Asymmetric ditransitive constructions: evidence from Korean

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Abstract

This paper investigates the underlying structures of the two ditransitive constructions in Korean, the postpositional dative construction (realized as [Dative-Accusative]) and the double object construction (realized as [Accusative-Accusative]). We evaluate two approaches proposed in the literature, Harley's (1997, 2002) symmetric theory and Bruening's (2010) asymmetric theory in the sense of Marantz's (1993) applicative analysis: Harley's approach is symmetric since it posits a symmetric structure for the two constructions, whereas Bruening's approach is asymmetric because it posits a different structure for each construction. We draw data from quantifier scope, nominalizations, and ditransitive idioms in Korean which have not been systematically discussed in the literature, and show that they lend support to the proposed asymmetric theory that the double object construction in Korean, unlike its dative counterpart, is introduced by an applicative head. We also argue how the observed patterns in Korean cannot be reconciled with the Harley-type structures. The result of the discussion will show that despite the lack of the overt morphology Korean can be added to the inventory of languages that has a double object

24 construction with applicative characteristics.

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33 **Abbreviations**

34 Acc   Accusative

35 Adn   Adnominal

36 Caus   Causative

37 Comp Complementizer

38 Cop   Copula

39 Dat   Dative

40 Dec   Declarative

41 Evi   Evidential marker

42 Fut   Future

43 Gen   Genitive

44 Hon   Honorific marker

45 Imp   Imperative

46 Mod   Modal

47	Neg	Negation
48	Nml	Nominalizer
49	Nom	Nominative
50	Pass	Passive
51	Pres	Present
52	Pst	Past
53	Q	Question
54	Rel	Relative marker
55	Top	Topic
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1. Introduction

English is well known to have two distinct argument structures for ditransitive verbs (Larson, 1988; Pesetsky, 1995; Pinker, 1989; among others). This is illustrated in (1).

(1) a. Tommy gave an iPod to Julie.

    b. Tommy gave Julie an iPod.

Shown in (1a), the first type of ditransitive consists of a direct object (DO, Theme) and an indirect object (IO, Goal); the IO is a PP headed by the preposition 'to'. We will refer to this type as the prepositional dative construction (henceforth, PDC). The second type of ditransitive expresses both the IO and the DO as NPs and is referred to as the double object construction (henceforth, DOC), as in (1b).

Parallel to English, Korean also displays two patterns with ditransitive verbs. They are distinguished from each other by case marking, as shown in (2) and (3). Note here that the [Acc-Acc] pattern is limited to a small subset of ditransitive verbs, such as *cwu-* 'give' and *kaluchi-* 'teach' (Jung and Miyagawa 2004).

(2) [Dat-Acc] pattern

Hana-ka   Chelswu-eykey   keyiku-lul   cwu-ess-ta.

Hana-Nom   Chelswu-Dat   cake-Acc   give-Pst-Dec

'Hana gave a cake to Chelswu.'

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93   (3) [Acc-Acc] pattern

94   Hana-ka   Chelswu-lul   keyiku-lul   cwu-ess-ta.

95   Hana-Nom   Chelswu-Acc   cake-Acc   give-Pst-Dec

96   'Hana gave Chelswu a cake.'

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98   In the [Dat-Acc] pattern in (2), the IO (Goal) *Chelswu* is marked with the dative marker -

99   *ey(key)*[1]; the DO (Theme) *keyiku* 'cake' is marked with the accusative case *-(l)ul.*[2] By contrast, in

100   the [Acc-Acc] pattern in (3), the IO (Goal) *Chelswu* and the DO (Theme) *keyiku* 'cake' are both

101   indicated by the accusative case *-(l)ul.*

102   Given the two patterns for ditransitive verbs, the question that immediately arises is how the

103   ditransitive constructions in Korean are associated with an argument structure. In other words,

104   does Korean have only one type, such as the postpositional dative construction (PDC), or the

105   DOC, or both? In this paper, we will show that Korean is quite similar to English in terms of the

106   argument structures of ditransitives; specifically the [Dat-Acc] pattern corresponds to the PDC in

107   English and the [Acc-Acc] pattern is parallel to the DOC in English. Evidence for this claim

108   comes from the fact that the two patterns have different semantic implications concerning the

109   case alternation and an animacy restriction, as observed by Jung and Miyagawa (2004).

110   Establishing that the two argument structures PDC and DOC exist in Korean, we proceed to ask

111   how these two types of ditransitives are mapped onto a syntactic representation. Should they

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[1] The allomorphs of the dative marker depend on the animacy of the complement NP: if the NP

encodes an inanimate entity, *-ey* is used, and if the NP encodes an animate entity, *-eykey* is used.

[2] The allomorphs of the accusative-case marker are phonologically conditioned: if the NP ends with a

consonant, *-ul* is used, while if the NP ends with a vowel, *-lul* is used.

112   receive a unitary structural analysis to the extent that they share some syntactic structure (for

113   example, in the form of a small clause), or alternatively does each have its own syntactic

114   structure? One representative view of the former approach is in Harley's (1997, 2002) approach

115   to ditransitives in English, which we refer to as a symmetric theory since under this view both

116   the PDC and the DOC contain a small clause. For the latter, we consider an asymmetric theory of

117   ditransitives in Korean by extending Bruening's (2010) proposal for ditransitives in English. In

118   support of the asymmetric theory, we present three empirical facts (quantifier scope,

119   nominalization, and idioms), by applying the syntactic diagnostics developed for English by

120   Bruening to the data in Korean and argue for an asymmetric account of Korean. In this paper, we

121   share with Harley (1997, 2002) and Jung and Miyagawa (2004) the assumption that there are

122   slightly different semantics between the PDC and the DOC. However, we will argue against their

123   proposed symmetric structure and show that such an assumption is not sufficient to indicate what

124   the correct structure is for each construction. Specifically, the novel data from quantifier scope,

125   nominalizations, and idiom patterns in Korean will demonstrate that the asymmetric theory is

126   correct, because it quite straightfowardly captures the asymmetric distributions of the PDC and

127   the DOC.[3] Our argument, in turn, will reveal that the symmetric theory in the sense of Harley

128   (1997, 2002) is incapable of handling these asymmetries, requiring modification to account for

129   them.

130   The current study reaches the conclusion that the internal structure of ditransitives in Korean

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[3] In Appendix B, we connect the Korean facts to the data in Japanese, another language that has been
assumed to have the asymmetric structure, and show, based on Miyagawa and Tsujioka (2004) and
Miyagawa (2012), how the supported applicative analysis can be extended to the Japanese
ditransitive idioms. Detailed discussions on the asymmetric patterns in Japanese are called for, and
we leave this open for future research (see Miyagawa 2012 for a discussion on nominalizations).

131 is the exact mirror-image of the analysis of English advocated in Bruening (2010) along the line

132 of Marantz (1993), displaying a noteworthy parallelism between the typologically unrelated

133 languages of Korean and English. In fact, the asymmetric structure for which we argue in this

134 paper is not something restricted to the langauges under discussion. A considerable body of

135 literature along the line of Marantz's (1993) work on Bantu languages has shown that the Goal

136 argument in the DOC is introduced by an applicative head even in numerous typologically

137 unrelated langauges which may not have obligatorily overt applicative verbal morphology (e.g.,

138 Greek in Anagnostopoulou, 1999a, 1999b, 2001, 2003; Albanian, Icelandic, and Italian in

139 McGinnis, 2001; Spanish in Cuervo, 2003a and 2003b; Romanian in Diaconescu 2004 and

140 Diaconescu and Rivero, 2007; Bulgarian in Slavkov, 2008). We shall thus contend that with the

141 combined evidence from Korean as well as many other languages as discussed in the literature,

142 there is a reason to implicate that the asymmetric structures may be widely available, shared by

143 languages with the PDC and the DOC distinction.

144   Further, the analysis proposed here contributes to our understanding of Korean ditransitive

145 constructions in general. There is a large body of literature on ditransitive constructions in other

146 languages (e.g., see Larson, 1988; Harley, 1997, 2002 on English; Yatsushiro, 2003; Miyagawa

147 and Tsujioka, 2004 on Japanese). To our knowledge, however, the literature on Korean is missing

148 an explanation for what phrase structure ditransitive verbs project for their arguments. The only

149 recent work that deals with this issue is Jung and Miyagawa (2004) and Kim (2008), both of

150 which are in line with Harley's symmetric theory which, as we will argue in this paper, turns out

151 to be inadequate insofar as correctly explaining the nature of Korean ditransitives.

152   The remainder of this paper is organized as follows. Section 2 shows following Jung and

153 Miyagawa (2004) that the [Dat-Acc] pattern corresponds to the PDC and the [Acc-Acc] pattern

154 to the DOC in English. In Section 3, we introduce the two approaches proposed in the literature.

155 In Section 4, we propose the asymmetric theory. In Section 4.1 and Section 4.2 we provide

156 evidence involving quantifier scope and nominalization, respectively, and show how the

157 asymmetric theory is successful in explaining a wide body of data in Korean; in Section 4.3 we

158 provide idioms in support of the asymmetric theory and show why the symmetric theory cannot

159 be maintained. In Section 5, we conclude this paper, with some implications for the asymmetric

160 theory of ditransitives.

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162 **2. Two ditransitive constructions in Korean**

163 In this section, we show how the [Dat-Acc] and the [Acc-Acc] patterns are associated with two

164 distinct argument structures, the PDC and the DOC, respectively. One main argument that bears

165 on this distinction is based on observations concerning the semantic differences between the two

166 patterns. More specifically, as previously noted in Jung and Miyagawa (2004), the Goal

167 argument in the [Acc-Acc] pattern must receive a possessor reading, whereas the immediately

168 available reading for the Goal argument in the [Dat-Acc] pattern is a location meaning,

169 indicating that the case markings contribute to the meanings of the ditransitive constructions. Let

170 us now consider examples with respect to such semantic differences.

171   First, an animacy constraint arises in the [Acc-Acc] pattern but not in the [Dat-Acc] pattern.

172 That is, the Goal argument in the [Acc-Acc] pattern is restricted to animate entities, but the

173 corresponding argument in the [Dat-Acc] pattern is not necessarily animate (Jung and Miyagawa

174 2004).

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177 (4) a. Hana-ka   sitayk-ey/si.tayk   sikkwu-eykey   ton-ul   cwu-ess-ta.

178   Hana-Nom in-laws.home-Dat/in-laws.home family.member-Dat money-Acc give-Pst-Dec

179   'Hana gave money to the home of her in-laws/the family members of her in-laws.'

180   b. #Hana-ka   sitayk-ul   ton-ul   cwu-ess-ta.

181   Hana-Nom   in-laws.home-Acc   money-Acc   give-Pst-Dec

182   'Hana gave the home of her in-laws money.'

183   c. Hana-ka   sitayk   sikkwu-lul   ton-ul   cwu-ess-ta.

184   Hana-Nom   in-laws.home family.member-Acc money-Acc   give-Pst-Dec

185   'Hana gave the family members of her in-laws money.'

186

187 In the [Acc-Acc] pattern, as in (4b), the inanimate NP *sitayk* 'home of in-laws' as the Goal

188 argument yields a degraded reading, since inanimate entities cannot be commonly interpreted as

189 possessors. Instead, as in (4c) the appropriate reading arises with the animate NP *sitayk sikkwu*

190 'the family members of her in-laws' as the Goal argument: Hana gave the members of the family

191 the money, in which case there is a strong implication that the members of the family own the

192 money, as a voluntary possessor. In contrast, in the [Dat-Acc] pattern, no animacy requirement is

193 found. In (4a), the most salient readings are that the money is located at *sitayk* 'the home of her

194 in-laws' or *sitayk sikkwu* 'the family members of her in-laws'; in either case the Goal is

195 interpreted as the location of the money.

196   Second, we find different semantic implications between the [Dat-Acc] and the [Acc-Acc]

197 patterns in Korean, similar to the case in English (Oehrle, 1976; Larson, 1988).

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199 (5) a. John taught French to the students.

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200   b. John taught the students French.

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202   In English, the DOC in (5b), in comparison with the PDC in (5a), has a much stronger

203   implication that the students possess knowledge of French.

204   A similar difference is also attested in Korean, as reported in Jung and Miyagawa (2004).

205

206   (6) a. Hana-ka   haksayngtul-eykey   pwule-lul   kaluchi-ess-ta.   [Dat-Acc]

207   Hana-Nom   students-Dat   French-Acc   teach-Pst-Dec

208   'Hana taught French to the students.'

209   b. Hana-ka   haksayngtul-ul   pwule-lul   kaluchi-ess-ta.   [Acc-Acc]

210   Hana-Nom   students-Acc   French-Acc   teach-Pst-Dec

211   'Hana taught the students French.'

212

213   In (6b), the [Acc-Acc] pattern carries the implication that the students indeed acquired some

214   knowledge of the French language, while this implication is relatively weaker in the [Dat-Acc]

215   pattern in (6a).[4]

216   Both of the facts presented above make sense if the [Dat-Acc] pattern is treated as a

217   representation of the PDC and the [Acc-Acc] pattern as the DOC. Given that the PDC and the

218   DOC receive location and possessor readings, respectively, for their Goal argument in English,

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[4] Note that the nature of the possession meaning is often unclear. A reviewer points out that *actual* possession of the Goal can be cancelled in the DOC. This is not surprising, however. As noted in the literature, there are often lexical variations regarding the possession entailment. The DOC is nonetheless distinguished from the PDC in terms of *intended* possession or *prospective* possession (e.g., Gropen et al., 1989; Beavers, 2011; inter alia).

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219   the fact that in Korean the [Acc-Acc] pattern has the possessor reading and the [Dat-Acc] pattern

220   has the location reading indicates that these case markings are crucial to determine the type of

221   ditransitive construction in Korean, as pointed out by Jung and Miyagawa (2004).

222   Note that Korean has a very limited number of lexical causative verbs, as listed in (7), that

223   behaves exactly like ditransitive verbs in terms of the case alternation and animacy requirement

224   as shown by Jung and Miyagawa (2004). This indicates that the notion of "cause" is a necessary

225   semantic component of the meaning of ditransitives in Korean (and ditransitive verbs in general).

226

227   (7) Lexical causative verbs (Jung and Miyagawa 2004)[5]

228   *mek-i* 'feed', *sin-ki* 'put shoes on someone', *mwul-li* 'suckle'

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230   To illustrate, just as the Goal alternates between the two markers in the ditransitive

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[5] Note that unlike Jung and Miyagawa (2004) we have not listed *ip-hi-* 'put.on-Caus' as a lexcial causative verb because (a) unlike other lexical causative verbs as listed in (7), *ip-hi-* 'put.on-Caus' is compatible with an inanimate accusative causee, as seen in (1), and (b) the judgments about whether the accusative causee is interpreted as an agent, or metaphorically as a possessor conflicts among researchers.

(1) Chelswu-ka   catongca-ey/lul   waks-lul   ip-hi-ess-ta.
     Chelswu-Nom   car-Dat/Acc   wax-Acc   put.on-Caus-Pst-Dec
     'Chelswu coated the car with wax.'   (Sim 2005, Page 258, Footnote 22, Example i)

An anonymous reviewer finds that the accusative causee with *ip-hi-* 'put.on-Caus' receives such an interpretation, whereas Um (1995) and Son (2006) classify *ip-hi* 'put.on-Caus' as a non-agentive causative verb. Such facts, therefore, seem to indicate as the reviewer suggests that the number of lexical causative verbs that parallel ditransitive verbs may be even smaller than what Jung and Miyagawa (2004) assumed.

231 construction, the causee (Goal) in the lexical causative verb construction also involves a case

232 alternation between the dative and the accusative markers, as seen in (8). Also, like the

233 accusative Goal in the DOC the accusative causee which appears with a limited set of lexical

234 causative verbs is interpreted as a participant in the action caused by the causer, or,

235 metaphorically, as a possessor (according to Jung and Miyagawa's terminology).[6]

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237 (8) John-i   Mary-eykey/lul   pica-lul   mek-i-ess-ta.

238   John-Nom   Mary-Dat/Acc   pizza-Acc   eat-Caus-Pst-Dec

239   'John caused Mary to eat pizza.'   (Jung and Miyagawa 2004, Page 12, Example 19)

240

241   In addition, the accusative causee with the lexical causative verbs is restricted to animate

242 entities, like the accusative Goal in the DOC.

243

244 (9) John-i   catongcha-ey/*lul   waks-lul   mek-i-ess-ta.

245   John-Nom   car-Dat/Acc   wax-Acc   eat-Caus-Pst-Dec

246   'John coated his car with wax.'   (Jung and Miyagawa 2004, Page 116, Example 26)

247

248   Moreover, a lexical causative verb like *mek-i* 'eat-Caus' may have exactly the same usage

249 with the verb *cwu-* 'give', as it can change to *cwu-* 'give'.

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251 (10) John-i   kyungchalkwan-eykey/ul   noymwul-ul   mek-i/cwu-ess-ta.

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[6] Jung and Miyagawa (2004) also note from Pinker (1989) that lexical causative verbs being associated with a literal or metaphorical possession interpretation is not peculiar to Korean.

252   John-Nom   policeman-Dat/Acc   bribe-Acc   eat-Caus/give-Pst-Dec

253   'John gave a bribe to a policeman.'   (Jung and Miyagawa 2004, Page 116, Example 25)

254

255   Therefore, the facts presented so far lend support to Jung and Miyagawa's proposed

256   correlation between a limited number of lexical causative verbs and ditransitive verbs in

257   Korean.[7] In this paper, we adopt Jung and Miyagawa's (2004) observation that a very limited

258   number of lexical causative verbs listed in (7) are ditransitive verbs.

259   Finally, it should be noted that since Korean, as a scrambling language, allows for word-

260   order variation, the two arguments (the IO and the DO) can be fairly freely reordered within the

261   [Dat-Acc] and the [Acc-Acc] patterns, as depicted schematically in (11) and (12) below. The

262   scrambling operation, however, does not change the animacy constraint or the possessor

263   interpretation.

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265   (11) PDC: [Dat-Acc] pattern

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[7] A reviewer points out that when the lexical causative verbs, as listed in (7) in the text, occur with an accusative causee, they behave like the DOC verbs in displaying the asymmetry of scope and nominalization. For example, the lexical causative verb construction with the accusative causee (like the DOC) may not nominalize, whereas the lexical causative verb construction with the dative causee (like the PDC) may nominalize. We take these facts as evidence that the lexical causative verb construction, like the DOC, may involve Appl (as will be discussed in Section 3), and this applicative property contributes to the asymmetric properties. However, we will not go into the details of the structure of the lexical causative verb construction in Korean. Although we agree with the reviewer that there is some correlation between the three lexical causative verbs and ditransitive verbs, it seems that the lexical causative verb construction may require much finer-grained analysis that reflects more complex events in the structure, as discussed in Son (2004, 2006) and Shim and Nakajima (forthcoming).

266   a. [Indirect Object-Dat   Direct Object-Acc]

267   Goal   Theme

268   b. [Direct Object-Acc   Indirect Object-Dat]

269   Theme   Goal

270

271   (12) DOC: [Acc-Acc] pattern

272   a. [Indirect Object-Acc_1 Direct Object-Acc_2]

273   Goal   Theme

274   b. [Direct Object-Acc_2 Indirect Object-Acc_1]

275   Theme   Goal

276

277   This means that in the PDC, as in (11), both the [Dat-Acc] and the [Acc-Dat] orders are possible.

278   Likewise, in the DOC, as in (12), the [Acc_1-Acc_2] order can appear as [Acc_2-Acc_1]. In this paper,

279   we follow the standard approach that the [Theme-Goal] order is derived from the [Goal-Theme]

280   order by moving the Theme across the Goal and postulate that the [Acc-Dat] order in the PDC

281   and the [Acc_2-Acc_1] order in the DOC are derived from the [Dat-Acc] and the [Acc_1-Acc_2]

282   orders, respectively (e.g., Lee, 1991; 1993, Cho, 1994; Choi, 1999; Lee, 2004; Oh and

283   Zubizarreta, 2009). Note that we will return to this issue and present some evidence illustrating

284   the standard view in Section 3.1, where we also discuss how a Harley-type structure cannot be

285   directly extended to the data in Korean.

