting the syntactic NR analysis over the pragmatic alternative comes from lexical sensitivities of NR predicates in Japanese, modeled on Horn's (1978) well-known observation regarding idiosyncratic lexical exceptions to the otherwise robust semantic classifications of NR predicates in English offered in his own work (i.e., opinion, perception, probability, intention/volition, and judgement/obligation). My argument is based on the observation that *omow* 'to think', but not *sinziru* 'to believe', behaves as an NR predicate licensing the reversed polarity reading, despite the fact that both verbs arguably belong to propositional attitude verbs committing a speaker to

the EM presupposition regarding their clausal complements along the lines of Bartsch's (1973) original approach to the NR reading.

Let us first the stage for my first argument. Taking the possibility of long-distance licensing of strong NPIs as the best diagnostic for syntactic NR, Bošković and Gajewski (2011) cites the Japanese example in (12) to conclude that Japanese simply lacks this operation.

(12) * [$_{S1}$ John-wa [$_{S2}$ Mary-ga asita-made syuppatu-suru
John-TOP Mary-NOM tomorrow-until leaving-do
daroo-to] sinzi-nak-atta].
will-COMP believe-NEG-PST
'John didn't believe that Mary would leave until tomorrow.'
(Bošković and Gajewski 2011:131)

This conclusion is rather hasty on three grounds. Firstly, I have already documented good evidence in section 2 for the syntactic NR hypothesis in Japanese based on the rather constrained distribution of strong NPIs. Secondly, the ungrammaticality of (12) is simply expected if *sinziru* is not an NR predicate, to begin with, unlike its English counterpart *believe*. In fact, this was exactly one of the important findings made in McGloin (1976: 388), who writes thus: "English verbs of thinking like *believe, guess, suppose, expect, feel* are considered negative-raising predicates. The corresponding Japanese *verbs sinziru, kanziru, kitasuru*, etc., which take *to* as a complementizer, however, do not seem to allow the negative to be optionally moved out of the lower clause." Finally, given the non-NR status of *sinziru*, the syntactic NR analysis correctly predicts that the variant of (2) with *sinziru*, instead of *omow*, blocks the reversed polarity reading, as shown in (13).

(13) Sensei-wa [$_{TP}$ kono bunseki-ga tadasii]$_{A}$-to sinzi-rare-nai-
teacher-NOM this analysis-NOM right-COMP believe-can-NEG-
sooda-ga imadani watasi-ni-wa naze [$_{TP}$…]$_{E}$ ka osietekurenai.
seem-but still me-DAT-TOP why Q don't.teach
'My teacher can't seem to believe that this analysis is right, but he has not taught me yet why.'

✔ a) '…why he can't believe that this analysis is right.'

* b) '…why this analysis is not right.

It is unclear how the verb-sensitivity of NR in Japanese, illustrated by the contrasting distribution of the reversed polarity reading between *omow* and *sinziru*, could be accommodated within the EM-based pragmatic approach, for both verbs are propositional attitude predicates which express the subject's doxastic stance toward the truth of the embedded clause, and hence have no reason not to induce the EM presupposition. The approach provides no principled explanation for why NR predicates are idiosyncratically distributed within a single language; see also Lakoff (1970), Horn (1978), and Collins and Postal (2014), inter alia, for further discussions and data pertaining to this point.

Kroll (2019, 2020), who first documented polarity reversals in English sluicing, develops a pragmatic account of the phenomenon in terms of Local Givenness in (14), which essentially states that a sluiced TP can be licensed iff the proposition denoted by the TP is entailed by its local context(c_L).

(14) Local Givenness: A TP α can be deleted *iff ExClo* ($[\![\alpha]\!]^g$) expresses a proposition p such that $c_L \subseteq p$. (Kroll 2019: 13)

Let us consider how her analysis works, using (1a) as an example. Kroll adopts a version of the EM-based approach to NR outlined in Gajewski (2005, 2007). She assumes that the assertion of the antecedent clause in (1a) and the EM presupposition triggered by *think* jointly derive the

reading that the speaker believes that California will not comply. She further adopts the idea that certain verbs like *think*, *see* and *believe* may assert their clausal complement as true in a local context independently of the matrix clause (Schlenker 2010; Anand and Hacquard 2014). Then, the strengthened embedded negation reading so derived creates a local context where California will not comply. Local Givenness is satisfied in (1a), because this context entails the elided TP, legitimatizing the generation of the reversed polarity sluicing example.