286

287   **3.   An analysis of the ditransitive constructions in Korean**

288   Having established the [Dat-Acc] pattern as the PDC and the [Acc-Acc] pattern as the DOC, we

289   proceed to investigate how these two types of ditransitives are mapped onto a syntactic

290   representation. In order to do so, we first evaluate two approaches proposed in the literature:

291   Harley's (1997, 2002) symmetric theory and Bruening's (2010) asymmetric theory. Next,

292   carefully examining novel data from quantifier scope, nominalization, and ditransitive idioms in

293   Section 4, we motivate an asymmetric theory of ditransitives in Korean.

294

295   **3.1.   Harley's (1997, 2002) symmetric theory**

296   Harley's (1997, 2002) small clause theory treats both the PDC and the DOC as involving a PP

297   small clause. Following Bruening's (2010) terminology, we refer to Harley's approach as a

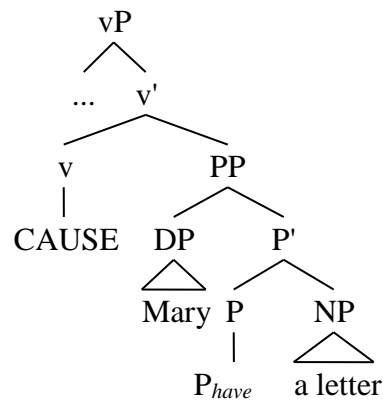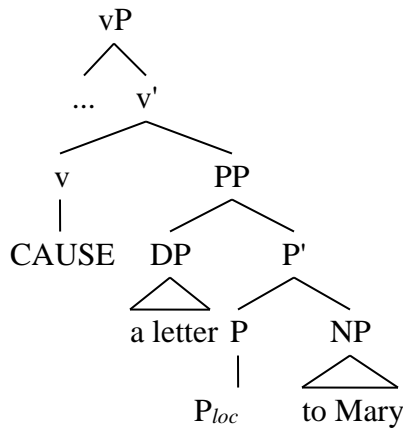298   symmetric theory since it posits a symmetric structure for the two constructions.

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300   (13) Harley's structure (2002, Page 32, Example 3)

301   a. PDC   b. DOC

302   John gave a letter to Mary.   John gave Mary a letter.

303

304   In Harley's symmetric theory, the PDC as in (13a) has a locative structure headed by P_{loc} and the

305   DOC as in (13b) has a possessive structure headed by P_{have}. Ditransitive verbs are thus a

306   combination of $[v_{cause} + P_{loc}]$ in the PDC and $[v_{cause} + P_{have}]$ in the DOC. Note also here that the

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307 relative hierarchy of the objects differs between the PDC and the DOC: in (13a), the Theme

308 asymmetrically c-commands the Goal in the PDC; in (13b), the Goal asymmetrically c-

309 commands the Theme in the DOC (see Larson 1988 for more detailed discussion of the syntactic

310 asymmetries observed in English ditransitives). These structures are an important aspect of

311 Harley's theory, for example, to account for idioms: the PDC has [P_{loc} + Goal] idioms and the

312 DOC has [P_{have} + Theme] idioms.

313 How to extend Harley's structure to the data in Korean is, however, not immediately obvious.

314 In particular, if we consider the Korean internal facts, as we have mentioned in Section 2, the

315 standard analysis is that the [Goal-Theme] order is basic, and the [Theme-Goal] order is derived

316 by scrambling; we also assume that this is true even with idioms (e.g. Lee, 1991, 1993; Cho,

317 1994; Choi, 1999; Lee, 2004; Kim, 2008; Oh and Zubizarreta, 2009). One piece of evidence

318 illustrating this analysis is the chain condition effect concerning *kucasin* 'himself' as reported in

319 Kim (2008), where she duplicates arguments from Japanese based on Yatsushiro (2003). The

320 chain condition effect (Rizzi 1986) shows up when the trace of the moved R-expression is

321 locally c-commanded by the anaphor within a chain (the chain is formed after an R-expression

322 has raised across the anaphor), and this causes the sentence to be ungrammatical.

323 Turning to the ditransitive constructions, the [Goal-Theme] order does not exhibit the chain

324 condition effect, but the [Theme-Goal] order does, indicating that the Goal is base-generated

325 higher than the Theme. Consider (14).

326

327 (14) a. (kewul-ul sayonghay-se) Hana-ka   Chelswu$_1$-eykey kucasin$_1$-ul   poyecwu-ess-ta.

328   mirror-Acc use-while   Hana-Nom Chelswu-Dat   himself-Acc   show-Pst-Dec

329   '(Using the mirror) Hana showed himself to Chelswu.'

330   b. *(kewul-ul sayonghay-se)Hana-ka   Chelswu-lul$_1$ kucasin$_1$-eykey t$_1$ poyecwu-ess-ta.

331   mirror-Acc use-while   Hana-Nom Chelswu-Acc   himself-Dat   show-Pst-Dec

332   '(Using the mirror) Hana showed Chelswu to himself.'

333

334   In (14a), in the [Goal-Theme] order the Theme is c-commanded by the Goal in the base-

335   generated position. If one posits that the [Goal-Theme] order is derived from the [Theme-Goal]

336   order, (14a) should be ungrammatical because the trace of the R-expression (the Goal) would be

337   c-commanded by the anaphor (the Theme) within a chain. But in fact it is the [Theme-Goal]

338   order in (14b) that shows the chain condition effect: the trace of the moved R-expression (the

339   Theme) is c-commanded by the anaphor (the Goal).[8] It thus follows that the Goal must be base-

340   generated higher than the Theme, indicating that the [Goal-Theme] order is basic and the

341   [Theme-Goal] order is derived by scrambling.[9] We assume that this is true even with idioms in

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[8] A reviewer judges the binding in (14b) just as good as that in (14a). Even though the judgment of the anaphor binding we report here should be confirmed experimentally, the native speakers of Korean we consulted find the binding far more difficult in (14b) than in (14a) (these judgments have been elicited from over ten native speakers; they seem to hold robustly). Until we conduct an experimental study, we cannot provide a definite answer as to why such a difference is attested. But, given the judgments we have collected from our consultants, we argue that the chain condition effect arises in the scrambled order, indicating that the Goal is base-generated higher than the Theme.

[9] A reviewer comments that the indexation in (14) may be misleading because it represents a relation between a real person and his image (i.e., not the real person *Chelswu* himself), and so the data may not constitute a legitimate experiment. Note, however, that *kucasin* 'himself' can have both reflexive and near-reflexive readings in Korean, like in English. For example, the Korean counterpart of Jackendoff's (1992) *wax museum* example *Ringo fell on himself* is grammatical, where *kucasin* 'himself' refers to either Ringo or his statute/image. In this, it seems hard to find a clear reason why (14) is not appropriate, and we maintain our assumption that in (14) *kucasin* 'himself' can be used to see the chain condition effect.

342 Korean.[10]

343   Now, if the standard view is correct, Harley's symmetric structure is not directly applicable

344 to the data in Korean, and this leads us to revise her original mechanism in such a way that it

345 correctly captures the syntactic relation between the Goal and the Theme. The modified

346 structures are illustrated in (16).

347

348 (15) a. Hana-ka   Chelswu-eykey   keyiku-lul   cwu-ess-ta.   PDC

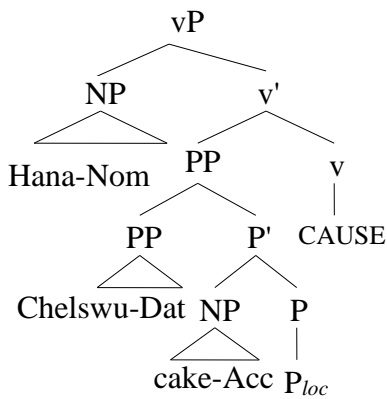349   Hana-Nom   Chelswu-Dat   cake-Acc   give-Pst-Dec

350   'Hana gave a cake to Chelswu.'

351   b. Hana-ka   Chelswu-lul   keyiku-lul   cwu-ess-ta.   DOC
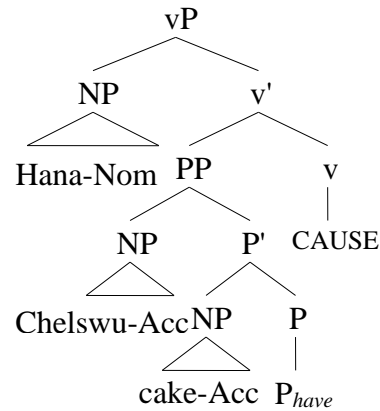
352   Hana-Nom   Chelswu-Acc   cake-Acc   give-Pst-Dec

353   'Hana gave Chelswu a cake.'

354

355 (16) a. PDC   b. DOC

356–361

```
        vP                                              vP
       /  \                                            /  \
     NP    v'                                        NP    v'
    /  \   / \                                      /  \   / \
Hana-Nom PP   v                                 Hana-Nom PP   v
       /  \   |                                        /  \   |
      PP   P' CAUSE                                   NP   P' CAUSE
     /\   / \                                        /\   / \
Chelswu-Dat NP  P                              Chelswu-Acc NP  P
           /\   |                                          /\   |
      cake-Acc P_loc                                   cake-Acc P_have
```

362 'Hana CAUSED a cake to GO TO Chelswu.'   'Hana CAUSED Chelswu to HAVE a cake.'

363

---

[10] See Appendix A, which contains a justification of this assumption.

364   Instead of Harley's proposal, one may posit as a null hypothesis two structures that are only

365   different in the flavor of P given that the Goal always asymmetrically c-commands the Theme in

366   Korean.[11] The empirical question then is, do the PDC and the DOC pattern uniformly with

367   respect to syntactic distributions? Clearly, the answer is 'no', as we will find asymmetric

368   distributions between the PDC and the DOC. We, therefore, interpret this null hypothesis as too

369   strong to maintain; it wrongly predicts that only semantic content plays into the distinction

370   between the PDC and the DOC when different syntactic patterns are also apparent.

371   Note that we agree that Harley's structure makes a convincing case for the meaning

372   difference between the two frames, and it has been advocated in a number of works for other

373   languages (Bleam 2003 on Spanish, Rimrott 2007 on German, among others). For Korean, Jung

374   and Miyagawa (2004) argue that the DOC has a postpositional possessive structure like (16b).

375   Along this line of research, it has been further shown that the PDC in Korean is associated with

376   the locative structure (Kim 2008). In this paper, we also make the assumption with Harley (1997,

377   2002) and Jung and Miyagawa (2004) that there are slightly different semantics between the

378   PDC and the DOC as discussed in Section 2. However, we are arguing that such an assumption

379   does not indicate what the correct structure is for each construction; there are various syntactic

380   properties that distinguish the PDC from the DOC, and such syntactic facts cannot be solely

381   captured by semantic factors like a possession meaning. In Section 4, we will demonstrate in

382   detail how a Harley-type symmetric theory appears less attractive than the proposed asymmetric

383   theory, by offering empirical evidence from the data in Korean.

384

385

---

[11] Thanks to an anonymous reviewer who brought this point to our attention.

386 **3.2.   Proposal: Bruening's asymmetric theory**

387 Alternatively, we propose an asymmetric theory (Bruening 2010, building on ideas in Marantz

388 1993), which posits a different structure for each construction, as illustrated in (18). In this

389 analysis, we assume that an external argument is introduced by a functional head Voice (Kratzer

390 1996).

391

392 (17) Asymmetric structure in Korean

393 a. PDC   b. DOC
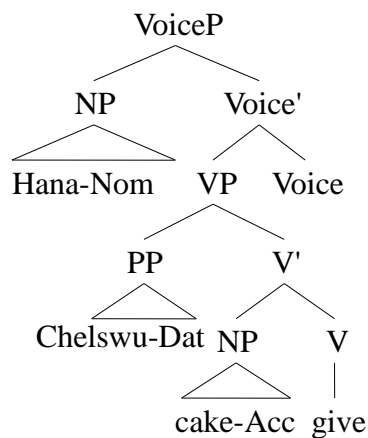
394 Hana-ka   Chelswu-eykey keyiku-lul cwu-ess-ta.   Hana-ka Chelswu-lul keyiku-lul cwu-ess-ta.

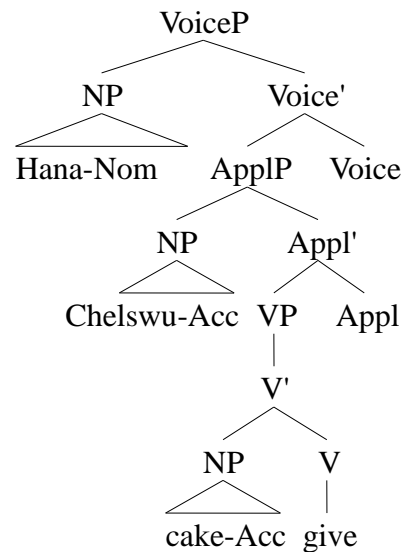395 Hana-Nom C.-Dat   cake-Acc give-Pst-Dec Hana-Nom C.-Acc   cake-Acc give-Pst-Dec

396 'Hana gave a cake to Chelswu.'   'Hana gave Chelswu a cake.'

397

398 (18) a. PDC   b. DOC

399–405

(a. PDC tree)
- VoiceP
  - NP: Hana-Nom
  - Voice'
    - VP
      - PP
        - Chelswu-Dat
        - V'
          - NP: cake-Acc
          - V: give
    - Voice

(b. DOC tree)
- VoiceP
  - NP: Hana-Nom
  - Voice'
    - ApplP
      - NP: Chelswu-Acc
      - Appl'
        - VP
          - V'
            - NP: cake-Acc
            - V: give
        - Appl
    - Voice

406

407 (19) Semantics of an applicative head (henceforth, Appl)

408   ⟦Appl⟧ = λx. λy. λe. HAVE(e) & THEME(e,x) & POSSESSOR(e,y) (Bruening 2010)

409   On the asymmetric account, in (18a), the IO (Goal) and the DO (Theme) in the PDC are the

410   arguments of the ditransitive verb within the VP. In contrast, in the DOC, the first accusative

411   object (IO, Goal) is introduced by an applicative head, while the second accusative object (DO,

412   Theme) is the argument of the ditransitive verb, as in (18b) (Marantz, 1993; Bruening 2010).

413   Semantically, as formalized in (19), Appl is responsible for the meaning of possession, the

414   meaning that is absent in the corresponding PDC: it takes the possessor (realized as the

415   accusative IO) and the possessee (realized as the accusative DO) and denotes a relation between

416   the Goal and an event described by the verb (Bruening 2010 for details). With the presence of

417   Appl, the meaning difference between the PDC and the DOC follows directly as discussed in

418   Section 2.[12]

419   Hence, the ditransitive structures under Bruening's (2010) approach are asymmetric: the

420   DOC requires an additional layer of applicative structure with the meaning of possession,

---

[12] Given the lack of overt morphology of Appl in the DOC, a reviewer points out that the current
study does not provide any direct evidence for the existence of Appl, although the PDC and the DOC
display the asymmetric behaviors (which will be discussed in Section 4). Postulating Appl in the
DOC is crucial, however. It not only can capture the meaning difference and the asymmetric
properties between the DOC and the PDC but also suggests a cross-linguistic approach to ditransitive
constructions. Note that positing a null verbal head is not new to our study. A growing body of work
on other constructions such as inalienable possession, causative, and passive constructions has argued
for a structure with a null verbal head (e.g., Son, 2004, 2006; Tomioka and Sim, 2007; Kim, 2011;
Shim and Nakajima, forthcoming; inter alia). Moreover, a Harley-type symmetric theory postulates a
null head like P$_{have}$ despite the lack of overt postposition encoding the meaning of possession. Then,
if the same reasoning carries over to the symmetric theory, proponents of this theory should also posit
the existence of P$_{have}$. The same reviewer also asks whether Appl in the DOC can be compatible with
intransitive verbs. This is not possible, because Appl in (19) selects the theme and the possessor,
meaning that only a verb that takes a possessor is permitted; intransitive verbs do not select a
possessor.

421   whereas the PDC takes a simpler structure involving only VP.

422

423   **4.   Asymmetric distributions in Korean**

424   Now that we have seen the two competing theories for ditransitives, this section will demonstrate

425   that the asymmetric theory as illustrated in (18) can explain a wide range of data in Korean. In

426   the sections that follow we provide evidence with regard to quantifier scope (in Section 4.1),

427   nominalization (in Section 4.2), and idioms (in Section 4.3) and show in greater detail how our

428   proposal appears more attractive than a Harley-type structure as advocated by Jung and

429   Miyagawa's (2004) analysis. We will conclude that the asymmetric approach has certain

430   advantages over a Harley-type symmetric structure as advocated by Jung and Miyagawa (2004):

431   (a) the asymmetric approach quite straightforwardly captures the asymmetric properties of the

432   PDC and the DOC without further stipulation; (b) the proposed analysis receives independent

433   support and justification from empirical facts that were previously unnoticed; and (c) it lends

434   additional support to a cross-linguistic approach to ditransitives in which Korean, which lacks an

435   overt applicative morpheme in the classical sense, can be added to the inventory of languages

436   which has a DOC with applicative properties.

437

438   **4.1.   Asymmetry: Quantifier Scope**

439   This section is divided into two subsections. In Section 4.1.1 we investigate quantifier scope in

440   ditransitives in Korean and show that a scope asymmetry between the PDC and the DOC follows

441   directly from the proposed asymmetric structures. Section 4.1.2 argues against an alternative

442   possibility to our proposed claim in which a scope asymmetry is derived from special semantic

443   properties imposed upon the DOC. We will show that an analysis resorting to semantic notions

444　does not go through, suffering from empirical problems.[13]

445

446　**4.1.1.　Quantifier Scope**

447　One piece of empirical evidence in support of the asymmetric theory concerns quantifier scope.

448　Before we turn to the ditransitive data, it is necessary first to understand 'quantifier scope

449　freezing', which is attested in Korean and distinct from English. In Korean, scope is basically

450　determined by the surface word order; only the surface scope interpretation for quantifiers in the

451　canonical word order is permitted (Huang, 1982; Hoji, 1985; Joo, 1989; Hagstrom, 1998; Yang,

452　1992; inter alia). For example, in English, (20) has scope ambiguity: 'some' can take scope over

453　'every' or vice-versa.

454

455　(20) Some student read every book.

456　 'some > every': 'A particular student read all the books.'

457　 'every > some': 'For each book, a possibly different student read it.'

458

459　　In Korean, in contrast, scope ambiguity does not arise in the corresponding sentence in (21);

460　this sentence has the canonical [Subject-Object-Verb] order (Joo, 1989; Ahn, 1990; Sohn, 1995;

461　Hagstrom, 1998; inter alia).

462

463　(21) etten　　 haksayng-i　 motun chayk-ul　　 ilk-ess-ta.

464　　　some　　student-Nom　every　book-Acc　　 read-Pst-Dec

---

[13] This subsection is based on an anonymous reviewer's comments and suggestions. We thank a
reviewer for these constructive points.

465   'Some student read every book.'

466   'some > every': 'A particular student read all the books.'

467   '*every > some': 'For each book, a possibly different student read it.'

468

469   The only available reading is 'there is a particular student who read all the books', the reading

470   under the 'some > every' scope.

471   However, the scope ambiguity becomes available if the object precedes the subject through

472   scrambling, as shown in (22).

473

474   (22) a. motun chayk-ul$_1$ etten haksayng-i   t$_1$ ilk-ess-ta.

475   every   book-Acc   some   student-Nom   read-Pst-Dec

476   'Some student read every book.'

477   'every > some': 'For each book, a possibly different student read it.'

478   'some > every': 'There is a particular student who read all the books.'

479   b. etten   chayk-ul$_1$ motun   haksayng-i   t$_1$ ilk-ess-ta.

480   some   book-Acc   every   student-Nom   read-Pst-Dec

481   'Every student read some book.'

482   'some > every': 'There is a particular book that all the students read.'

483   'every > some': 'Each student read a possibly different book.'

484

485   In (22a), the scrambled sentence reveals the scope ambiguity: 'some' takes scope over 'every' or

486   vice-versa. The same is true of (22b).

487   Hence, scope rigidity is attested in the [Subj-Obj] order, the canonical word order in Korean,

488   as in (21), but not in the [Obj-Subj] order, a scrambled word order, as in (22). This is referred to

489   as the 'scope freezing effect', (i.e., scope is frozen in the canonical word order).

490   Turning to ditransitives, the PDC displays scope ambiguity under scrambling: scope is

491   frozen in the [Goal-Theme] order, but flexible in the scrambled [Theme-Goal] order, as shown in

492   (23).

493

494   (23) a. Hana-ka   etten   ai-eykey   motun chayk-ul   cwu-ess-ta.   [Goal-Theme]

495   Hana-Nom   some   kid-Dat   every book-Acc   give-Pst-Dec

496   'Hana gave every book to some kid.'

497   'some > every': 'Hana gave all the books to a particular kid.'

498   '*every > some': 'For every book, Hana gave it to a possibly different kid.'

499   b. Hana-ka   motun chayk-ul$_1$ etten   ai-eykey t$_1$ cwu-ess-ta.   [Theme-Goal]

500   Hana-Nom   every book-Acc   some   kid-Dat   give-Pst-Dec

501   'Hana gave every book to some kid.'

502   'some > every': 'Hana gave all the books to a particular kid.'

503   'every > some': 'For every book, Hana gave it to a possibly different kid.'

504   c. Hana-ka   etten   chayk-ul$_1$ motun ai-eykey t$_1$ cwu-ess-ta.   [Theme-Goal]

505   Hana-Nom   some   book-Acc   every kid-Dat   give-Pst-Dec

506   'Hana gave some book to every kid.'

507   'some > every': 'There is a particular book that Hana gave to all the kids.'

508   'every > some': 'For every kid, Hana gave a possibly different book to him.'

509

510   In (23a), in the [Goal-Theme] order 'some' only takes scope over 'every'; in (23b), the

25

511 scrambled [Theme-Goal] order is ambiguous between the two readings, since 'some' can take

512 scope over 'every' or vice-versa. In (23c), similarly, scope ambiguity occurs in the scrambled

513 [Acc-Dat], where the Theme consists of the existential quantifier 'some' and the Goal contains

514 the universal quantifier 'every'.[14] Note here that the facts regarding the quantifier scope in (23)

515 are consistent with those regarding the chain condition effect as discussed in Section 3, strongly

516 indicating that [Goal-Theme] is the underlying order.

517   But, unlike what we find in the PDC, scope is frozen in the corresponding DOC, in which

---

[14] We do not provide the corresponding [Dat-Acc] order as shown below because the data are not appropriate for testing scope ambiguity. (2) below has the 'every > some' reading: this covers both the situation in which 'each kid received a different book' and the situation in which 'each kid received the same book'. Hence, (2) illustrates an issue of vagueness, not ambiguity.

(2) Hana-ka   motun ai-eykey   etten   chayk-ul   cwu-ess-ta.
    Hana-Nom every kid-Dat   some   book-Acc   give-Pst-Dec
    'Hana gave every book to some kid.'

Related to this sentence, a reviewer questions how it is guaranteed that the 'some > every' reading in (23b) in the text does not come from the vagueness as illustrated in (2) above. While teasing apart vague and ambiguous sentences might often be delicate, it can be seen by means of several tests (see Reinhart, 1976; Cooper, 1979; Fodor and Sag, 1982; Ruys, 1992; Breul, 2004; inter alia). For example, (23b) in the text and (2) above would receive a different truth value, when they are embedded under negation like *it is not true that X* in a given context. For a vague sentence like (2) under the negation, it would be judged as false because the 'some > every' reading entails the 'every > some' reading. For an ambiguous sentence like (23b) under the negation, by contrast, it would be difficult to assign a truth value of either true or false because such a sentence does not reveal a truth value of the 'some > every' reading; the 'some > every' reading does not entail the 'every > some' reading. Accordingly, we take this as evidence that the 'some > every' reading in an ambiguous sentence like (23b) does not come from the 'every > some' reading, supporting the prevailing view that scope is frozen in the surface word order and that scrambling can lead to scope ambiguity.

518   the second accusative object (Theme) is unable to take scope over the first accusative object

519   (Goal) in the scrambled [Theme-Goal] order.

520

521   (24) a. Hana-ka   etten   ai-lul   motun   chayk-ul   cwu-ess-ta.   [Goal-Theme]

522   Hana-Nom   some   kid-Acc   every   book-Acc   give-Pst-Dec

523   'Hana gave some kid every book.'

524   'some > every': 'Hana gave a particular kid all the books.'

525   '*every > some': 'For every book, Hana gave it to a possibly different kid.

526   b. Hana-ka   motun chayk-ul$_1$ etten   ai-lul   t$_1$ cwu-ess-ta.   [Theme-Goal]

527   Hana-Nom   every   book-Acc   some   kid-Acc   give-Pst-Dec

528   'Hana gave some kid every book.'

529   'some > every': 'Hana gave a particular kid all the books.'

530   '*every > some': 'For every book, Hana gave it to a possibly different kid.'

531

532   In (24a), the [Goal-Theme] order receives only the surface scope reading, in which 'some' takes

533   scope over 'every'. In a similar vein, in the scrambled [Theme-Goal] order in (24b), we get only

534   the 'some>every' reading, 'Hana gave a particular kid all the books'.

535   In short, we find that there is an asymmetric distribution concerning quantifier scope: inverse

536   scope is available in the PDC, but unavailable in the DOC. It is mysterious, then, why

537   scrambling of the DO over the IO does not alter the scope relation in the DOC (but it does in the

538   PDC). In order to figure out this asymmetry, we put forward a theory of scrambling as a feature-

539   driven movement which is subject to standard theories of locality (in the case of A-scrambling),

540   in which an element is attracted to check unvalued features on a head, A-scrambling or A-bar

541 scrambling. This is not a new idea and has been suggested and advocated by various researchers

542 following the idea that movement is not free (Chomsky 1993, 1995) (see Grewendorf and Sabel,

543 1999; Kitahara, 2002; Kawamura, 2004; Ko, 2005, 2007, McGinnis, 1999; Miyagawa, 1995,

544 1997, 2001, 2003; Sabel, 2001; *inter alia*).[15] With this assumption, we show that quantifier scope

545 between the IO and the DO is the result of checking an unvalued feature on a head associated

546 with A-movement, and thereby the asymmetry follows from the proposed asymmetric theory.

547   Specifically, we assume, following Chomsky's (1993) Attract F theory of movement, that a

548 feature on the head, an A-feature or an A-bar feature as illustrated in (25), attracts an element that

549 has an identical feature for feature matching, and then the attracted element raises to a specifier

550 of that head and enters into a feature checking relation with that head. Also, A-scrambling obeys

551 the locality condition on feature movement, as illustrated in (26) (see Miyagawa, 1997, 2001,

552 2005; McGinnis, 1999; Grewendorf and Sabel, 1999; Sabel, 2001; Kitahara, 2002; Ko 2005,

553 2007; inter alia). We also postulate that a head cannot attract its own specifier (Chomsky 2000,

554 2001), and in the case of multiple scrambling elements may move to multiple specifier positions

555 of the head (in the same manner as multiple *wh*-movement or the movement of two objects in

556 object shift in Germanic languages).

557

558 (25) a. A feature [S-A]: This feature is associated with A-scrambling, and in principle interprets

559   the highest copy at LF.

560   b. A feature [S-A']: This feature is associated with A-bar scrambling and in principle

---

[15] Previous studies on scrambling have often treated it as an adjunction operation that arises
optionally (e.g., Kuroda, 1988; Satio, 1985; Fukui, 1993; Saito and Fukui, 1998; Takano, 1998). See
also Bošković and Takahashi (1998) who show that scrambling involves base-generation in the
scrambled position rather than movement.

561   interprets the lowest copy at LF.

562

563   (26) a. Minimality link condition: K attracts α if there is no β closer to K than α, such that K

564   attracts β. (Chomsky 1995:311)

565   b. Equidistance: α and β are equidistant from γ if α and β are in the same minimal domain.

566   (Chomsky 1995: 356)

567

568   In the case of A-scrambling, as in (25a), it is driven by a feature [S-A] on Voice. In the case of A-

569   bar scrambling, as in (25b), it is driven by a feature [S-A'], and takes place just like other kinds

570   of A-bar movement; this means that just as a [+*wh*] on the head C attracts a *wh*-phrase in *wh*-

571   movement, a feature [S-A'] on the head attracts an element that has the same feature for feature

572   matching. Also, the fact that a feature [S-A] interprets the highest copy at LF and a feature [S-A']

573   interprets the lowest copy at LF follows from the generally-held condition on the nature of A-

574   movement and A-bar movement, respectively. That is, A-movement can introduce new

575   possibilities for binding and the highest copy has an effect on binding relations.[16] A-bar

576   movement, on the other hand, obligatorily reconstructs, and a copy left behind by movement has

577   a reconstruction effect.[17]

---

[16] An anonymous reviewer notes that scrambling has been analyzed differently from the typical A-movement such as subject raising and object shift. This is correct. Our study does not also make any argument or assumption that the manifested scrambling belongs to subject raising and object shift just because of the fact that the scrambling, like subject raising, is A-movement. As noted in the text, what we mean by scrambling as A-movement is that it is A-movement because it introduces new binding possibilities, a standard property associated with A-movement.

[17] An anonymous reviewer notes that Chomsky's (1998, 2000, 2001) typical φ-features include case and agreement and typical non φ-features include focus and topic. S/he further comments that

578   With this background, our argument in support of the view that the quantifier scope facts

579   between the IO and the DO are the result of A-movement rather than A-bar movement comes

580   from the effects of weak crossover (henceforth, WCO) and strong crossover (henceforth, SCO).[18]

581   It has been discussed that lack of WCOs effect indicates that scrambling is an instance of A-

582   movement; however, if scrambling induces a WCO violation, it is A-bar movement (e.g.,

583   Mahajan, 1989; Lee, 1993; Cho, 1994). Considering the data concerning WCO as well as SCO, it

584   turns out that the scrambling of the DO across the IO in the PDC, as an instance of A-movement,

585   is immune to WCO and SCO effects as it can create new binding possibilities (Frank, Lee, and

586   Rambow, 1996; McGinnis, 1999); in contrast, scrambling of the DO across the IO in the DOC

587   triggers WCO and SCO violations as it has a reconstruction effect, a clear property associated

588   with A-bar movement. Let us first consider the PDC examples.

589

590   (27) a. *Chelswu-ka   [pro_1/ku-uy$_1$ cwuin-eykey] [etten kangaci-lul$_1$]   cwu-ess-ni?

591   Chelswu-Nom pro/he-Gen owner-Dat   which puppy-Acc   give-Pst-Q

extending this distinction to the movement in the PDC and the DOC would however bring out some undesirable result to the current paper. For example, the reviewer states that under Chomsky (1998, 2000, 2001) the scrambling of the DO across the IO in the PDC is an agreement feature-driven object shift; nonetheless Korean is not an object shift language, and thereby the scrambling in the PDC should differ from the regular agreement feature-driven A-movement. While Chomsky's features like case and agreement have been used in much previous work, we do not dispense with the view that case and agreement features are the exclusive features driving A-movement. Rather we contend that other features may also drive A-movement (e.g., theta-role features in Hornstein 2001, 2002; possessor raising in Lee-Schoenfeld, 2006; Kishimoto, 2013; inter alia), and the most relevant features to the movement here are scrambling features, as also discussed in McGinnis (1999), Grewendorf and Sabel (1999), and Kawamura (2004).

[18] The main data we show in the paper cover the secondary strong crossover in the sense of Postal (1993). For convenience of description, we refer to Postal's secondary strong crossover as SCO.

592   'Which puppy$_1$ did Chelswu give to *pro*$_1$/his$_1$ owner?'

593   b. Chelswu-ka   [etten kangaci-lul$_1$]$_2$ [*pro*$_1$/ku-uy$_1$ cwuin-eykey]   t$_2$ cwu-ess-ni?

594   Chelswu-Nom   which puppy-Acc   *pro*/he-Gen owner-Dat   give-Pst-Q

595   'Which puppy$_1$ did Chelswu give to *pro*$_1$/his$_1$ owner?'

596

597 In the PDC, as in (27), the local scrambling does not trigger a WCO effect, because scrambling

598 as an instance of A-movement can create new binding relations. In the unscrambled [Goal-

599 Theme] order, as in (27a), the *wh*-element contained in the DO cannot bind its coreferential

600 pronoun embedded in the IO. As in (27b), however, if the DO scrambles across the IO, it can

601 bind the pronoun, indicating that scrambling in the PDC as an instance of A-movement repairs a

602 WCO violation.[19]

603   However, the same operation in the DOC induces a WCO effect, as shown in (28). In the

604 unscrambled order, a sentence like (28a) is ungrammatical because the *wh*-element contained in

605 the DO cannot bind its pronoun embedded in the IO. As in (28b), the scrambled order is still

606 ruled out; the copy of the DO left behind by movement has a reconstruction effect, resulting in a

607 WCO violation.

608

609 (28) a. *Chelswu-ka   [*pro*$_1$/ku-uy$_1$ cwuin-ul]   [etten kangaci-lul$_1$]   cwu-ess-ni?

610   Chelswu-Nom   *pro*/he-Gen owner-Acc   which puppy-Acc   give-Pst-Q

---

[19] We include both *ku* and a null argument *pro* in the data regarding WCO and SCO effects. This is because in Korean *ku* may be ambiguous between a demonstrative pronoun and a personal pronoun for some speakers, and in cases where English would use an overt pronoun Korean makes use of argument drop. It is crucial to note that the native speakers we have consulted provided the same judgments for both sentences with *ku* and sentences with *pro*. Thanks to a reviewer who brought this point to our attention.

611   'Which puppy$_1$ did Chelswu give *pro*$_1$/his$_1$ owner?'

612   b. *Chelswu-ka   [etten kangaci-lul$_1$]$_2$ [*pro*$_1$/ku-uy$_1$ cwuin-ul]   t$_2$ cwu-ess-ni?

613   Chelswu-Nom   which puppy-Acc   *pro*/he-Gen owner-Acc   give-Pst-Q

614   'Which puppy$_1$ did Chelswu give *pro*$_1$/his$_1$ owner?'

615

616   The proposed derivations for these sentences are given below.

617

618 (29) a. PDC   b. DOC
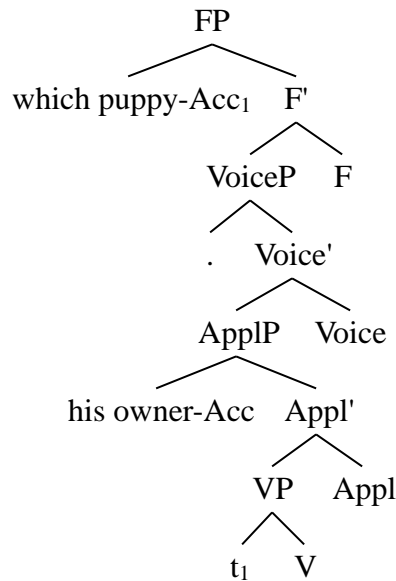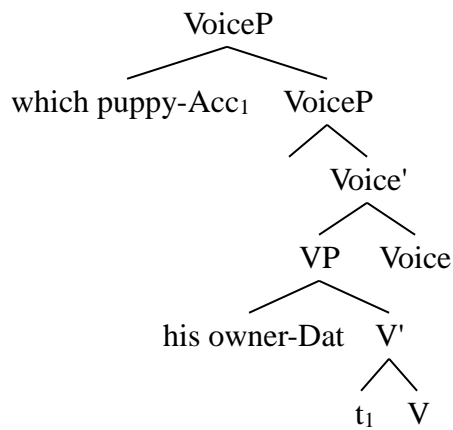
627 In the PDC (29a), the DO scrambles to VoiceP where it checks a feature [S-A] on Voice; since

628 this feature interprets the highest copy at LF, no WCO effect arises. In the DOC (29b), the DO

629 raises to some FP (Functional Projection) above Voice for checking a feature [S-A'], and this

630 feature interprets the lowest copy at LF, resulting in a WCO violation. We assume that the

631 subject moves to a position higher than the scrambled DO.

632   In addition, we can also find a SCO effect induced in the DOC, as in (31), but the same

633 effect is absent in the PDC, as in (30).

634 (30) a. *Hana-ka   [ku-eykey$_1$]   [nwukwu-uy$_1$ sacin-ul]   cwu/poyecwu-ess-ni?

635   Hana-Nom   he-Dat   who-Gen   photo-Acc   give/show-Pst-Q

636   'Whose$_1$ photo did Hana give/show to him$_1$?'

637   b. Hana-ka   [nwukwu-uy$_1$ sacin-ul]$_2$ [ku-eykey$_1$]   t$_2$ cwu/poyecwu-ess-ni?

638   Hana-Nom   who-Gen   photo-Acc   he-Dat   give/show-Pst-Q

639   'Whose$_1$ photo did Hana give/show to him$_1$?'

640

641 (31) a. *Hana-ka   [ku-lul$_1$]   [nwukwu-uy$_1$ sacin-ul]   give/poyecwu-ess-ni?

642   Hana-Nom   he-Acc   who-Gen   photo-Acc   give/show-Pst-Q

643   'Whose$_1$ photo did Hana give/show him$_1$?'

644   b. *Hana-ka   [nwukwu-uy$_1$ sacin-ul]$_2$ [ku-lul$_1$]   t$_2$ give/poyecwu-ess-ni?

645   Hana-Nom   who-Gen   photo-Acc   he-Acc   give/show-Pst-Q

646   'Whose$_1$ photo did Hana give/show him$_1$?'

647

As in (30a), in the PDC, the unscrambled [IO-DO] order is ungrammatical, as a pronoun in the IO cannot be bound by the *wh*-element in the DO. Yet, in the scrambled [DO-IO] order (30b) the moved DO can bind the pronoun in the IO, indicating that scrambling repairs a SCO violation by introducing a new binding relation.[20] This contrasts with the DOC. As in (31b), the scrambled

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[20] We assume that the binding relation here is explained in accordance with Hornstein's (1995) *almost c-command*. Also, an anonymous reviewer points out that the PDC and the DOC data concerning SCO effects do not seem to show a sharp contrast, especially if *poyecwu-* 'show' changes to *cwu-* 'give'. The reviewer further states that s/he is not sure whether *poyecwu-* 'show' belongs to the same class as *cwu-* 'give'. We agree with the reviewer to the extent that the two verbs may not belong to the same class, especially in terms of a lexical semantic perspective (see Levin 2004 and Beavers 2011 who address differences between *give* and *show*). At this point, we are uncertain if the

652   DO does not bind a pronoun in the IO; rather, the copy left behind by movement has a

653   reconstruction effect, resulting in a Condition C effect.
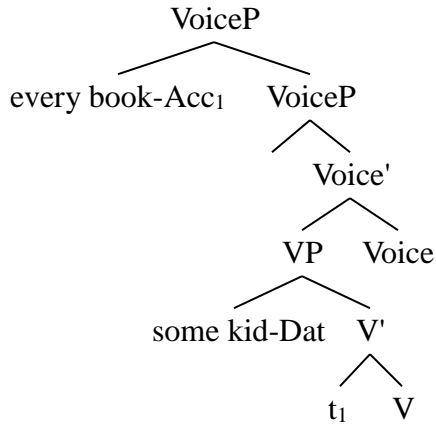
654   Therefore, the contrast between the PDC and the DOC in the configuration of WCO and

655   SCO suggests that scrambling of the DO across the IO can make a clear A/A-bar distinction;

656   scrambling of the DO across the IO in the PDC can introduce new binding possibilities, a

657   property associated with A-movement, and scrambling of the DO across the IO in the DOC

658   obligatorily reconstructs, a property associated with A-bar movement.

659   Returning to the quantifier scope facts, the scope difference follows from the proposed

660   asymmetric structures, as illustrated in (32) below.
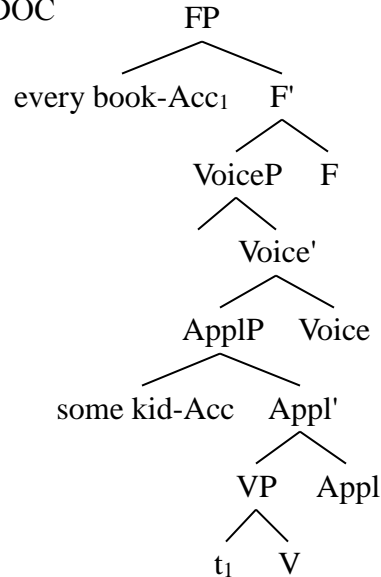
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reviewer's judgment comes from such a lexical difference. While it might be interesting to
investigate this difference in Korean, we assume that the two verbs belong to the same group in the
sense that they are both ditransitive verbs (Fillmore 1965, 1968; Jackendoff & Culicover 1971; Green
1974; Oehrle 1976; Barss & Lasnik 1986; Larson 1988; Gropen et al.1989; Pinker 1989; inter alia).
As for our data regarding the presence of SCO effects, the fifteen native speakers of Korean we have
consulted found that the DOC in the SCO context is degraded, while the corresponding PDC is
acceptable. Even consultants who initially said the PDC is marginally acceptable said that the
corresponding DOC is deviant. Taken together, given that the PDC and the DOC show a contrast
with *poyecwu-* 'show' (for the reviewer) and that our informants find a contrast concerning SCO
effects, we argue that the ungrammaticality of the DOC comes from the SCO effect.

668 (32) Asymmetric structures in Korean

669 a. PDC   b. DOC

```
        VoiceP                                         FP
       /      \                                       /    \
every book-Acc₁  VoiceP                   every book-Acc₁   F'
                  /    \                                    /   \
               Voice'                                  VoiceP    F
               /    \                                   /  \
             VP    Voice                             Voice'
            /   \                                    /    \
   some kid-Dat  V'                              ApplP    Voice
                 / \                             /    \
               t₁   V                    some kid-Acc  Appl'
                                                       /    \
                                                     VP     Appl
                                                    /  \
                                                  t₁    V
```

678 In the asymmetric account, the two objects in the PDC (32a) reside within the same maximal

679 domain, the VP, and so in the resulting structure either the IO or the DO can undergo movement,

680 in accordance with the locality constraint as defined in (26), to check the feature [S-A] on

681 Voice.[21] The current claim thus makes the right prediction about the scope ambiguity in the PDC

---

[21] An anonymous reviewer questions how the proposed asymmetric theory can handle the word order

variation in (3) where both the IO and the DO in the PDC precede *ecey* 'yesterday', given the

assumption that *ecey* 'yesterday' adjoins to some functional projection above VP.

(3) Chelswu-ka   Mary-eykey   chayk-ul   ecey   cwu-ess-ta.
    Chelswu-Nom   Mary-Dat   book-Acc   yesterday   give-Pst-Dec
    'Chelswu gave a book to Mary yesterday.'