It is crucial to note, however, that Kroll's analysis stands on the EM presupposition and the exceptional ability of certain propositional attitude verbs to introduce their clausal complements as true in a local context. As such, the issue of verb-sensitivity to NR noted above applies equally to this analysis. Additionally, recall that the Japanese verb *sinziru* is not an NR predicate. Kroll's analysis, then, cannot account for the cross-linguistic difference between *believe* and *sinziru* with respect to the availability of the reversed polarity sluicing, for there does not seem to be any solid ground to claim that only one of these verbs can trigger the EM presupposition or contribute its complement to the local context. Example (15) shows that the English verb *believe* easily gives rise to the reversed polarity interpretation in striking contrast with the Japanese verb *sinziru* (recall (13)).

(15) Joe does not believe that $[_{TP}$ Donald will be president$]_A$, and he knows exactly why $[_{TP}$ ~~Donald will not be president~~$]_E$.

My second argument that the syntactic NR analysis of reversed polarity sluicing in Japanese is to be preferred over the EM-based pragmatic alternative comes from the tauto-clausal licensing requirement on strong NPIs in Japanese, reviewed in section 2: recall (6–8). In his semantic approach to NR inferences which is based on a version of Bartsch's (1973) EM-based theory, Gajewski (2005, 2007) develops a purely semantic licensing condition for strong NPIs such as *until tomorrow* in English, which states that such NPIs cannot be merely

licensed by downward entailing contexts (Ladusaw 1979) but must occur in an anti-additive environment in the sense of Zwart (1998), which is defined as in (16). Gajewski's (2007) licensing principle for strict NPIs is shown in (17).

(16) F is Anti-Additive iff $F(A) \wedge F(B) \Leftrightarrow F(A \vee B)$ (Gajewski 2005:37)

(17) A strict NPI α is licensed in a sentence S if there is a constituent ß containing α such that ß is Anti-Additive with respect to the maximal F-projection of α. (Gajewski 2007:302)

To illustrate how this semantic condition works, Gajewski (2007:302) observes that *not a single student* creates an antiadditive environment, but *not every student* does not. This contrast is evidenced by the observation that the inference in (18a), but not that in (18b), is valid.

(18) a. Not a single student smokes and not a single student drinks
= Not a single student smokes or drinks.
b. Not every student smokes and not every student drinks.
≠ Not every student smokes or drinks.
(Gajewski 2007:302)

Correlatively, this contrast, Gajewski argues, accounts for the difference in grammaticality between (19a) and (19b) with respect to licensing of the strong NPI *in years*.

(19) a. Not a single student has visited in years.
b.* Not every student has visited in years. (Gajewski 2007:302)

It is crucial that sentences with matrix negated NR verbs create an antiadditive environment, as shown by the validity of the inference in (20a) with the NR predicate *think*. This inference pattern is to be contrasted with the invalid inference pattern in (20b) with the non-NR predicate *is certain*, which does not

trigger the same environment.

(20) a. John doesn't think Mary left and John doesn't think Bill left.
= John doesn't think that Mary or Bill left.
b. John didn't claim that Mary left and John didn't claim that Bill left.
≠ John didn't claim that Mary or Bill left.

((20a) from Gajewski 2007:302)

It follows then that only the negated *think* licenses the strong NPI *until tomorrow*, as witnessed by the contrast in grammaticality between (21a) and (21b).

(21) a. Bill doesn't think [$_{CP}$ Mary will leave until tomorrow].
b.* Bill didn't claim [$_{CP}$ that Mary would arrive until tomorrow].

(Gajewski 2007:293)

It is not my concern in this paper to either defend or criticize Gajewski's semantic approach to licensing of strong NPIs in NR constructions in English or its possible extension to their Japanese equivalents, for that matter; I simply refer the interested reader to Collins and Postal (2014:ch10) for critical evidence against his approach and valuable data supporting the syntactic NR analysis of the paradigm in English. Rather, my point here is more modest. Recall that we have seen in section 2 McGloin's (1976)/Aoyagi and Ishii's (1994) argument that Japanese strong NPIs such as *raigetu-made* 'until next month' and *XP-sika* 'anything but XP' are subject to the requirement to the effect that they must be licensed by some clausemate negation. It seems unlikely that purely semantic approaches such as Gajewski's, whether or not they may be supplemented with the additional antiadditive licensing condition, would have any way of deriving the tauto-clausal licensing condition on strong NPIs, a condition which is no doubt syntactic in nature. By contrast, the relevant condition can be naturally captured in the syntactic NR hypothesis by whatever formal principles restrict the negative

transportation from its base-generated position in an embedded clause only to the next higher surface pronounced position.