Under the current claim, the IO moves, and the DO is drawn to multiple specifier positions of the

head Voice, checking features; the feature [S-A] permits both of the IO and the DO to move. Note

that *ecey* 'yesterday' does not necessarily count as an intervener in the use of the feature-checking

(scrambling) mechanism, because a prototypical adjunct theory is assumed to be at work such that

682   in which the [Theme-Goal] order is ambiguous between the surface and the inverse scope

683   readings. Turning to the DOC, in principle the same A-scrambling can take place in the DOC.[22]

684   The locality condition on movement as given in (26), however, results in the DO never being

685   able to cross the higher IO in A-scrambling. As illustrated in the proposed asymmetric structure

686   (32b), the objects in the DOC are not contained within the same maximal domain: the first object

687   'some kid' is introduced by Appl, while the second object 'every book' stays inside the VP. This

688   is why the DO is unable to cross the higher IO in a scope-taking movement, resulting in the

689   inverse scope being unavailable in the DOC. Instead, the only way for the DO to move across the

690   higher IO is by A-bar scrambling, meaning that the DO may A-bar scramble to some FP above

691   VoiceP that would check the feature [S-A'], as in (32b). (We have shown earlier that this

692   movement is indeed associated with A-bar movement as it obligatorily reconstructs.) Hence, on

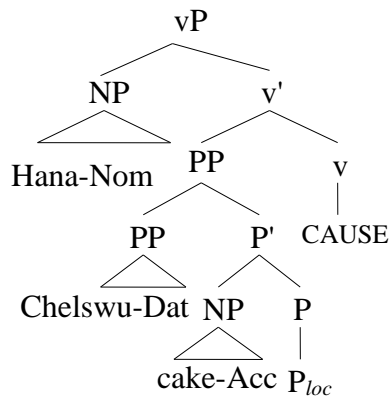693   this asymmetric approach we can directly capture the lack of the inverse reading in the DOC.[23]

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adverbials are adjoined to available projections in which they are interpretable.

[22] See Section 4.1.2, where we show that it is indeed the case that A-scrambling can take place in the DOC; the two objects are just unable to cross each other because of the locality condition on movement. That is, if the second object (the DO) crosses the first, that movement must be A-bar movement and cannot change the scope, as we are discussing in the text. However, as will be shown in Section 4.1.2, the accusative Goal can undergo A-movement and take scope over other things, such as negation and modals.

[23] A reviewer comments that in the DOC successive cyclic movement through the Spec of the existing VoiceP seems much more economical than moving through the Spec of a newly created FP for the movement. The successive cyclic movement is not available here, however, because the Spec of the existing VoiceP lacks a feature, a feature that the DO moving across the IO in the DOC needs to check; so, the DO in the DOC will have to pass through some functional projection. The same reviewer points out that scrambling is associated with discourse-semantic effects such as topic and focus. We do not, however, address exactly how the manifested formal properties of scrambling, the main concern of the present study, are interpreted at the discourse interface due to space limitation.
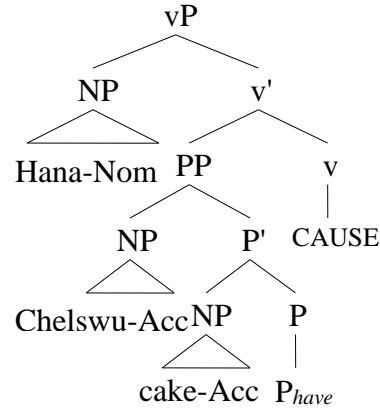
694   Harley's symmetric theory, however, fails to deal with this asymmetric distribution. Since it

695   assigns symmetrical structures to the PDC and the DOC, we would expect them to pattern

696   together with respect to quantifier scope.

697

698   (33) a. PDC   b. DOC   Repeated from (16)

699–704

(33) a. PDC

```
              vP
             /  \
           NP    v'
          /  \   / \
    Hana-Nom PP  v
            / \  CAUSE
          PP   P'
         / \   / \
Chelswu-Dat NP  P
           / \  |
      cake-Acc P_loc
```

b. DOC

```
                vP
               /  \
             NP    v'
            /  \   /  \
      Hana-Nom PP    v
              / \   CAUSE
            NP   P'
           / \   / \
   Chelswu-Acc NP  P
              / \  |
         cake-Acc P_have
```

705

706   In the symmetric structure, as illustrated in (16), repeated as (33), the two objects in both the

707   PDC and the DOC are equidistant for scrambling (quantifier raising), as they are contained

---

Note that this has been a long-standing issue in the study of scrambling (e.g., Ross, 1967; Inoue, 1976, 1977; Harada, 1977; Saito, 1985, 1989, 2003, 2004; Mahajan, 1990; Yoon, 1997; Miyagawa, 1997, 2001, 2005; Choi, 1999; Dayal, 2003; Lee and Cho, 2004; Ko, 2005, 2007; inter alia). Since Ross (1967) who first describes scrambling as a stylistic operation, there have been extensive discussions on the nature of scrambling. On the one hand, researchers like Harada (1977) and Saito (1989, 2004) take a syntactic-based approach to scrambling according to which scrambling is true syntactic operation and semantically vacuous. Miyagawa (2005) suggests that scrambling is in general syntactic operation, but it can often be described as some stylistic operation for a restricted range of data. On the other hand, if scrambling is analyzed as a genuine discourse operation (e.g., Inoue, 1976, 1977), it remains a mystery why scrambling shares the properties of standard syntactic movements (e.g., binding relations) (see Satio 1985, 2003; Mahajan, 1990). A wider investigation of addressing these questions is called for, which we leave for future work.

708 within the same maximal domain, the higher PP. This means that in principle the Theme can

709 move across the Goal and take scope over it, indicating that the inverse scope reading should

710 also be available in the DOC, contrary to fact.

711

712 **4.1.2. Arguments against an alternative analysis**

713 Thus far, we have shown that the scope asymmetry between the PDC and the DOC follows

714 straightforwardly from the proposed asymmetric structures. In the PDC, the two objects are

715 contained within the same maximal domain, whereby the DO can cross over the IO in

716 accordance with the locality condition on movement as defined in (26). In contrast, the two

717 objects in the DOC are not arguments of the same head, and this results in the DO never being

718 able to cross the higher IO in A-scrambling; this movement would violate the locality condition

719 on movement. The only way for the lower DO to cross the higher IO is by A-bar scrambling;

720 empirical facts regarding WCO and SCO effects have indicated that such movement is indeed

721 associated with A-bar scrambling.

722   An anonymous reviewer questions our argument that scrambling of the DO over the IO in

723 the DOC involves A-bar movement and suggests an alternative analysis couched in semantic

724 arguments; that is, (a) what determines the grammaticality of the DOC is the semantic notion of a

725 newly-established possession relation between the two objects in the DOC and (b) the lack of

726 inverse scope between the two objects in the DOC may have to do with the specificity of the

727 accusative Goal (IO) rather than with the applicative properties of the DOC. In this way, one can

728 maintain a Harley-type symmetric structure in Korean, according to which the DOC is

729 distinguished from the PDC only by semantic components, and any asymmetry that may arise

730   between the two is predicted to come from this semantic difference.[24]

731   In what follows, however, we show how the alternative account resorting to semantics is

732   insufficient to indicate what the correct structure is for each construction by demonstrating that

733   (a) the DOC does not necessarily require a newly-established possession relation between the

734   two objects and (b) the lack of inverse scope between the two objects in the DOC comes from

735   the applicative property of the DOC, not from a specificity effect of the accusative Goal. One

736   crucial point we will make is that A-movement is possible in the DOC; the two objects in the

737   DOC are just unable to cross each other in doing so because of the locality condition on

738   movement. That is, if the second object (the DO) crosses the first, that movement must be A-bar

739   movement and cannot change scope relations. However, the accusative Goal can undergo A-

740   movement and take scope over other things, such as negation and modals.

741   To begin with the first alternative view, it is said that in the DOC the possession relation

742   between the possessor (the Goal) and the possessee (the Theme) is required to be a newly-

743   established one because the ungrammaticality in the WCO context, as illustrated in (28b),

744   repeated as (34b), is also witnessed in the non-WCO context, as illustrated in (35b). On this

745   alternative account, (34b) and (35b) are ruled out by a pre-established possession relation

746   between the DO 'the puppy/book' and the IO '(his/its) owner'.

747

748   (34) a. *Chelswu-ka [ku-uy$_1$ cwuin-ul]   [etten kangaci-lul$_1$] cwu-ess-ni? Repeated from (28)

749   Chelswu-Nom he-Gen owner-Acc   which puppy-Acc give-Pst-Q

750   'Which puppy did Chelswu give his owner?'

---

[24] Note that this is very similar to a null hypothesis (as noted in Section 3.1), according to which the PDC and the DOC are only different in the flavor of P.

751   b. *Chelswu-ka   [etten kangaci-lul$_1$]$_2$ [ku-uy$_1$ cwuin-ul]   t$_2$ cwu-ess-ni?

752   Chelswu-Nom   which puppy-Acc   he-Gen owner-Acc   give-Pst-Q

753   'Which puppy did Chelswu give his owner?'

754

755 (35) a. *Chelswu-ka   [kangaci/chayk-(l)ul$_1$]$_2$ [(ku/ku kes-uy$_1$) cwuin-ul]   t$_2$ cwu-ess-ta.

756   Chelswu-Nom   puppy/book-Acc   (he/it-Gen)   owner-Acc   give-Pst-Dec

757   'Chelswu gave (his/its) owner the puppy/book.'

758   b. *Chelswu-ka   [(ku/ku kes-uy$_1$)   cwuin-ul]   [kangaci/chayk-(l)ul$_1$]   cwu-ess-ta.

759   Chelswu-Nom   (he/it-Gen)   owner-Acc   puppy/book-Acc   give-Pst-Dec

760   'Chelswu gave (his/its) owner the puppy/book.'

761

762 On closer inspection of the data, however, the ungrammaticality of (35b) arises not because of

763 the lack of a newly-established possession relation but because of the co-indexation between

764 'his'/'its' and 'the puppy'/'book'. As is well-known in Korean, there is a tendency to avoid

765 backward pronominalization. That is, when the pronoun precedes the first mention of the NP, the

766 sentence is judged ungrammatical (e.g., a sentence like *his*$_1$ *mother loves Nick*$_1$ in Korean is

767 ungrammatical, but it is acceptable in English). The Korean speakers we consulted find that

768 (35b) is considerably more acceptable when it does not contain the pronoun (7/9). Two speakers

769 report that (35b) is degraded since they disfavor the DOC anyway; they reject the double object

770 forms and prefer the PDC counterpart. Note that the PDC counterpart is also not well-formed due

771 to the tendency to avoid backward pronominalization, as illustrated in (36a). However, it

772 becomes grammatical if the pronoun 'his' is removed, as shown in (36b).

773

774 (36) a. *Chelswu-ka ku_1-uy   cwuin-eykey   kangaci$_1$-lul   cwu-ess-ta.

775   Chelswu-Nom   he-Gen   owner-Dat   puppy-Acc   give-Pst-Dec

776   'Chelswu gave the puppy to his owner.'

777   b. Chelswu-ka   cwuin-eykey   kangaci-lul   cwu-ess-ta.

778   Chelswu-Nom   owner-Dat   puppy-Acc   give-Pst-Dec

779   'Chelswu gave the puppy to the owner.'

780

781 Returning to the example (35a), a reviewer points out that the fact that the IO in (35a) cannot

782 tolerate even an implicit genitive pronoun suggests that the possession relation must be a newly-

783 established one. We agree with the reviewer that (35a) is deviant when the IO does not have even

784 a genitive pronoun (unless there is a strong pause between the two objects). In our analysis,

785 however, this fact can be readily explained by the well-known restriction on implicit arguments

786 in the sense of Partee (1989) and Lasnik and Stowell (1991), in which implicit arguments are

787 also subject to a WCO effect. Assuming that their observation is tenable, it explains why DOCs

788 like (35a) are unacceptable regardless of the presence of the genitive pronoun on the IO.

789   An additional argument against the requirement of a newly-established possession relation in

790 the DOC is the fact that such a semantic notion does not rescue the ungrammaticality of the DOC

791 in the WCO context. For example, a sentence like (37) in the WCO context is still

792 ungrammatical even though the IO '(his) owner' as in (34b) changes with '(his) new owner'; by

793 '(his) new owner', there is a presupposition that he never possessed a puppy in the past and

794 enters into a possession relation with it at the present event time. Native speakers we have

795 consulted find the DOC in the configuration of WCO to be deviant regardless of whether the

796 owner is a previous owner or a new owner.

797 (37) *Chelswu-ka   [etten kangaci-lul$_1$]$_2$ [(ku-uy$_1$) say cwuin-ul]   t$_2$ cwu-ess-ni?

798   Chelswu-Nom   which puppy-Acc   he-Gen new owner-Acc   give-Pst-Q

799   'Which puppy did Chelswu give his new owner?'

800

801 This is unexpected if the DOC is required to have a newly-established possession relation.

802   Furthermore, it is unclear how a newly-established possession relation is motivated for the

803 DOC in the SCO context; for example, in (31) whether the two objects stand in a pre-established

804 or newly-established possession relation is not apparent at all.

805   Therefore, we conclude that the alternative account whereby the DOC is required to involve

806 a newly-established possession relation is not plausible. Instead, the fact that the DOC displays

807 WCO and SCO effects, unlike the PDC, can be captured straightforwardly under our argument

808 that scrambling in the DOC has a reconstruction effect (as an instance of A-bar movement),

809 whereas scrambling in the PDC can create new binding possibilities (as an instance of A-

810 movement).

811   Turning to the second alternative view, it says that the lack of inverse scope in the DOC may

812 have more to do with the specificity of the accusative Goal (IO) than with the structural

813 properties of the DOC. Contrary to this idea, however, there is much empirical evidence

814 illustrating that the scope of the accusative Goal is not absolutely fixed. That is, even though

815 only the accusative Goal takes scope over the Theme under scrambling (in a scope-ambiguous

816 environment), it can also have a narrow scope with subject quantifiers and various operators such

817 as modals and negation. [25] (Note that the same scope facts hold for the DO (the Theme), where

---

[25] An anonymous reviewer points out that the sentences (38), (40), and (41) are associated with

contextual manipulations. While we agree with the reviewer that contextual manipulation can lead to

818   the DO can have a narrow/wide scope with subject quantifiers and various operators. Due to

819   space limitations, however, we restrict our data into the accusative Goal.) Such facts, therefore,

820   suggest that the accusative Goal (as well as the Theme) in the DOC can undergo A-movement;

821   they just cannot cross each other in doing so because of the locality condition on movement. That

822   is, if the second object (the DO) crosses the first (the IO), that movement must be A-bar

823   movement and cannot change the scope. But, the accusative Goal (and the Theme) can undergo

824   A-movement and take scope over other things, such as negation and modals.[26]

825   First, the subject can distribute over the accusative Goal. For example, (38a) has a

826   distributive reading in which each father teaches his son English; likewise, (38b) means that each

827   man gives his girlfriend a chocolate.

828

829   (38) a. motun apeci$_1$-ka   ku-uy$_1$ atul-ul   yenge-lul   kaluchi-n-ta.

830   every father-Nom   he-Gen   son-Acc   English-Acc teach-Pres-Dec

---

an inaccurate judgment about scope facts in Korean, we feel that this point is not something we can argue with the reviewer, especially given that there is no exact definition of contextual manipulation. It should also be noted that our examples in the text rely on a widely held assumption that interactions of quantifiers with modals and negation may (not) give rise to scope ambiguities (e.g., von Fintel and Iatridou, 1998 and 2003; Swanson, 2010). In addition, a growing number of experimental studies on quantification and negation (e.g., Han et al., 2007) and anaphor binding (e.g., Kim and Yoon 2009) have made use of the methodology of setting up a detailed context for acceptability judgments. It is also crosslinguistically common to use such methodology in the study of quantifiers. As pointed out in Appendix A, we believe that the idea behind setting up a context in linguistic research is that providing a context for native speakers can facilitate the task of acceptability judgments. Also, we do not contend that a context can create a new scope possibility; if there is no scope at all, no context will create it.

[26] The judgments we report in (38) through (41) were elicited from over ten native speakers, and their judgments were consistent.

831   'Every father teaches his son English.'

832   b. motun   namca$_1$-ka   ku-uy$_1$ yeca   chinkwu-lul chokholleys-ul   cwu-n-ta.

833   every   man-Nom   he-Gen woman friend-Acc   chocolate-Acc   give-Pres-Dec

834   'Every man gives his girlfriend a chocolate.'

835

836   A similar fact holds for (39), where the subject consists of the universal quantifier and the IO

837   contains the existential quantifier.[27]

838

839 (39) motun   namca-ka   etten yeca-eykey/lul   kkos-ul   cwu-ess-ta.

840   every   man-Nom   some woman-Dat/Acc   flower-Acc   give-Pst-Dec

841   'Every man gave flowers to some woman.'

842   'Every man gave some woman flowers.'

843

844 The sentence (39) in both the PDC and the DOC has the logical form where 'every' takes scope

845 over 'some', and this covers both the situation in which 'every man gave flowers to a different

846 woman' and the situation in which 'every man gave flowers to the same woman' (see also Han,

---

[27] A reviewer says that the DOC example in (39) has only a specific reading where the accusative Goal including 'some' takes wide scope over the subject containing 'every' and not vice-versa; whereas the PDC counterpart receives only a distributive reading in which the subject takes scope over the Goal and not vice-versa. In this way, the alternative analysis is supported, such that scope rigidity in the DOC comes from the specificity effect of the accusative Goal. Although we acknowledge that a thorough experimental study is needed to substantiate such a discrepancy, we find that (39) can be associated with the two readings, in which case it addresses the issue of vagueness, as explained in the text, which suggests that the specificity effect does not hold in the DOC.

847   Lidz, and Musolino 2007 who provide similar examples like (39) and address an issue of

848   vagueness concerning the scope interaction between universal and existential quantifiers in

849   Korean, following Reinhart 1997).

850   In addition, if the Goal is obligatorily specific, it should always be associated with a rigid

851   scope. However, this prediction is not borne out, because negation and modal operators can take

852   scope over the accusative Goal. Consider (40) and (41)

853

854   (40) Chelswu-ka   etten haksayng-ul yenge-lul   kaluchi-ci   anh-ass-ta.

855   Chelswu-Nom   some student-Acc English-Acc teach-ci   Neg-Pst-Dec

856   'Chelswu did not teach some student English.'

857   a. 'Neg. > some': 'It is not the case that Chelswu taught some student English.'

858   b. 'some > Neg.': 'There is a particular student that Chelswu did not teach English.'

859

860   (41) Mina-ka   etten calsayngkin namca-lul   sathang-ul   cwu-eya ha-n-ta.

861   Mina-Nom some handsome   man-Acc   candy-Acc   give-must do-Pres-Dec

862   'Mina must give some handsome man a candy.'

863   a. 'must > some': 'It must be the case that Mina gives a candy to any man who is handsome

864   (i.e., anyone who meets that description).'

865   b. 'some > must': 'For a particular handsome guy, Mina must give him a candy.'

866

867   As indicated in (40a) and (41a), the accusative Goal can be in the scope of these operators, in

868   which case the Goal is interpreted as non-specific. Also, as in (40b) and (41b) the accusative

869   Goal has wide scope over the operators, where the Goal can be interpreted as specific.[28] Such

870   facts indicate that the accusative Goal in the DOC can undergo A-movement and take scope over

871   negation and modals; once again, what is not possible is a kind of movement between the two

872   objects where the second object crosses the first, and this explains the lack of inverse scope, as

873   discussed earlier. [29]

874   Furthermore, the accusative Goal associated with the minimizer *han myeong-to* 'one Clf-

875   even', a polarity sensitive item in Korean (e.g., Choi 2007), can also be in the scope of the

---

[28] A reviewer asks how the derivation for negation in (40) works. For the reading under the 'some >
Neg.' scope, the accusative Goal (the IO) with an unvalued [S-A] may move to the specifier of NegP
that would check a feature [S-A]. This feature must be a [S-A] feature, but not a [S-A'] feature. If it is
a [S-A'] feature, the scope would obligatorily reconstruct, and thereby the 'some > Neg.' reading
would not arise, contrary to the fact. For the reading under the 'Neg > some' scope, 'some' does not
have to move, because scope is interpreted in the position where 'some' is base-generated. Note here
that we assume that Neg with a feature [+Neg] has its own projection NegP above VoiceP.

[29] A reviewer points out that depending on the theory of specific DPs, the A-movement is not
necessarily guaranteed; for example, a choice function story can avoid the movement operation in
scope calculation. Admittedly, work on the semantics of quantifiers has developed the choice
function theory and explained wide-scope effects of indefinites in some complex cases like *if* clauses
and island context (e.g., Reinhart, 1995, 1997; Winter, 1997; Kratzer, 1998). We also have the
impression that some data with indefinites could be translated into this approach, and it would be
equally interesting to analyze them within the choice function theory. Nonetheless, the current study
couches its discussion with the movement terms throughout, and maintains the classical view that
analyzes the scope of quantifiers with quantifier raising (e.g., Chomsky, 1976; May, 1985). One main
reason for this is that the movement analysis can directly capture the asymmetric property of
quantifier scope in concert with the empirical facts regarding the presence and absence of the WCO
and SCO effects in the PDC and the DOC. Additionally, note that the scope facts would not follow
under the symmetric account in combination with either the movement approach or the choice
function theory, because a Harley-type theory wrongly predicts that only semantic content plays into
the distinction between the PDC and the DOC when different syntactic patterns are also apparent.

876 subject quantifier.[30] Once again, this scope fact is unexpected if the accusative Goal has to be

877 specific.[31]

---

[30] We assume with a reviewer that the minimizer *han myengto* 'even one person', like an NPI *amwuto* 'anyone', takes (immediate) scope over negation (e.g., Chung and Park, 1998; Kim, 1999; Sells and Kim, 2006; inter alia). Although this is the case, our argument against the specificity effect of the accusative Goal is still valid, because the subject quantifier can have wide scope over the accusative Goal, as noted in the text.

[31] As additional support for the specificity effect of the accusative Goal in the DOC, a reviewer points out that scope rigidity in the DOC is even attested under rightward movement (henceforth, RM).

(4) Hana-ka   nwukwunka-eykey/lul   cwu-ess-ta   motun chayk-ul.
    Hana-Nom someone-Dat/Acc   give-Pst-Dec   every book-Acc
  'Hana gave every book to someone.' 'Hana gave someone every book.'

It is, however, unclear whether such scope rigidity under RM necessarily comes from the specificity effect, because RM constructions seem to involve different syntactic and semantic properties from leftward scrambling constructions (e.g., Kuno, 1978; Choe, 1987; Whitman, 2000; Tanaka, 2001; Abe, 2004; Ko and Choi, 2009; Chung 2012; Yoon, 2013; Yun, to appear). In terms of information structure, for instance, right-dislocated NPs are often treated as backgrounded and given information like a topic in a sentence. As seen in the contrast between (5a) and (5b), right-dislocated NPs cannot be replaced with a *wh*-phrase, a property associated with topichood. (A reviewer points out that the constraint associated with the syntax-phonology could explain the ungrammaticality of (5b); the Q-marker -*ni*, when estranged from a *wh*-word, cannot be prosodically interpreted at PF.)

(5) a. *Chelswu-ka   Hana-eykey/lul   cwu-ess-ni   mwuess-ul?
        Chelswu-Nom   Hana-Dat/Acc   give-Pst-Q   what-Acc
      'What did Chelswu give to Hana?'
    b. mwuess-ul   Chelswu-ka   Hana-eykey/?lul   cwu-ess-ni?
       what-Acc   Chelswu-Nom   Hana-Dat/Acc   give-Pst-Q
      'What did Chelswu give to Hana?'

878 (42) motun   sensayngnim-i haksayng-ul han   myeong-to ei-lul   cwu-ci anh-ass-ta.

879   every   teacher-Nom   student-Acc   one   Clf-even   A-Acc   give-ci Neg-Pst-Dec

880   'Every teacher did not give even one student an A.'

881   'every > Neg. > *-to*': For every teacher(x), it is not the case that he gave even one student an A.

882

883   Taken together, the lack of inverse scope between the objects in the DOC does not indicate

884 that the accusative Goal has to be obligatorily specific, as the scope of the accusative Goal is not

885 absolutely fixed.[32] In our account, these empirical facts about scope are handled, such that A-

---

It seems thus hard to draw a firm conclusion that the lack of inverse scope in the DOC under RM must be derived from a specificity requirement of the accusative Goal. While understanding the nature of RM constructions may be an important issue, we will not offer detailed analysis of RM constructions and leave for future work more investigation into RM constructions.

[32] Along with the semantic argument, one might also speculate that the absence of the inverse scope reading in the DOC might be due to the fact that the lexical component HAVE blocks it, given that main verb 'have' itself disallows an inverse scope reading in English.

(6) Some student had every book. ('some > every'; *'every > some')

It is not always the case however that HAVE prevents the inverse scope reading, which is problematic for the P*have* structure defended in Harley (1996, 2002) and Harley and Jung (to appear); Harley and Jung's recent work maintains the P*have* structure, while they admit that the structure of the PDC in (18), our proposed and supported structure, is right. Consider the following data from English.

(7) If a different person has every book I am looking for, I won't be able to do my research.
(8) If you give a different person every book I am looking for, I won't be able to do my work.

In a conditional sentence involving the lexical verb *have*, as in (7), the inverse scope reading can be

886 scrambling can always occur, including in the DOC, and this will change the scope of the

887 arguments of the DOC. As has been discussed, however, the locality restriction on movement

888 results in the lower NP never being able to cross the higher one in A-scrambling. So, in the DOC

889 scope is only fixed in a relative way: the IO > the DO. If the DO does cross the IO, this must be

890 an instance of A-bar movement, and it is possible because the higher NP lacks the feature that

891 the attracting head is looking for.

892

893 **4.2.   Nominalization**

894 Similar to the ditransitives in English, the counterparts in Korean show that the PDC permits

895 nominalization, while the corresponding DOC does not. Let us first examine the data from

896 English.

897

898 (43) a. The gift of a statue to Mary

899   b. The sale of a defective car to us   (Bruening 2010, Page 528, Example 19)

900

901 (44) a. *The gift of Mary (of) a statue   (Bruening 2010, Page 528, Example 17a)

---

easily obtained: 'for each book a different person has the book'. In the corresponding DOC, however, a similar inverse scope reading is absent, as shown in (8).

In addition, a slight complication emerges if we consider the inalienable possession construction involving *have* as in (9), in which no inverse scope reading is found, in contrast to the alienable possession construction as in (7), in which this reading is available.

(9) If a different person has every hair color, I won't be able to do my research.

These facts tell us that main verb *have* does not always independently block inverse scope, indicating that this line of reasoning needs to be further elaborated.

902   b.*Mary's gift of the letter by her teacher   (Kayne 1984, Page 146, Example 62)

903

904   The ditransitives in English, as given in (43) and (44), display a nominalization asymmetry

905   between the PDC and the DOC. Bruening (2010) accounts for this by noting Pesetsky's (1995)

906   argument in which the affixation of null morphemes to a verbal root blocks further derivations

907   such as nominalization (Myers 1984). Specifically, in the DOC, a null morpheme is posited in

908   the head Appl. This head, in combination with the ditransitive verb, prohibits additional

909   morphological derivation such as nominalization. In the PDC, however, this null morpheme is

910   absent. Thus, nominalization is expected to arise only in the PDC, but not in the DOC.

911   Korean patterns like English: -*(u)m* nominalizations are allowed in the PDC but not in the

912   DOC. Note that the nominalizer -*(u)m* 'the act or fact of being/doing' attaches to the base of the

913   verb (Sohn 2005). In the -*(u)m* nominalization, the DO, the accusative-marked object, must bear

914   only the postnominal genitive case marking -*uy*, whereas the IO must maintain its dative marker,

915   and the entire PP must bear the genitive case marking. Let us now consider the following data

916   with regard to -*(u)m* nominalization in the PDC.

917

918   (45) a. Thim-i   Chelswu-eykey   mapep-ul   kaluchi-ess-ta.

919   Tim-Nom   Chelswu-Dat   magic-Acc   teach-Pst-Dec

920   'Tim taught magic to Chelswu.'

921   b. Chelswu-eykey-uy   mapep-uy   kaluchi-m.

922   Chelswu-Dat-Gen   magic-Gen   teach-Nml

923   'The teaching of magic to Chelswu'

924

925 (46) a. Chelswu-ka   yeca   chinkwu-eykey   ku   hyangswu-lul senmwul-ha-yess-ta.

926   Chelswu-Nom female friend-Dat   that   perfume-Acc gift-do-Pst-Dec

927   'Chelswu gave the perfume to his girlfriend (as a gift).'

928   b. yeca   chinkwu-eykey-uy   ku   hyangswu-uy senmwul(-ha-m).

929   female friend-Dat-Gen   that   perfume-Gen gift(-do-Nml)

930   'The gift of the perfume to his girlfriend'

931

932 As seen above, nominalization is compatible with the PDC. For example, the nominalized form

933 in (45b) has the meaning of 'the teaching of magic to Chelswu' with an agent implied. The same

934 holds for (46b), in which the PDC allows nominalization with the Sino-Korean predicate 'do

935 gift', meaning 'give something as a gift', and again an implicit agent is implied.

936   However, nominalization is not legitimate in the corresponding DOC, as illustrated in (47b)

937 and (48b).

938

939 (47) a. Thim-i   Chelswu-lul   mapep-ul   kaluchi-ess-ta.

940   Tim-Nom   Chelswu-Acc magic-Acc   teach-Pst-Dec

941   'Tim taught Chelswu magic.'

942   b. *Chelswu-uy   mapep-uy   kaluchi-m.

943   Chelswu-Gen   magic-Gen   teach-Nml

944   'Chelswu's teaching of magic'[33]

---

[33] The sentence in (48b) is grammatical under a different reading of 'the teaching of magic by Chelswu', where the source sentence is as follows.

(10)   a. Chelswu-ka   mapep-ul   kaluchi-ess-ta.   b. Chelswu-uy   mapep-uy   kaluchi-m.

945 (48) a. Chelswu-ka   yeca   chinkwu-lul   ku   hyangswu-lul   senmwul-ha-yess-ta.

946   Chelswu-Nom female friend-Acc   that   perfume-Acc   gift-do-Pst-Dec

947   'Chelswu gave his girlfriend the perfume (as a gift).'

948   b. *yeca   chinkwu-uy   ku   hyangswu-uy senmwul(-ha-m).

949   female   friend-Gen   that   perfume-Gen gift(-do-Nml)

950   'The girl friend's present of perfume'[34]

951

952 In order to explain this asymmetric distribution, however, Myers' generalization is not at work. A

953 reviewer correctly points out that nominalizations in Korean may allow a null morpheme such as

954 Voice.[35] As an anonymous reviewer points out, the subject of the sentence may also undergo

---

Chelswu-Nom magic-Acc   teach-Pst-Dec   Chelswu-Gen magic-Gen teach-Nml
'Chelswu taught magic.'   'The teaching of magic by Chelswu.'

[34] Similar to (47b), (48b) is grammatical under a different reading of 'the gift of the perfume by the girlfriend'. See the following source sentence.

(11)   a. yeca   chinkwu-ka   ku   hyangswu-lul senmwul-ha-yess-ta.
        female   friend-Nom   that   perfume-Gen gift-do-Pst-Dec
        'The girl friend gave the perfume (as a gift).'
        b. yeca   chinkwu-uy   ku   hyangswu-uy senmwul.
        female   friend-Gen   that   perfume-Gen gift
        'The gift of the perfume by the girlfriend.'

[35] In accordance with the reviewer, Benjamin Bruening (personal communication) also points out that many nominalizations in English clearly have Voice, indicating that Myers' generalization would require modifications to handle the PDC in English.

(12)   The sale of a defective car to us by John.

955   nominalization. Consider (49).

956

957   (49) a. sensayngnim-kkeyse   Chelswu-eykey   mapep-ul   kaluchi-si-n-ta.

958   teacher-Hon.Nom   Chelswu-Dat   magic-Acc   teach-Hon-Pres-Dec

959   'The teacher taught magic to Chelswu.'

960   b. sensayngnim-kkeyse-uy   Chelswu-eykey-uy   mapep-uy   kaluchi-si-m.

961   teacher-Hon.Nom-Gen   Chelswu-Dat-Gen   magic-Gen   teach-Hon-Nml

962   'The teaching of magic to Chelswu by the teacher.'

963

964   If Myers' generalization were extended to the data in Korean, it would be difficult to explain how

965   the PDC nominalization is still possible because the null Voice head should block additional

966   derivations like nominalization.[36]

We suggest that our argument can be extended to the data in English. As Bruening (2010, Page 528, Footnote 9) also points out, only a thematic argument of a verb may undergo nominalization in English.

[36] While Myers' generalization has been arguably accepted as the standard view for dealing with the asymmetric distribution in nominalizations, many authors have also noted a weakness associated with this generalization, and there have been two approaches to overcoming the weakness in the literature. One approach is to reject the idea and to offer a different kind of analysis (e.g., Marantz, 1997 on English; Anagnostopoulou, 2005 on Greek). The other approach is to maintain Myers' generalization such that it is a restriction only on specific derivational morphology such as the nominalizers *-ion* in English and *-kata* in Japanese (Miyagawa 2012).

We admit that different approaches may be at work across languages to explain the asymmetric distribution in nominalization. Regardless of the type of alternative, however, what is crucial here is that a Harley-type theory runs into difficulty anyway: since it posits a symmetric structure for the PDC and the DOC, the only argument to maintain the theory is to hypothesize that the possession meaning has a special status for some reason, and that this meaning blocks the nominalization. While

967   In order to explain the nominalization asymmetry, we argue that there is an independent

968   reason why the DOC cannot nominalize; as we show below in connection with resultative and

969   ECM constructions in Korean, non-selected arguments may not nominalize, but selected

970   arguments may (see also Beck and Johnson 2004, Page 99, footnote 2 and Bruening 2010, Page

971   528, footnote 9). On this account, nominalization in the DOC is predicted to be not possible

972   because the Goal is not a thematic argument of a verb, but of Appl.

973   In the resultative and ECM constructions selected arguments may nominalize, whereas non-

974   selected arguments may not. Consider the following data from Wechsler and Noh (2001) and

975   Son (2008), where they divide the resultatives into selected resultatives (e.g., *Tim wiped the table

976   clean*) and unselected resultatives (e.g., *Jane screamed her throat hoarse*).

977

978   (50) a. Inho-ka   pyek-ul   ppalkah-key   chilha-ess-ta.   Selected resultative

979   Inho-Nom   wall-Acc   red-key   paint-Pst-Dec

980   'Inho painted the wall red'   (Son 2008, Page 91, Example 3c)

981   b. Kim-un   meli-lul   ccalp-key   cala-ass-ta.

982   Kim-Top   hair-Acc   short-key   cut-Pst-Dec

983   'Kim cut her hair short.'   (Wechsler and Noh 2001, Page 16, Example 30b)

984

985   (51) a. pyek-uy   ppalkah-key   chilha-m.   Nominalization

986   wall-Gen   red-key   paint-Nml

987   'The painting of the wall red (by someone)'

this approach might be plausible at first glance, it turns out to be incorrect once we take into

consideration the data, as illustrated in (56) in the text.

988   b. meli-uy   ccalp-key   cal-um.

989   hair-Gen   short-key   cut-Nml

990   'The cutting of the hair short (by someone).'

991

992 (52) a. Chelswu-ka   mok-i   swi-key   solichi-ess-ta.   Unselected resultative

993   Chelswu-Nom throat-Nom   get.hoarse-key scream-Pst-Dec

994   'Chelswu screamed his throat hoarse.'

995   b. Yenghi-ka   sonswuken-i   cec-key   wul-ess-ta.

996   Yenghi-Nom handkerchief-Nom   get.wet-key   cry-Pst-Dec

997   'Yenghi cried her handkerchief wet.'   (Son 2008, Page 91, Example 4c)

998

999 (53) a. *mok-uy   swi-key   solichi-m.   Nominalization

1000   throat-Gen   get.hoarse-key scream-Nml

1001   'The screaming of the throat hoarse (by someone).'

1002   b. *sonswuken-uy   cec-key   wul-um.

1003   handkerchief-Gen   get.wet-key   cry-Nml

1004   'The crying of the handkerchief wet (by someone).'

1005

1006 The selected resultatives in (50) and (51) allow their objects to undergo nominalization, whereas

1007 the unselected resultatives in (52) and (53) disallow it.

1008   In a similar vein, the non-selected objects in the ECM construction in Korean do not undergo

1009 nominalization.[37]

---

[37] We assume that ECM constructions in general have a non-selected object. It should, however, be

1010 (54) a. Mina-ka   Chelswu-lul/ka   ttokttokha-ta-ko   mit-nun-ta.

1011   Mina-Nom   Chelswu-Acc/Nom   smart-Dec-Comp   believe-Pres-Dec

1012   'Mina believes Chelswu to be smart.'

1013   b. ??*Chelswu-uy   ttokttokha-ta-ko-uy   mit-um.

1014   Chelswu-Gen   smart-Dec-Comp-Genbelieve-Nml

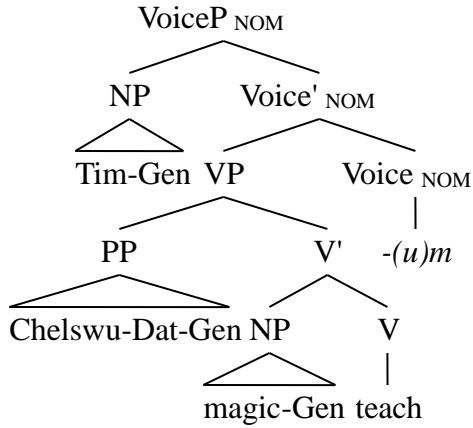1015   'The belief of Chelswu being smart (by someone).'

1016

1017   Turning to the ditransitives, nominalization is allowed in the PDC, but not in the DOC. With

1018 independent evidence that only a thematic argument of a verb may nominalize, our proposed

1019 asymmetric structures make the correct prediction that nominalization is impossible because the

1020 Goal in the DOC is not a thematic argument of a verb, but of Appl, as shown in (55b). By

1021 contrast, nominalization in the PDC is possible because the Goal is a thematic argument of a verb,

1022 as shown in (56a). Note here that the subject can participate in the nominalization, although it is

1023 not a thematic argument of a verb. We assume that the genitive subject may be associated with a

1024 more general notion of 'relatedness', unlike the nominative subject, and the agent role is one

1025 case of the relatedness role (e.g., Kratzer, 1996).[38] We accordingly hypothesize that the

---

noted that ECM constructions in Korean may differ from those in English because of the possibility
for a non-selected object to also alternate with a nominative case. Much debate has taken place on the
case alternation in the Korean ECM constructions, and we refer readers to Yoon (2007) and
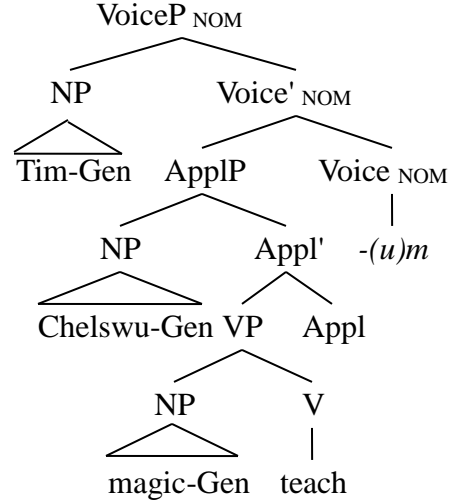references cited there.

[38] We thank Shigeru Miyagawa (personal communication) for pointing this out to us. Similar to
Kratzer's (1996) argument, the genitive subject in (13a), in addition to the agents of the drawing
event, can be understood as the attenders of the drawing event, and (13b) is compatible with Yuna or
someone else reading Shakespeare's Sonnet.

1026 nominalized constituent is a defective VoiceP in the sense that unlike the Voice head in an

1027 ordinary sentence it does not necessarily introduce an agent.

1028

1029 (55) a. PDC   b. *DOC

```
          VoiceP NOM                                          VoiceP NOM
         /        \                                          /        \
       NP        Voice' NOM                                 NP        Voice' NOM
      /  \        /      \                                 /  \        /       \
  Tim-Gen VP          Voice NOM                       Tim-Gen  ApplP        Voice NOM
         /  \           |                                    /     \            |
        PP    V'      -(u)m                                 NP      Appl'      -(u)m
       /  \   / \                                          /  \     /   \
Chelswu-Dat-Gen NP  V                             Chelswu-Gen VP   Appl
               / \   |                                       /  \
         magic-Gen teach                                    NP    V
                                                           /  \   |
                                                      magic-Gen teach
```

1030

1031 Thim-uy Chelswu-eykey-uy mapep-uy kaluchi-m. *Thim-uy Chelswu-uy mapep-uy   kaluchi-m.

---

(13)   a. kim.kica-uy   phikhaso-uy   kuli-m-un   pak.kica-uy   kohu-uy

           Kim.journalist-Gen Picasso-Gen   draw-Nml-Top Park.journalist-Gen   Gogh-Gen

           kulim-pota   hwelssin   cohta-nun   phyengka-lul   pat-ass-ta.

           draw-than   far.much   good-Adn   evaluation-Acc   receive-Pst-Dec

           'The journalist Kim's drawing of Picasso received an evaluation that was far much better

           than the journalist Park's drawing of Gogh.'

     b. Yuna-nun   Shakespeare-uy   Sonnet-uy   ilk-um-ul   culki-n-ta.