4 One Issue: Non-Reversed Polarity Readings in Clausal Argument Ellipsis

In this section, I wish to point out one unresolved issue with my NR-based analysis of polarity reversals under sluicing in Japanese. The issue comes from the lack of reversed polarity readings in clausal argument/CP ellipsis. Example (22) illustrates this ellipsis pattern.

(22) Hanako-wa [$_{CP}$ zibun-no teian-ga saiyoosareru-to]$_{A}$
Hanako-TOP self-GEN proposal-NOM accepted-COMP
omotteiru-ga, Taroo-wa [$_{CP}$…]$_{E}$ omotte-inai.
think-but Taroo-TOP think-NEG
'Hanako thinks that her proposal will be accepted, but Taro does not think that her/his proposal will be accepted.' (Saito 2007:209, 210)

I assume that the ellipsis of clausal complements of *omow* 'to think', as illustrated in (22), involves a full-fledged CP, followed by the ellipsis of the CP, either through PF-deletion or LF-copy, a choice that is not directly relevant for our present concerns; see Shinohara (2006), Saito (2007) and Takita (2018) for supporting evidence for the argument ellipsis analysis over the *pro*-based analysis (Kasai 2014) based on the impossibility of scrambling from the CP-ellipsis site and the parallelism constraint on ellipsis (Fiengo and May 1994; Takahashi 2013). Keeping this theoretical choice point in mind, consider now the example (23), with the NR verb *omow* as the matrix antecedent verb.

(23) John-wa [$_{CP}$ kono ronbun-no bunseki-ga tadasii-to-wa]$_{A}$
John-TOP this paper-GEN analysis-NOM right-COMP-TOP
omotte-inai. Mary-wa [$_{CP}$ …]$_{E}$ omotteiru.
think-NEG Mary-TOP think
'John does not think that this paper's analysis is right. Mary thinks that this paper's analysis is right.'

My analysis of reversed polarity sluicing in Japanese, developed in section 2, assumes that the negation is interpreted in the embedded clause *before* it undergoes NR to the matrix pronounced position. The example in (23) does not have the reversed polarity interpretation according to which Mary thinks that this paper's analysis is not right. The example instead only allows the matching polarity interpretation, namely, that Mary thinks that this paper's analysis is right. This observation indicates, then, that in cases like (23), the negation must be interpreted in the matrix clause *after* the syntactic NR, for otherwise the antecedent-elliptical TP pair would not match in polarity. The fundamental question, then, is where the negation can or must be interpreted in an NR environment and why. I won't be able to offer any interesting attempt at solving this fundamental issue for the moment and must leave further exploration of this issue for another occasion.

5 Conclusion

In this paper, I have documented and analyzed reversed polarity sluicing in Japanese, following Kroll's (2019, 2020) recent investigation into its English brethren. This sluicing pattern seems problematic for the most successful theories to date of the range of identity conditions on sluicing such as Merchant's (2001) mutual entailment condition. I have proposed that this problem is resolved under the syntactic NR hypothesis. I have also compared this analysis of the construction with the competing alternative based on the EM presupposition, and argued that the latter analysis would be hard pressed in the verb-sensitivity of NR instantiated

by *omow* ‘to think’ and *sinziru* ‘to believe’ as well as in the tauto-clausal requirement on strong NPIs in Japanese, a requirement that seems to have its origin in syntactic structures. I have ended the paper with a brief glimpse at one fundamental issue with my NR-based analysis of polarity reversed sluicing in Japanese, as raised by clausal argument ellipsis.

Abbreviations

COMP = complementizer, DAT = dative, GEN = genitive, NEG = negative, NOM = nominative, NPST = non-past, PST = past tense, Q = question particle, TOP = topic

Competing Interests

The author has no competing interests to declare.

REFERENCES

Anand, Pranav & Valentine Hacquard. 2014. Factivity, belief and discourse. In Luka Crnič & Uli Sauerland (eds.), *The Art and Craft of Semantics: A Festschrift for Irene Heim*, 69–90, MITWPL, Cambridge, MA.

Aoyagi, Hiroshi & Toru Ishii. 1994. “On agreement-inducing vs. non-agreement-inducing NPIs. In Mercé Gonzàlez (ed.), Proceedings of NELS 24. 1–15. Amherst, MA: GSLA.

Bartsch, Renate. 1973. ‘Negative transportation’ gibt es nicht. *Linguistische Berichte* 27.1–7.