           Yuna-Top   Shakespeare-Gen   Sonnet-Gen   read-Nm-Acc enjoy-Pres-Dec

           'Yuna enjoys a reading of Shakespeare's Sonnet'

The judgments could be complicated by the fact that some speakers disprefer the nominalization; nominalizations often sound formal. Most speakers (8/10) we have consulted, however, find some contrast between the genitive subject in the *-(u)m* nominalization with various types of verbs and the nominative subject. Thus, the data seem to suggest that the genitive subject may implicate a more general notion of 'relatedness' and the agent role is one case of this role (Kratzer 1996), although the notion of 'relatedness' may need further refinements.

| 1032 | Tim-Gen C.-Dat-Gen magic-Gen teach-Nml | Tim-Gen C.-Gen | magic-Gen teach-Nml |

1033   'The teaching of magic to Chelswu by Tim.'   'Chelswu's teaching of magic by Tim.'

1034

1035   Therefore, the nominalization asymmetries can be captured straightforwardly under our

1036   argument that only a thematic argument of a verb may undergo nominalization.[39]

1037   However, these nominalization asymmetries constitute a problem for the symmetric theory.

1038   Under the symmetric approach, both the Goal and the Theme are arguments of P$_{have}$, indicating

---

[39] A reviewer points out that the impossibility of nominalization of the unselected resultatives and ECM constructions could be attributed to some other factors. For example, the reviewer says that nominalization is in general not allowed across a clause boundary, especially when the clause embedded between the matrix subject and the matrix predicate is finite. We acknowledge that this constraint is at work in order to explain the unavailability of the unselected resultatives and ECM constructions. Nevertheless, we maintain our argument that only a thematic argument of a verb may undergo nominalization, the argument that covers and explains a broader range of data (i.e., the unselected resultatives, the selected resultatives, ECM constructions, the PDC, and the DOC). As can be seen in the text, the nominalization of the DOC occurs within a single clause, which is unexpected under the reviewer's general constraint. In addition, the *-(u)m* nominalization across a clause boundary.

(14)   a. Chelswu-ka   masa-ka   ttena-ss-nun-ci   kwungkumha-yss-ta.
           Cheslwu-Nom   Masa-Nom   leave-Pst-Adn-Comp   wonder-Pst-Dec
          'Chelswu wondered whether Masa left.'
        b. Chelswu-uy   masa-uy   ttena-ss-nun-ci-uy   kwungkumha-m.
           Chelswu-Gen   Masa-Gen   leave-Pst-Adn-Comp-Gen   wonder-Nml
          'Chelswu's wondering of Masa leaving.'

Hence, we maintain our argument that also explains the data including DOCs, resultatives, and ECM constructions, as noted in Beck and Johnson (2004, Page 99, footnote 2) and Bruening (2010, Page 528, footnote 9).

1039 that the nominalization should be possible in the DOC, contrary to fact. One might say that the

1040 nominalization could be blocked by some semantic component such as the possession meaning

1041 by itself. This, however, cannot be borne out, as a typical instance involving a possession

1042 meaning may nominalize in Korean.

1043

1044 (56) a. Thomi-ka   ton-ul   kac-ko   iss-ta.

1045   Tommy-Nom money-Acc   have-ko   exist-Dec

1046   'Tommy has money.'

1047   b. Thomi-uy   ton-uy   kac-ko   iss-um.

1048   Tommy-Gen money-Gen   have-ko   exist-Nml

1049   'The having of the money by Tommy.'

1050

1051 (57) a. motun   pwuca-ka   kenmwul-ul   soyuha-n-ta.

1052   every   rich.people-Nom   building-Acc own-Pres-Dec

1053   'Every rich person owns a building.

1054   b. motun   pwuca-uy   kenmwul-uy   soyuha-m.

1055   every   rich.people-Gen   building-Gen own-Nml

1056   'The owning of the building by every rich person.'

1057

1058 In (56) and (57), the sentences contain the lexical possessive verbs *kac-* 'have' and *soyuha-*

1059 'own', respectively, and their nominalizations are possible.

1060   An anonymous reviewer suggests that the symmetric theory could be made to account for the

1061 nominalization asymmetry by establishing the hypothesis that a special type of possession

1062   meaning, that is part of the meaning of ditransitive verbs decomposed into [P$_{have}$ + CAUSE],

1063   cannot assign genitive case to the Goal, and this lexical meaning blocks nominalization in the

1064   DOC. On this account, the PDC is compatible with nominalization since it has no lexical

1065   meaning represented as [P$_{have}$ + CAUSE]. We agree with the reviewer that the lexical meaning

1066   represented as [P$_{have}$ + CAUSE] is at work to accommodate the nominalization asymmetry in

1067   Korean. We contend, however, that it would be more satisfying to find a reason behind the

1068   asymmetry and that a more desirable approach is to have access to a broader range of data and to

1069   receive independent motivation. This, in our analysis, is that only a thematic argument of a verb

1070   may undergo nominalization. We hence assert that our proposed claim is more promising without

1071   a stipulation; it has independent justification from empirical facts that are previously unnoticed

1072   about why resultative and ECM constructions disallow the *-(u)m* nominalization, and arguing

1073   this there is no need to stipulate that nominalization in Korean is banned by a special type of

1074   possession meaning. If successful, our arguments can be used as a test for distinguishing selected

1075   arguments from non-selected arguments in general in Korean. We therefore draw the conclusion

1076   that the restriction on nominalization in the DOC is a consequence of the independent fact that

1077   only a thematic argument of a verb may undergo nominalization, without resorting to a lexical

1078   meaning constraint based on [P$_{have}$ + CAUSE].

1079   To recapitulate so far, we have shown that nominalization and quantifier scope asymmetries

1080   can be more straightforwardly analyzed under the proposed asymmetric theory. At the same time,

1081   we have argued against an analysis that appeals to the notion of a possession meaning

1082   requirement like a newly-established possession relation between the objects (for a WCO effect),

1083   a specificity effect on the possessor (for quantifier scope), and a particular type of possession

1084   meaning like [P$_{have}$ + CAUSE] (for nominalization). By offering counterarguments to this

60

1085 alternative view, we have asserted that the argument that semantics make a crucial contribution

1086 to the asymmetries does not go through, suffering from empirical problems. In what follows, we

1087 turn to another type of asymmetric distribution with respect to ditransitive idioms. It will once

1088 again emerge that ditransitive idioms in Korean and Japanese lend further support to the

1089 asymmetric theory.

1090

1091 **4.3.   Idioms**

1092 Further support for the asymmetric theory comes from ditransitive idiom patterns in Korean.

1093 Bruening (2010) points out that the primary problem with a Harley-type theory is its inadequacy

1094 in handling the asymmetric distribution of the two ditransitives in English idioms. Because

1095 Harley's account posits a symmetric structure for both constructions, only a symmetric

1096 distribution of idioms is predicted. In the following subsection, it is shown that similar problems

1097 arise with the ditransitive idioms in Korean. We solve the puzzle with an extension of Bruening's

1098 (2010) principle of idiomatic formation in combination with the proposed asymmetric structures

1099 for ditransitives.

1100

1101 **4.3.1.   Idioms in Korean**

1102 Before proceeding to our main argument for ditransitive idioms, we introduce some basic

1103 assumptions adopted in this section. First, we assume, following a broad definition suggested in

1104 previous literature (e.g., Nunberg et al., 1994; O'Grady, 1998; McGinnis, 2002; Bruening, 2010),

1105 that idioms are those that have a meaning that is not a simple function of the literal (i.e., non-

1106 figurative) meaning of their parts (see also Footnote 58), and that they may act as systematic and

1107 compositional phrases. Second, there is a strong preference for idiomatic elements to be adjacent

1108   to each other for idiomatic interpretation.

1109   To begin with, there are two approaches in the literature to how idioms are formed. Under

1110   the first view, idioms are considered as frozen units which occur in a sentence without any

1111   variation. This non-compositional approach treats idioms as a sequence of words that

1112   syntactically and semantically behave as a single lexical unit, and so idiomatic arguments differ

1113   from non-idiomatic arguments. Under the second view, in contrast, idioms are in fact

1114   morphosyntactically flexible, and a number of recent works (e.g., Nunberg et al., 1994; O'Grady,

1115   1998; McGinnis, 2002; Bruening, 2010; and Kim, 2013) have discussed the semantic and

1116   syntactic structures of idioms. In this subsection, we show that idioms in Korean provide further

1117   evidence in support of the second view. In doing so, we will posit that idiomatic and non-

1118   idiomatic arguments do not much differ to the extent that both exhibit sensitivity to syntax and

1119   morphology.

1120   For example, parts of idioms can be modified by adjectives, as shown in (58) for English and

1121   (59) for Korean (see also Nunberg et al., 1994; Fellbaum, 1993; Pulman, 1993; O'Grady, 1998;

1122   Kwon, 2009; Kim, 2010).

1123

1124   (58) a. kick the **filthy** habit   (O'Grady 1998)

1125   b. leave no **legal** stone unturned

1126

1127   (59) Idiom: ***himchan/macimak*** *pakchalul kahata* 'put **powerful/last** spurs (of a horse) to X'

1128   yenkwuwen-tul-i   sin.kiswul   kaypal-ey   **himchan/macimak**

1129   researcher-Pl-Nom   new.techonology   development-Dat   **powerful/last**

1130   pakcha-lul   kaha-ko   iss-ta.

1131   spur-Acc   add-ko   exist-Dec

1132   Literal: 'The researchers are putting powerful/last spurs to the development of a new

1133   technology.'

1134   Idiomatic: 'The researchers are putting much effort into the development of a new technology.'

1135

1136   In (58), the idiomatic phrases in English can be modified by the adjectives 'filthy' and 'legal'. In

1137   a similar fashion, in (59) the idiomatic part *pakcha* 'a spur' in Korean can be modified by

1138   adjectives such as *himchan* 'powerful' and *machimak* 'last'.

1139   Modifiers can also be part of an idiom both in English and Korean.

1140

1141   (60) (be) in **hot** water   (Bruening 2010, Page 533)

1142

1143   (61) Idiom: ***chan/*ttukewun** *mwulul kkienta* 'pour **cold/*hot** water'

1144   Chelswu-ka   wuli-uy kyeyhoyk-ey   **chan/ttukewun**   mwul-ul   kkienci-ess-ta.

1145   Chelswu-Nom we-Gen plan-Dat   **cold/hot**   water-Acc   pour-Pst-Dec

1146   Literal: 'Chelswu poured cold/hot water over our plan.'

1147   Idiomatic (available with *chan* 'cold', but not with *ttukewun* 'hot'): 'Chelswu discouraged us

1148   from carrying out our plan.'

1149

1150   Furthermore, parts of an idiom in English and Korean can undergo syntactic operations such

1151   as passivization or relativization, as in (62) and (63), respectively.

1152

1153   (62) Idiom: *spill the beans*; *pull strings*

1154   a. You spilt the beans.

1155   b. The beans were spilled.

1156   c. The strings that he pulled

1157

1158   (63) Idiom: *hannwunul phalta* 'sell one eye to X'

1159   a. Thim-i   minye-eykey   han   nwun-ul   phal-ass-ta.

1160   Tim-Nom   beautiful.woman-Dat   one   eye-Acc   sell-Pst-Dec

1161   Literal: 'Tim sold his one eye to the beautiful woman.'

1162   Idiomatic: 'Tim got sidetracked by the beautiful woman.'

1163   b. han   nwun-i   minye-eykey   phal-li-ess-ta.

1164   one   eye-Nom   beautiful.woman-Dat   sell-Pass-Pst-Dec

1165   Literal: 'One eye was sold to the beautiful woman.'

1166   Idiomatic: 'Someone got sidetracked by the beautiful woman.'

1167   c. minye-eykey   phal-li-n   Chelswu-uy   nwun-ul   poa-la.

1168   beautiful.woman-Dat   sell-Pass-Rel Chelswu-Gen eye-Acc   see-Imp

1169   Literal: 'Look at Chelswu's eye that was sold to the beautiful woman.'

1170   Idiomatic: 'Look at Chelswu who got sidetracked by the beautiful woman.'

1171

1172   Finally, there seems to be a systematic pattern of idioms in both English and Korean, a well-

1173   known asymmetry between a subject and an object in the sense of Marantz (1984). As pointed

1174   out by Bruening (2010), on the one hand, there are a large number of [Verb-Obj] idioms in

1175   English, where a verb and its object are interpreted idiomatically, excluding the subject. On the

1176   other hand, there are no [Subj-Verb] idioms in English, in which a subject and a verb receive an

1177 idiomatic interpretation to the exclusion of the object. The same holds for idioms in Korean; a

1178 large number of [Obj-Verb] idioms are attested, while [Subj-Verb] idioms excluding the object

1179 are very rare.

1180   Notice that the common view that idioms must form constituents at some underlying level of

1181 representation to the exclusion of non-idiomatic elements faces a problem when the facts

1182 presented above are taken into consideration in syntax. In contrast, such facts can be captured

1183 under the current assumption that idiomatic arguments may behave as systematic and

1184 compositional phrases, similar to non-idiomatic arguments (Nunberg et al., 1994; O'Grady,

1185 1998; Bruening, 2010; inter alia). Note that this statement applies to individual idioms that we

1186 cover in this paper.[40] Later, we come back to the aforementioned asymmetry between a subject

1187 and an object, and argue that such existent and non-existent idiomatic patterns are directly

1188 expected under our proposed claims.

1189   Turning to our second assumption, we postulate that there is a strong preference of speakers

1190 for idiomatic elements to be adjacent to each other, which normally leads to linear adjacency for

1191 discontinuous idioms in Korean.[41]

1192

1193 (64) Idiom: *nwuaphey twuta* 'put X in front of eyes'

1194 a. tutwie   ku   kaswu-ka   nwun.aph-ey   paykman   kilok-ul   twu-ko iss-ta.

1195   finally   that   singer-Nom   eye.front-Dat   million   record-Acc   put-ko exist-Dec

1196   Literal: 'The singer is putting one million records in front of eyes finally.'

---

[40]As an anonymous reviewer points out, Korean idioms may vary in compositionality and there could be more frozen idioms that reject syntactic operations. In accordance with this point, our assumption is made to deal with individual idioms in Korean, rather than to cover all of the idioms in Korean.

[41] We thank a reviewer for pointing out linear adjacency condition on Korean idiom formation.

1197   Idiomatic: 'The singer is in the state of reaching one million records finally.'

1198 b. tutwie   ku   kaswu-ka   paykman kilok-ul   nwun.aph-ey twu-ko iss-ta.

1199   finally   that   singer-Nom million   record-Acc eye.front-Dat put-ko exist-Dec

1200   Literal: 'The singer is putting one million records in front of eyes finally.'

1201   Idiomatic: 'The singer is in the state of reaching one million records finally.'

1202

1203   In (64a), the idiom is discontinuous: the verb *twu-* 'put' and the dative argument (the Goal)

1204   *nwun.aph-ey* 'eye.front-Dat' are apart from each other, separated by the non-idiomatic accusative

1205   argument (the Theme). In (64b), by contrast, the idiomatic elements *twu-* 'put' and *nwun.aph-ey*

1206   'eye.front-Dat' are adjacent to each other. We have found through consultation with fifteen

1207   speakers of Korean that speakers prefer (64b) to (64a) for idiomatic interpretation: all speakers

1208   accept (64b) as an idiomatic phrase. The same speakers report that (64a) can also have an

1209   idiomatic interpretation: some Korean speakers find (64a) naturally acceptable (12/15) and some

1210   find it marginally acceptable (3/15).

1211   Note that the judgment often varies widely among speakers. As for the following

1212   discontinuous idiom *son-ey neh-ta* 'hand-Dat put.in-Dec' a reviewer reports that the speakers

1213   s/he consulted all prefer the [Theme-Goal] order in (65a), where linear adjacency is respected.

1214   The reviewer says that the same speakers judge (65b) very awkward, where the adjacency is

1215   disrupted by the non-idiomatic argument.

1216

1217   (65) Idiom: *soney nehta* 'put X to a webbing'

1218   a. Chelswu-nun   machimnay ku cha-lul   son-ey   neh-ess-ta.

1219   Chelswu-Top   at.last   the car-Acc   hand-Dat   put-Pst-Dec

1220   Literal: 'Chelswu put the car in hands at last.'

1221   Idiomatic: 'Chelswu obtained the car at last.'

1222 b. Chelswu-nun   machimnay   son-ey   ku   cha-lul   neh-ess-ta.

1223   Chelswu-Top   at.last   hand-Dat   the   car-Acc   put-Pst-Dec

1224   Literal: 'Chelswu put the car in hands at last.'

1225   Idiomatic: 'Chelswu obtained the car at last.'

1226

1227 We cannot provide a definite answer yet as to exactly why such variation occurs. However, it is

1228 in some sense expected because the use of idioms is commonly colloquial and subject to many

1229 syntactic and semantic constraints. We acknowledge that a thorough large-scale experimental

1230 study on idioms is needed to substantiate such variation; it is also unclear whether the judgment

1231 variation is crucially affected by the type of verb in the idiom or the type of the idiom itself. But,

1232 the fact that some discontinuous idioms are acceptable for the speakers we consulted suggests

1233 that linear adjacency can be understood as a strong preference (at surface structure) rather than as

1234 a strong constraint that defines a general pattern of idioms in Korean.

1235   Our additional support for linear adjacency being a speakers' strong preference rather than

1236 an unviolable constraint that defines a basic architecture of idioms in Korean comes from

1237 consideration of data from naturally occurring texts. As illustrated in (66a) and (66b), naturally

1238 occurring data found on the Internet with Google and Naver search[42] show that native speakers

---

[42] Our assumption regarding the use of naturally occurring data found on the Internet and in corpora
is that on top of solicited data from native speakers such data can tell us about the grammatical
knowledge of speakers (see Smith, 1999: 15; Chomsky, quoted in Aarts 2000:6; and Fillmore,
1992:35 who assert the importance of using such data in linguistics).
    Also, the source of the data in (66a) and (66b) is as follows:

1239 often use discontinuous idioms like [Goal-Verb] where the idiomatic elements are separated by a

1240 non-idiomatic Theme argument.

1241

1242 (66) a. Idiom: *kasumey saykita* 'engrave X on one's chest'

1243 …kasum-ey   700-i-la-nun   swusca-lul   sayki-ko   aph-man po-ko   talli-keyss-supni-ta.

1244 …chest-Dat   700-Cop-Adn   number-Acc   engrave-and front-only see-and run-Fut-Hon-Dec

1245 Literal: 'I will keep running by engraving the number 700 on my chest.'

1246 Idiomatic: 'I will remember the number 700 and keep running.'

1247 b. Idiom: *ipey tamta* 'put X in one's mouth'

1248 Nay-ka   ip-ey   yok-ul   tam-ci anh-nun   ku   nal.kkaci…

1249 I-Nom   mouth-Dat   insult-Acc   put-ci Neg-Adn   that   day.till

1250 Literal: 'Until the day that I do not put an insult in my mouth...'

1251 Idiomatic: 'Until the day that I speak an insult…'

1252

1253 If linear adjacency were taken as an unviolated constraint, such data should not be attested as

1254 they are considered to be ungrammatical by native speakers.

1255   Furthermore, idioms can often be separated by a non-idiomatic element such as adverbs.

1256

1257 (67) a. Idiom: *sokul kulkta* 'scratch a stomach'[43]

1258 (*pro*) talun   keyim-ey   pihayse   sok-ul   manhi kulk-ess-ten   kes kath-supni-ta.

1259 (*pro*) different game-in comparison.with stomach-Acc much scratch-Pst-Evi kes seem-Hon-Dec

---

http://sports.media.daum.net/soccer/news/k_league/breaking/view.html?newsid=2012100720001441

3 and http://blog.naver.com/PostView.nhn?blogId=liel0052&logNo=110093076228

[43] http://blog.naver.com/PostView.nhn?blogId=byzet&logNo=60180605056

1260   Literal: 'It seems that that game scratched a stomach a lot in comparison with other games.'

1261   Idiomatic: 'It seems that that game annoyed me a lot in comparison with other games.'

1262   b. Idiom: *hopakssilul kkata* 'shell pumpkin seeds'   (Kim 2010, Page 89, Example 5)

1263   ecey   twul-i   anca-se   hopak.ssi-lul   tas   mal-un   cokhi   kka-ss-ta.

1264   yesterday two-Nom   sit-while pumpkin.seed-Acc   five   Clf-Top sufficiently shell-Pst-Dec

1265   Literal: 'Yesterday, while sitting on a floor we shelled five pumpkin seeds sufficiently.'

1266   Idiomatic: 'Yesterday, while sitting on a floor we backbit someone very much sufficiently.'

1267

1268   As in (67a), in the [Obj-Verb] idiom, the adverb *manhi* 'much' can intervene between the object

1269   and the verb and does not change the idiomatic meaning. Likewise, as in (67b) the idiomatic

1270   phrase can be interrupted by the classifier phrase *tas mal* 'five Clf' associated with the idiomatic

1271   NP and the adverb *cokhi* 'sufficiently' with no change in the idiomatic meaning.

1272   Taken together, we assume that idioms may act as systematic and compositional phrases, and

1273   there is a strong preference of speakers for idiomatic elements to be adjacent for discontinuous

1274   idioms. On the basis of such assumptions, we show in the next section that the asymmetric

1275   theory can capture the idiom asymmetry by means of selection (Bruening 2010) but the

1276   symmetric theory (even with the adjacency condition and/or additional semantic constraints)

1277   fails to do so. Our supporting arguments are that (a) the symmetric theory lacks an account for

1278   the alternating class of idioms and that (b) it also runs into difficulty accounting for the

1279   ditransitive idioms in Japanese. We will therefore show that the asymmetric theory is called for,

1280   even granting the importance of a semantic constraint on an idiomatic interpretation.

1281

1282

1283 **4.3.2. Idioms in the ditransitive constructions**

1284 Let us return to the main discussion of the asymmetry between the two ditransitives in Korean.

1285 We show that novel ditransitive idiom data provide support for the asymmetric theory.

1286 First, consider the table in (68) which lists the logically possible idiom patterns for the

1287 ditransitives in Korean. The idiomatic part is highlighted.

1288

1289 (68) Logical possibilities for idiomatic forms in Korean ditransitives

PDC	Existent?	DOC	Existent?
Class 1 [PP$_{Dat}$ NP$_{Acc}$ Verb]	Yes	Class 4 [NP$_{Acc}$ NP$_{Acc}$ Verb]	Yes
Class 2 [PP$_{Dat}$ NP$_{Acc}$ Verb]	Yes	Class 5 [NP$_{Acc}$ NP$_{Acc}$ Verb]	No
Class 3 [PP$_{Dat}$ NP$_{Acc}$ Verb]	Yes	Class 6 [NP$_{Acc}$ NP$_{Acc}$ Verb]	No

1290

1291 As shown on the left-hand side in (68), in the PDC all of the classes are extensively attested.

1292 Particularly, since the dative marker on the Goal in the PDC can be replaced by the accusative

1293 marker in the DOC when the Goal is animate (Jung and Miyagawa 2004), we have also checked

1294 whether all the examples of idioms in the PDC alternate with the DOC. Our result is that only a

1295 limited number of idioms in Class 1 occur in the DOC, as in Class 4, whereas Class 2 and Class

1296 3 are fixed and do not seem to alternate in the DOC. Turning to the right-hand side, unlike the

1297 idioms in the PDC, in the DOC only Class 4 exists, and this alternates with the PDC. Idioms that

1298 occur *only* in Class 5 and Class 6 are systematically missing.[44] The following data illustrate

---

[44] An anonymous reviewer asks whether the fact that Korean lacks Class 5 idioms, as opposed to Japanese (as seen in Appendix B), is accidental. Our response is that the difference between Korean and Japanese regarding the availability of Class 5 idioms may be an accidental gap, but at the same time the rarity of the DOC idioms in both Korean and Japanese can be taken as an indication that

1299   examples of each class.

1300

1301   (69) Class 1 [PP_Dat NP_Acc Verb]

1302   a.   Idiom: *chimul nohta* 'put a needle onto X'

1303   sensayngnim-un   aitul-eykey   chim-ul   noh-ass-ta.

1304   teacher-Top   kids-Dat   needle-Acc   put.onto-Pst-Dec

1305   Literal: 'The teacher put a needle onto the kids.'

1306   Idiomatic: 'The teacher warned the kids (to be quiet).'

1307   b.   Idiom: *kwilul cwuta* 'give ears to X'

1308   chayk-ul ilk-nun   chekha-myense, Hana-ka   ku tayhwa-ey   kwi-lul cwu-ess-ta.

1309   book-Acc read-Adn   pretend-while, Hana-Nom that conversation-Dat ear-Acc give-Pst-Dec

1310   Literal: 'Hana gave her ears in the conversation while she pretended to read a book.'

1311   Idiomatic: 'Hana overheard the conversation while she pretended to read a book.'

1312

1313   (70) Class 2 [PP_Dat NP_Acc Verb]

1314   a.   Idiom: *ipey motelul talta* 'put an electric motor on a mouth'

1315   Thim-i   ip-ey   mote-lul   tal-ass-ta.

1316   Tim-Nom   mouth-Dat   electric.motor-Acc   put.on-Pst-Dec

1317   Literal: 'Tim put the electric motor on his mouth.'

1318   Idiomatic: 'Tim spoke very fast.'

1319   b.   Idiom: *mokey himul cwuta* 'give a power to a throat'

---

there is a general tendency for functional heads like Appl to be unfavorably made use of in idiom formation. See pages 76 through 78 for a discussion.

1320 sachang-i   mok-ey   him-ul   cwu-ess-ta.

1321 boss-Nom   throat-Dat   power-Acc   give-Pst-Dec

1322 Literal: 'The boss gave a power to his throat.'

1323 Idiomatic: 'The boss was arrogant.'

1324

1325 (71) Class 3 [PP~Dat~ NP~Acc~ Verb]

1326 a. Idiom: *sonakwiey nehta* 'put X to a webbing'

1327 Hana-ka   sonakwi-ey   nampyeon-ul   neh-ko   thongceyhalye ha-n-ta.

1328 Hana-Nom   webbing-Dat husband-Acc   put.in-and   control   do-Pres-Dec

1329 Literal: 'Hana puts her husband in her webbing, controls him.'

1330 Idiomatic: 'Hana takes control of her husband.'

1331 b. Idiom: *hanuley mathkita*   'put X in the sky'

1332 tayphyothim-un   sungpey-lul hanul-ey   mathki-ko   yelsimhi ttwi-n-ta.

1333 national.team-Top   outcome-Acc sky-Dat   put-and   hard   run-Pres-Dec

1334 Literal: 'The national team puts the outcome to the sky, and runs hard.'

1335 Idiomatic: 'The national team just runs hard without worrying about their victory or defeat at the

1336 moment.'

1337

1338   (72) below further shows the alternating idioms, the idioms that may appear in both PDCs

1339 and DOCs; here, the non-idiomatic part, the dative Goal, is replaced with the accusative marker

1340 (this is possible because the Goal is animate), and the idiomatic part in Class 1 can appear as part

1341 of a Class 4 idiom in the DOC.

1342

1343   (72) Alternating Class 1 [PP_Dat NP_Acc Verb] ~ Class 4 [NP_Acc NP_Acc Verb]

1344   a. Idiom: *chimul nohta* 'put a needle onto X' ~'put X a needle'

1345   sensayngnim-un   aitul-eykey/ul   chim-ul   noh-ass-ta.

1346   teacher-Top   kids-Dat/Acc   needle-Acc   put.onto-Pst-Dec

1347   Literal: 'The teacher put a needle onto the kids.'

1348   Idiomatic: 'The teacher warned the kids (to be quiet).'

1349   b. Idiom: *kwilul cwuta* 'give ears to X' ~ 'give X ears'

1350   nwukwunka-ka   pelsse   Mina-eykey/lul   kwi-lul   cwu-ess-ta.

1351   somebody-Nom   already   Mina-Dat/Acc   ear-Acc   give-Pst-Dec

1352   Literal: 'Somebody already gave ears to Mina.'

1353   Idiomatic: 'Somebody already revealed the truth to Mina so that he would be cautious about it.'

1354

1355   Our survey of ditransitive idioms reveals that there seems no genuine double object idiom

1356   that occurs *exclusively* in the DOC in Korean; that is, no ditransitive idioms have been found,

1357   where they are used *only* in the DOC and not in the PDC. [45] Native speakers of Korean we have

1358   consulted, however, noted that if idioms in the PDC involves an animate Goal, they could

1359   alternate in the DOC, which is expected given the animacy requirement on the Goal noted in

1360   Jung and Miyagawa (2004): for example, a limited number of idioms in Class 1 that allow for an

1361   animate Goal can be used in the DOC, as in Class 4.[46] As a reviewer correctly points out,

---

[45] Our sources are the online dictionary of the National Institute of the Korean Language, the online version of the collection of Korean dictionaries, and print dictionaries of Korean and idioms.

[46] An anonymous reviewer says that in (70) the Goal in Class 2 idioms can also be replaced with the accusative marker, while retaining an idiomatic interpretation, unlike our consultants' judgments. We speculate that a body part can often been treated as an animate entity, and this could explain the case

1362 therefore, it is said that apparent double object idioms seem to belong to the PDC. In addition,

1363 we find that the number of verbs permitting a double object idiom is quite limited; this is not

1364 surprising, because only a small number of ditransitive verbs (i.e., *cwu-* 'give' type verbs) can

1365 appear in the DOC, as noted in Jung and Miyagawa (2004).[47] Accordingly, the idiom patterns in

1366 Korean are asymmetric: all classes are found in abundance in the PDC, while there is no genuine

1367 double object idiom.

1368   Having described the ditransitive idioms in Korean, we are now in a position to show that

1369 the asymmetric idiom pattern receives a simple account under the current proposal, in particular

1370 in combination with Bruening's (2010) idiom-as-selection principle, shown in (73).

1371

1372 (73) Bruening's (2010) Idiom-as-Selection

1373 a. The Principle of Idiomatic Interpretation: X and Y may be interpreted idiomatically only if

1374   X selects Y.

---

alternation here.

[47] Related to this fact, a reviewer questions the following: if the Korean DOC and the English DOC are semantically and syntactically parallel, why is there such a difference? We attribute this to a lexical property of ditransitive verbs in Korean. It should, however, be noted that a similar kind of restriction holds for the DOC in many languages. According to Malchukov, Haspelmath, and Comrie's (2007) typological study, there seems to be a cross-linguistic tendency for restricting the use of verbs in the DOC. For instance, Yaqui has seven verbs that are used in the DOC, such as *miika* 'give', *bittua* 'show', *majta* 'teach', *maka* 'give a gift', *reuwa* 'lend', *tejwa* 'tell', and *u'ura* 'take away'; Ewe has three verbs including *ná* 'give', *fiá* 'teach/show', and *fiá* 'ask'. Malchukov, Haspelmath, and Comrie (2007) attribute this tendency to some factors like an affectedness interpretation and the animacy constraint imposed on the DOC. We therefore conclude that the restriction on the use of verbs in the Korean DOC is a lexical property of Korean ditransitive verbs, but at the same time this limitation may conform to a cross-linguistic pattern if their observation is right.

1375   b.   Constraint on Idiomatic Interpretation: If X selects a lexical category Y and X and Y are

1376   interpreted idiomatically, all of the selected arguments of Y must be interpreted idiomatically

1377   as well (Lexical categories are V, N, A, Adv).

1378

1379 The principle in (73) provides a constraint on what can be idiomatically interpreted in the syntax

1380 and claims that idiomatic interpretations are determined by selection. For example, if the

1381 ditransitive verb 'send' selects the dative argument 'to the showers', the two can be interpreted

1382 idiomatically.[48]

1383   Let us now consider how the asymmetric theory in conjunction with the selection principle

1384 yields desirable consequences regarding the idiom patterns in Korean. First, the existence of

1385 Class 1, Class 2, and Class 3 follows from the current claim; by satisfying the condition in (73a),

1386 the verb and its selected arguments can be interpreted idiomatically. For example, in Class 1 the

1387 verb selects the accusative NP, and in Class 2 the verb selects both the accusative NP and the P; P

1388 selects its complement, the dative NP. Thus, the selected items can be interpreted idiomatically.

1389 Class 3 is discontinuous, with the verb and the dative PP having an idiomatic interpretation

1390 excluding the accusative NP. Class 3 is formed in the same way as Class 1 and Class 2. That is,

1391 the verb selects the P and P selects the dative NP, and so selected elements receive an idiomatic

1392 interpretation (see (73a) and (73b)). Since linear adjacency is a preference at surface structure, it

1393 is not involved at the point of idiom formation. Recall from Section 4.3.1 that linear adjacency is

---

[48] An anonymous reviewer points out that the notion of selection has to be sharpened to cover an idiom like [V-XP's N] where the verb, the genitive XP, and the object have an idiomatic interpretation. This is in fact what Bruening (2010) further points out. That is, as the reviewer also notes, the noun selects the genitive XP, and so the two can be interpreted idiomatically. Also, the verb selects the whole NP which contains the genitive XP, and thereby the [V-XP's N] idiom can be interpreted idiomatically.

1394 a strong preference of speakers at surface structure, but is not an unviolable constraint that

1395 defines a basic pattern of idioms in Korean; not only did the speakers we consulted find a

1396 discontinuous idiom (marginally) acceptable as an idiomatic phrase, but naturally occurring data

1397 contain a number of discontinuous idioms where the idiomatic elements are often not adjacent to

1398 each other.

1399   Second, the fact that the idioms in Class 4 alternate with the PDC is also expected under the

1400 asymmetric theory.

1401

1402 (74) Alternating Class 1 [PP$_{Dat}$ NP$_{Acc}$ Verb] ~ Class 4 [NP$_{Acc}$ NP$_{Acc}$ Verb]

1403 a. Idiom: *chimul nohta* 'put a needle onto X' ~'put X a needle'

1404 sensayngnim-un   aitul-eykey/ul   chim-ul   noh-ass-ta.

1405 teacher-Top   kids-Dat/Acc   needle-Acc   put.onto-Pst-Dec

1406 Literal: 'The teacher put a needle onto the kids.'

1407 Idiomatic: 'The teacher warned the kids (to be quiet).'

1408 b. Idiom: *kwilul cwuta* 'give ears to X' ~ 'give X ears'

1409 nwukwunka-ka   pelsse   Thim-eykey/ul   kwi-lul   cwu-ess-ta.

1410 somebody-Nom   already   Tim-Dat/Acc   ear-Acc   give-Pst-Dec

1411 Literal: 'Somebody already gave ears to Tim.'

1412 Idiomatic: 'Somebody already revealed the truth to Tim so that he would be cautious about it.'

1413

1414

1415

1416

1417 (75) Asymmetric Theory

1418 a. DOC

VoiceP
… Voice'
ApplP Voice
NP Appl'
… VP Appl
V'
NP V
ear-Acc give

b. PDC

VoiceP
… Voice'
VP Voice
PP V'
… NP V
ear-Acc give
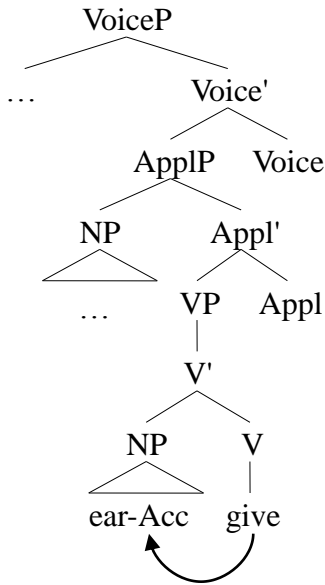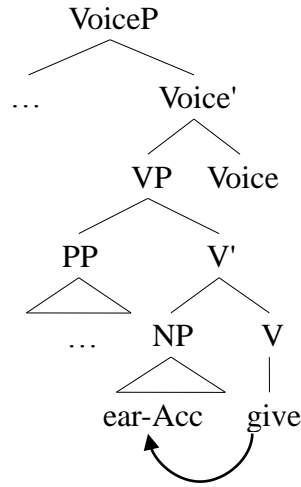
1427 As shown in (75a), in Class 4, the verb selects the second accusative NP (the Theme), but the

1428 idiom does not include the Appl head. In consequence, the [NP$_{Acc}$ Verb] combination in Class 4

1429 can appear as part of either the PDC as in (75b) or the DOC as in (75a).[49]

1430   At this point, one may speculate whether Appl may restrict idiom formation, given that Appl

1431 apparently does not participate in idiom formation. In addition, recall that there is no genuine

1432 double object idiom occurring only in the DOC, and Class 4 (the only idioms appearing in the

---

[49] A reviewer comments that the proposed asymmetric theory has to postulate two different idioms to account for the alternating idioms, as the DOC and PDC start from two different structures. While it is true that the claim we are making here is that PDC and DOC have different structures, we are not in accord with the reviewer's point. As discussed in the text, alternating idioms in Korean all belong to Class 1 (i.e., PDC idioms), meaning that alternating idioms are all represented as Class 1 [PP$_{Dat}$ NP$_{Acc}$ Verb], and what alternates here is the [NP$_{Acc}$ Verb] combination, as in Class 4. In addition, whether a given idiom alternates or not is a property of an individual idiom, and also an empirical fact that a theory needs to explain. That some idioms (i.e., some PDC idioms in Class 1) alternate and other idioms do not is the main asymmetry that the proposed asymmetric approach can account for, and the main asymmetry that argues against the symmetric theory.

1433 DOC) originates as Class 1 in the PDC. Taking these facts into consideration, it seems that Appl

1434 in Korean *may* limit idiom formation, and this explains the lack of double object idioms in

1435 Korean.[50]

1436   Our view that Appl may limit idiom formation in Korean can further extend to the functional

1437 head Voice, which also appears to not participate in idiom formation. Upon closer inspection, it

1438 is highly uncommon to find idioms in which all of the elements in one sentence are idiomatically

1439 interpreted together. For example, in the case of a sentence involving a transitive verb, there is no

1440 [Subj-Obj-Verb] idiom, where the subject, object, and verb are all idiomatically interpreted.

1441 Similarly, we have not found any [Subj-Verb] idioms, where a verb is an unergative verb or a

1442 transitive verb. Most of the idioms that we have seen so far are [Obj-Verb], which consists of a

1443 verb and its object, excluding the subject. Similar facts hold for English. As Bruening (2010)

1444 shows, English has a very large class of [Verb-Obj] idioms that include a verb and its object,

1445 excluding the subject (e.g., *pull strings*, *kick the bucket*), whereas there are no [Subj-Verb]

1446 idioms consisting of the subject and the verb to the exclusion of the object.

---

[50] Note that our point is that there is a general tendency to disfavor Appl in idiom formation in Korean; it does not obligatorily mean that Appl is never part of an idiom. So, a reviewer comments that since it is a tendency, not a principle, the asymmetric approach to the idiom patterns is not as straightforward as we conclude. Notice, however, that the same tendency is also found in the English idioms (as discussed in the current section) and the Japanese idioms (see Appendix B), which seems to suggest an interesting empirical generalization that might hold across langauges that (arguably) contain Appl in their DOCs. A wider discussion of this tendency across languages with applicative properties is held over for future research. A part of this study would be to examine Bantu langauges that have overt applicative morphemes. Nevertheless, this observation is not new to this study. Marantz (1984) and Kratzer (1996) notice that a functional head is rarely able to trigger a special interpretation of the verb (e.g., idiomatic meaning). Along this line of view, Kim (2013) supports the view that a phase (e.g., Appl) is a cycle domain for semantic interpretation as well, based on idioms from Japanese and Korean.

1447   These facts follow if we assume that functional heads such as Appl and Voice may limit

1448   idiom formation in Korean as well as in English, as illustrated in (76a) and (76b). The tree in

1449   (76a) shows that Voice may restrict idiom formation, in a similar fashion as Appl does in (76b).

1450   We indicate the possible domain of idiom formation by a dotted line.

1451

1452   (76) a.

```
           VoiceP                                    ApplP
          /      \                                  /     \
        NP       Voice'                           NP      Appl'
       /___\     /    \                          /___\    /    \
              VP       Voice                           VP       Appl
             /  \                                      /  \
           NP    V                                   NP    V
          /__\                                      /__\
```

b.
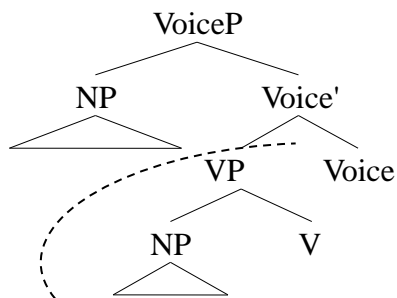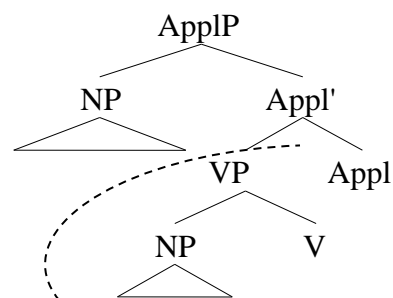
1457   The general issue is the extent to which the functional heads Appl and Voice restrict idiom

1458   formation. In Korean, the absence of idioms involving Appl and Voice indicates that they may

1459   constrain the domain of idiom formation, as we have discussed so far. In English, in contrast,

1460   Appl can be part of idioms, as there are double object idioms that appear only in the DOC, as

1461   noted in Bruening (2010). In addition, Voice seems to participate in idiom formation as well,

1462   because we can find (at least) two idioms involving Voice (e.g., *the shit hit the fan*, and *the ram*

1463   *has touched the wall*). Thus, the difference between Korean and English can be reduced to the

1464   participation of functional heads in idiom formation.

1465   We believe, however, that such a difference is only trivial and that languages have a general

1466   tendency to disfavor functional heads like Appl and Voice in idiom formation. Specifically, in the

1467   case of English, there are only a small number of idioms involving functional heads, (i.e., seven

1468 double object idioms involving Appl, as shown in Bruening (2010)[51] and two idioms involving

1469 Voice). Similarly, Korean has none of idioms involving Appl and only four idioms with Voice.[52]

1470 In addition, both Korean and English show the well-known asymmetry between the subject and

1471 the object in the sense of Marantz (1984). As noted above, no [Subj-Verb] idioms are found, in

1472 which a subject and a verb are interpreted idiomatically, excluding the object. By contrast, there

1473 is a large class of [Verb-Obj] idioms (for English) and [Obj-Verb] idioms (for Korean), where a

1474 verb and its object receive an idiomatic interpretation to the exclusion of the subject. Given these

1475 facts, we suggest that there seems to be a general tendency for Appl and Voice to be unfavorably

1476 made use of in idiom formation in both English and Korean. In the appendix we will show that

1477 this view also explains directly the systematic pattern of the Japanese ditransitive idioms.