Bošković, Željko & Jon Gajewski. 2011. Semantic correlates of the NP/DP parameter. In Suzi Lim, Kevin Mullin & Brian Smith (eds.), Proceedings of NELS 39. 121–134. Amherst, MA: GSLA.

Collins, Chris & Paul M. Postal. 2014. *NEG Raising: An Essay on the Syntax of Negation*. Cambridge, MA: MIT Press.

Crowley, Paul. 2019. Neg-raising and neg movement. *Natural Language*

Semantics 27. 1–17.

Fiengo, Robert & Robert May. 1994. *Indices and Identity*. Cambridge, MA: MIT Press.

Fillmore, Charles J. 1963. The position of embedding transformations in a grammar. *Word* 19. 208–231.

Gajewski, Jon. 2005. *Neg-Raising: Polarity and Presupposition*. Massachusetts Institute of Technology PhD dissertation.

Gajewski, Jon. 2007. Neg-Raising and Polarity. *Linguistics and Philosophy* 30. 298–328.

Horn, Laurence R. 1978. Remarks on neg-raising. In Peter Cole (ed.), *Syntax and Semantics, Vol. 9*. 129–220. New York: Academic Press.

Horn, Laurence R. 1989. *A Natural History of Negation*. Chicago: University of Chicago Press.

Horn, Laurence R. & Samuel Byer. 1984. Short-circuited implicature: A negative contribution. *Linguistics and Philosophy* 7. 397–414.

Jacobson, Pauline. 2018. Some people think there is neg raising, and some people Don't. *Linguistic Inquiry* 49. 559–576.

Kasai, Hironobu. 2014. On the nature of null clausal complements in Japanese. *Syntax* 17. 168–188.

Kroll, Margaret. 2019 Polarity reversals under sluicing. *Semantics and Pragmatics* 12. 1–49.

Kroll, Margaret. 2020. *Comprehending Ellipsis*. University of California Santa Cruz PhD dissertation.

Ladusaw, William. 1979. *Polarity as Inherent Scope Relations*. University of Texas Austin PhD dissertation.

Lakoff, George. 1970. Pronominalization, negation, and the analysis of adverbs. In Roderick A. Jacobs & Peter S. Rosenbaum (eds.), *Readings in Transformational Grammar*. 14–165. Waltham, MA: Blaisdell,

Lakoff, Robin. 1969. A Syntactic Argument for Negative Transportation. In Robert I. Binnick, Alice Davison, Georgia M. Green & Jerry Morgan (eds.), Papers from the 5th Regional Meeting of the Chicago Linguistic Society. 140–147. Chicago, IL: University of Chicago,

Chicago Linguistic Society.

McGloin, Naomi H. 1976. Negation. In Masayoshi Shibatani (ed.), *Syntax and Semantics, Vol. 5: Japanese Generative Grammar*. 371–419. New York: Academic Press.

Merchant, Jason. 2001. *The Syntax of Silence: Sluicing, Islands, and the Theory of Ellipsis*. Oxford: Oxford University Press.

Prince, Ellen F. 1976. The syntax and semantics of neg-raising, with evidence from French. *Language* 52. 404–426.

Romori, Jacopo. 2013. A scalar implicature-based approach to neg raising. *Linguistics and Philosophy* 36. 291–353.

Ross, John. 1973. Slifting. In Maurice Gross, Morris Halle & Marcel P. Schützenberger (eds.), *The Formal Analysis of Natural Languages: Proceedings of the First International Conference*. 133–169. Mouton: The Hague.

Saito, Mamoru. 2007. Notes on East Asian argument ellipsis. *Language Research* 43. 203–227.

Schlenker, Philippe. 2010. Local contexts and local meanings. *Philosophical Studies* 151. 115–142.

Shinohara, Michie. 2006. On some differences between the major deletion phenomena and Japanese argument ellipsis. Ms., Nanzan University.

Takahashi, Daiko. 2013. A note on parallelism for elliptic arguments. In Kazuko Yatsushiro & Uli Sauerland (eds.), Proceedings of FAJL 6: Formal Approaches to Japanese Linguistics. 203–213. Cambridge, MA: MITWPL.

Takita, Kensuke. 2018. Antecedent-contained clausal argument ellipsis. *Journal of East Asian Linguistics* 27. 1–32.

Zwart, Frans. 1998. Three types of polarity. In Fritz Hamm & Erhard Hinrichs (eds.), *Plurality and Quantification*. 177–238. Dordrecht: Kluwer.