1478   Returning to the idiom asymmetry, the absence of Class 5 [NP$_{Acc}$ NP$_{Acc}$ Verb] and Class 6

1479 [NP$_{Acc}$ NP$_{Acc}$ Verb] is simply captured as systematically missing. Since the Appl head is not

1480 involved in idiom formation in Korean, there is no selector that can select the first accusative

1481 Goal to be idiomatically interpreted.

1482   Therefore, under the proposed asymmetric account, the idiom patterns are handled in a

1483 straightforward way, provided that the structures of the PDC and the DOC are asymmetric and

1484 that idiom formation is based on selection (following Bruening's idiom-as-selection principle).

---

[51] The idioms include *give NP the boot, give NP the sack, give NP the creeps, give NP a headache,
give NP pause, give NP a piece of one's mind,* and *promise NP the moon*, as illustrated on page 537,
example (36) in Bruening (2010). Benjamin Bruening (personal communication) points out that
double object idioms occurring only in the DOC are restricted to those examples and that the number
of genuine double object idioms appears to be quite limited in comparison to the number of
prepositional dative idioms in English.

[52] We thank a reviewer for offering two instances of idioms involving Voice in Korean. According to
our survey, we also found two idioms involving Voice out of 1114 idioms in Korean.

1485 However, this asymmetric distribution of idioms is problematic for a Harley-type symmetric

1486 account. As noted in Section 3.1, under Harley's approach idioms are considered as a single

1487 constituent (i.e. the idiom-as-constituent theory) along the line of Larson (1988), and so forming

1488 a constituent is necessary for an idiomatic interpretation. In what follows, we show in greater

1489 detail how this constituent story runs into difficulty in dealing with the asymmetric distributions

1490 of idioms in Korean.

1491 First, the existence of Class 3 [PP$_{Dat}$ NP$_{Acc}$ Verb] is problematic because the [PP$_{Dat}$ Verb]

1492 combination should obligatorily involve the non-idiomatic accusative NP, as illustrated in (77).

1493

1494 (77) Class 3 *sonakwiey neta* 'put X to a webbing'

1495 aney-ka   sonakwi-ey   nampyeon-ul   ne-ess-ta.

1496 wife-Nom   webbing-Dat   husband-Acc   put.in-Pst-Dec

1497 Literal: 'The wife put her husband to her webbing.'

1498 Idiomatic: 'The wife took control of her husband.'

1499 b.

1500

1501

1502 idiom formed

1503

1504

1505

vP
├── ...
└── v'
    ├── PP
    │   ├── PP (webbing-Dat)
    │   └── P'
    │   ├── NP (husband-Acc)
    │   └── P (P_{loc})
    └── v (CAUSE)
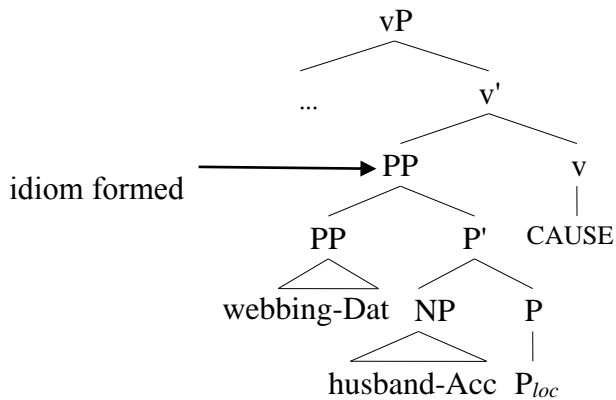
1506 On the symmetric theory, the idiom *sonakwiey nehta* 'put to a webbing' is formed at the PP level,

1507 where they form a single constituent, as illustrated in (77b). Then, since the non-idiomatic

81

1508 accusative NP is also obligatorily included, it is not clear how to capture this class of idioms.

1509 One might wonder whether it is possible to explain the idiom patterns just by adopting

1510 Bruening's (2010) selection theory and maintaining a Harley-type symmetric structure as

1511 illustrated in (13b), repeated in (78b). At first glance, this may seem to be possible, because this

1512 would correctly predict the existence of Class 3 [PP$_{Dat}$ NP$_{Acc}$ Verb]; the head of PP selects the

1513 dative argument (PP) and the lexical component of the ditransitive verb.

1514 However, this approach does not pan out once we consider the fact that Class 6 [NP$_{Acc}$ NP$_{Acc}$

1515 Verb] is systematically missing. That is to say, if Class 3 is a possible form, Class 6 should also

1516 be possible on the same line of reasoning. This is so because the head of PP selects the first

1517 accusative NP (Goal) and the lexical component of the ditransitive verb, and so they should be

1518 able to be idiomatically interpreted. Nevertheless, Class 6 is missing. Thus, this tells us that the

1519 symmetric structure itself is problematic, since it does not correctly predict which idiomatic

1520 forms are possible.

1521

1522 (78) a. PDC   b. DOC

'Hana CAUSED a cake to GO TO Chelswu.'   'Hana CAUSED Chelswu to HAVE a cake.'

1529
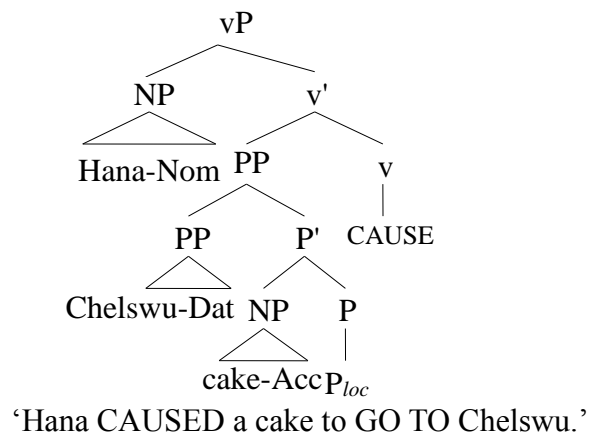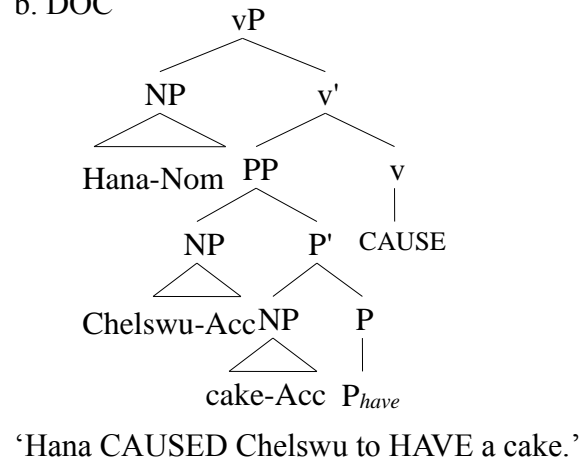
1530 Second, alternating idioms are also problematic under the symmetric theory. Since the

symmetric approach treats idioms as *fixed* expressions associated with certain lexical heads, P_{loc}

and P_{have} in the PDC and the DOC, respectively, it would have to posit some other structure

where P_{loc} and P_{have} are both projected, or else say that alternating idioms are exceptional. Either

way, something supplementary must be stipulated to handle alternating idioms. (Note that the

existence of alternating idioms cannot be reconciled with Harley and Jung's (to appear) argument

for the P $_{have}$ account for the same reason mentioned above. See also Footnote 32.)

Finally, the symmetric theory in conjunction with the constituent story does not account for

the absence of Class 5 [NP$_{Acc}$ NP$_{Acc}$ Verb], because under this view, the two accusative objects

are incorrectly predicted to build an idiomatic single constituent at the level of PP. Nonetheless,

Korean uniformly lacks Class 5.

An anonymous reviewer suggests that a possible alternative explanation for the absence of

double object idioms in Korean is to say that there is a semantic restriction such as an animacy

constraint imposed on the DOC, and this prevents the existence of Class 5 [NP$_{Acc}$ NP$_{Acc}$ Verb]

and Class 6 [NP$_{Acc}$ NP$_{Acc}$ Verb]. In this way, the lack of DOC idioms is attributable to the

semantic idiosyncrasies of ditransitive verbs, and thereby one can maintain a Harley-type

symmetric structure.

However, the consideration of a fuller range of ditransitive idioms suggests that an animacy

restriction seems to hold for ditransitive idioms in general, in which animate entities are less

commonly used than inanimate entities in the formation of ditransitive idioms.[53] We list more

idioms in (79).

(79) a. Class 1: *tol-ul tenci-ta* (stone-Acc throw-Dec) 'to criticize', *paykki-lul tul-ta* (white flag-

---

[53] We thank an anonymous reviewer who suggested to us a similar point that there might be an
independent constraint that would block an animate Goal being used in the DOC.

1552   Acc take-Dec) 'to give away', *kkoli-lul chi-ta* (tail-Acc wag-Dec) 'to seduce', *saykki-lul chi-ta*

1553   (baby-Acc yield-Dec) 'to increase'

1554   b. Class 2: *kasum-ey taymos-ul pak-ta* (chest-Dat big.nail-Acc hammer-Dec) 'to make

1555   someone hurt deeply', *ip-ey kemichwul-ul chi-ta* (mouth-Dat web-Acc spin-Dec) 'to starve',

1556   *son-ey son-ul cap-ta* (hand-Dat hand-Acc hold-Dec) 'to cooperate'

1557   c. Class 3: *ekkey-ey ci-ta* (shoulder-Dat carry-Dec) 'to take responsibility', *ip-ey tam-ta*

1558   (mouth-Dat put.in-Dec) 'to speak about something'

1559

1560 For example, for Class 1 [PP_{Dat} NP_{Acc} Verb] the idiomatic accusative argument (the Theme)

1561 usually consists of inanimate entities; as seen in (79a) only one idiom *saykki-lul chi-ta* 'baby-Acc

1562 yield-Dec' where the Theme is animate is attested. Likewise, for Class 2 [PP_{Dat} NP_{Acc} Verb] we

1563 have not found any idioms where either the Goal or the Theme is animate. The same also holds

1564 for Class 3 [PP_{Dat} NP_{Acc} Verb], where we have not found any idioms where the Goal is animate.

1565 More broadly, our survey of idioms involving different types of verbs indicates that the use of

1566 animate entities is much more restricted than the inanimate ones. Therefore, if our view is correct,

1567 it is difficult to attribute the lack of Class 5 and Class 6 only to an animacy constraint, as animate

1568 entities are also rarely made use of for other classes of ditransitive idioms in Korean.

1569   An additional argument against such a semantic constraint based on the symmetric structures

1570 is that such an account cannot *prima facie* capture why some idioms appear in both the PDC and

1571 the DOC. As discussed above, the symmetric theory makes the incorrect prediction, such that

1572 idioms should not alternate because on this view idioms are fixed expressions associated with

1573 certain lexical components. The least satisfying approach to this question would be just to

1574 stipulate that it is simply a feature of ditransitive idioms in Korean. Such an approach, however,

1575   is not tenable because there are also alternating idioms in English and Japanese.

1576   More importantly, a natural question concerns what are the possible and impossible idioms

1577   in Korean. Once again, if one attributes the lack of certain classes of idioms to idiosyncrasies of

1578   ditransitive verbs based on the symmetric structures, how can we handle the systematic pattern

1579   of idioms, including the asymmetry between a subject and an object (in the sense of Marantz

1580   1984 and Bruening 2010) in connection with the systematic absence of Class 5 and Class 6

1581   idioms in Korean as well as the systematic pattern of idioms in English and Japanese (see

1582   Appendix B) where DOC idioms are relatively fewer than PDC idioms? The reviewer points out

1583   that the lack of idioms in Class 5 and Class 6 is attributable to semantic idiosyncrasies of

1584   ditransitive verbs and that idioms are after all idiosyncratic. As has been discussed thus far,

1585   however, there is rich evidence strongly indicating that idioms may act as systematic and

1586   compositional phrases; for example, parts of an idiom in English and Korean can be modified by

1587   adjectives, and undergo syntactic operations such as passivization or relativization; in addition,

1588   certain types of idioms are uniformly missing and at the same time a number of idioms are

1589   existent systematically. The common view that idioms are simply an idiosyncratic string cannot

1590   deal with such patterns; rather the systematic patterns of idioms need a systematic account.

1591   Therefore, the alternative view maintaining the symmetric theory in combination with some

1592   semantic restriction on the DOC fails to cover the overall range of idioms in Korean (as well as

1593   in English). Without a principled account of the systematic pattern of idioms (including the

1594   subject and object asymmetry on top of the alternating class of ditransitive idioms), an analysis

1595   couched in these terms based on the symmetric structure loses explanatory force.

1596   Furthermore, though we restrict our discussion to the ditransitive idioms in Korean, English

1597   (based on Bruening 2010), and Japanese (in Appendix B) due to space limitations, the present

1598   analysis could readily be extended to ditransitive idioms in Greek, another language that has

1599   been shown to follow the asymmetric structures, as noted in Anagnostopoulou (1999a, 1999b,

1600   2001, 2003).[54] From our brief consideration of Greek ditransitive idioms on the basis of

1601   Anagnostopoulou's argument, it seems that there is an asymmetric distribution between the PDC

1602   and the DOC. We leave this for future study.

1603   Therefore, the proposed asymmetric approach to ditransitive idioms not only can handle the

1604   Korean internal facts as discussed in the current study but also supports a cross-linguistic

1605   observation of idioms patterns in support of Marantz (1984) and Kratzer (1996) according to

1606   which a functional head is rarely able to trigger a special interpretation of the verb (e.g.,

1607   idiomatic meaning).

1608   Finally, the ditransitive idiom patterns are not the only asymmetry attested between the PDC

1609   and the DOC. As shown in the previous sections, there are other asymmetries including

1610   quantifier scope and nominalization, both of which are difficult to explain with a Harley-type

1611   symmetric theory and/or with a semantic constraint such as the notion of a newly-established

1612   possession relation (for a WCO effect), a specificity effect (for quantifier scope), or a particular

1613   type of possession meaning encoded in the DOC (for nominalization). At first glance, an analysis

1614   couched in semantic terms might be appealing as seemingly the difference between the PDC and

1615   the DOC is a meaning difference; recall from Section 3 that this is also what the null hypothesis

1616   says. As we have shown thus far, however, a number of asymmetries between the PDC and the

---

[54] Anagnostopoulou (1999a, 1999b, 2001, 2003) shows that the DOC in Greek is distinguished from
the PDC with respect to the case marking on the Goal: the Goal in the DOC is marked by genitive
case, whereas the Goal in the PDC is marked by a preposition. We also thank Angeliki
Athanasopoulou (personal communication) for offering us Greek ditransitive idioms and her
judgments.

1617 DOC cannot be merely attributed to such meaning components, and such asymmetries can be

1618 better explained by the applicative properties of the DOC.

1619   We, therefore, conclude that the symmetric theory is less desirable, and argue that various

1620 asymmetries attested in the ditransitives indicate that the structures of the PDC and the DOC are

1621 asymmetric.

1622

1623 **5. Conclusion**

1624 We have discussed the ditransitive constructions in Korean in which the [Dat-Acc] and the [Acc-

1625 Acc] orders are the representations of the PDC and the DOC, respectively, and argued that their

1626 syntactic structures are asymmetric. The Korean facts are of special interest because although

1627 Korean is not genetically or typologically related to English, the internal structures of the Korean

1628 ditransitives are the exact mirror-image of the English ones proposed in Bruening (2010) along

1629 the line of Marantz (1993). We have applied the same syntactic diagnostics (quantifier scope,

1630 nominalization, and idioms) developed for English by Bruening (2010) to the relevant data in

1631 Korean, and have shown that despite the lack of overt applicative morphology the observed

1632 patterns have a simpler explanation under the asymmetric theory that postulates a null head.

1633   More broadly, the asymmetric theory further extends to other languages such as Japanese

1634 (Miyagawa and Tsujioka, 2004; Miyagawa, 2012), a language that is also not related to English

1635 but is typologically similar to Korean. A considerable body of literature has also supported the

1636 asymmetric theory (e.g., Bantu langauges in Marantz, 1993; Greek in Anagnostopoulou, 1999a,

1637 1999b, 2001, 2003).

1638   Furthermore, in Bhattacharya and Simpson's (2011) recent work on Bangla ditransitives,

1639 they report a striking parallelism between the Bangla and the Japanese ditransitives with regard

1640   to the distribution of two Goals and the interpretation of the Goal and the Theme. Although they

1641   do not spell out the syntactic structures in the sense of Marantz's (or Bruening's) asymmetric

1642   structures we can subsume the Bangla ditransitives under the asymmetric structures if Bangla has

1643   exactly the same type of ditransitive constructions as Japanese, as advocated in Bhattacharya and

1644   Simpson (2011).

1645   We shall thus contend that with the combined evidence from Korean, English, Japanese,

1646   Bantu langauges, Greek, and possibly Bangla, there is now reason to implicate that the

1647   asymmetric structures may be widely available, shared by languages with the PDC and the DOC

1648   distinction. A wider investigation of other languages is clearly called for, and we leave this for

1649   future research.

1650   Finally, as a reviewer points out to us, the so-called accusativization phenomenon in Korean

1651   in which an argument that is marked by *-ey(key)* can often be replaced by accusative case is also

1652   found in many other constructions in Korean including simple intransitive sentences involving a

1653   verb like *ka-* 'go', *give*-type benefactives, and causative sentences (e.g., Lee 1991, Sim 2005,

1654   Son 2006), in addition to the ditransitive construction under consideration. Having focused on

1655   the accusativization involving ditransitive verbs in the PDC and the DOC, describing and

1656   discussing the accusativization phenomenon in general remains as our future research.

1657

1658

1659

1660

1661

1662   **Appendix A**

1663   Due to the restricted meanings of idioms, it is not often straightforward to show whether idioms

1664   are subject to syntactic operations. Yet, with the right context it is possible to see that this is the

1665   case; see also Section 4.3 and the references cited there (e.g., Nunberg et al., 1994; O'Grady,

1666   1998; McGinnis 2002; Bruening, 2010; and Kim, 2013) for a more detailed discussion on this

1667   issue. Consider (80), where the idiom is *sonakwi-ey neh-ta* 'webbing-Dat put.in-Dec'. We

1668   consulted nine speakers and seven find that (80a) is idiomatic and unambiguous regarding the

1669   quantifier scope, while (80b) is idiomatic and ambiguous between the two scope interpretations.

1670

1671   (80) a. Context (Reading 1: 'one > every', *'every > one') Hana is a manager of a company

1672   where her coworkers are all male. Whenever they take on a huge project, Hana does not listen

1673   to the male coworkers' opinions or suggestions and just ignores them. That is, she takes control

1674   of all the guys.

1675   b. Context (Reading 2: 'every > one', *'one > every') Hana is a stubborn girl, and every time she

1676   goes out with a different guy, she always takes control of him; that is, for every guy that she goes

1677   out with, she takes control of him.

1678

1679   (81) Scope test under the contexts in (80)

1680   a. Hana-ka   han sonakwi-ey   motun namca-lul neh-ko   hwitwululye-ko   ha-n-ta.

1681   Hana-Nom one webbing-Dat every guy-Acc   put-and control-and   do-Pres-Dec

1682   'one > every': 'Hana takes control of all the guys.'

1683   '*every > one': 'For each guy, Hana takes control of him.'

1684   b. Hana-ka   motun namca-lul han sonakwi-ey   neh-ko   hwitwululye-ko ha-n-ta.

1685   Hana-Nom every guy-Acc   one webbing-Dat put-and control-and   do-Pres-Dec

89

1686   'one > every': 'Hana takes control of all the guys.'

1687   'every > one': 'For each guy, Hana takes control of him.'

1688

1689   In (81a), the idiomatic order has frozen scope. By contrast, in (81b) the idiomatic scrambled

1690   order has flexible scope. This is expected under the assumption that the [Theme-Goal] order is a

1691   derived word order; here, the trace of the Theme makes the inverse scope possible. Given the

1692   data from (non-) idioms as we have noted in the text, this paper makes an assumption in

1693   accordance with the standard approach in Korean that the [Theme-Goal] order is derived from

1694   the [Goal-Theme] order through scrambling the Theme across the Goal.

1695   Note that a reviewer comments that the real scope relation in (80) seems to be between some

1696   circumstance and the universal quantifier, because if the expression is idiomatically interpreted,

1697   the sentences in (81) do not apparently take two (overt) quantifiers. So, s/he suggests that we

1698   need to say that scope interaction takes place between *sonakwuy* 'webbing' (or some

1699   circumstance which is somehow related to *sonakwuy*) (part of the idiom) and the universal

1700   quantifier and the former is incorporated into the idiom later.

1701   We agree that the reviewer's point could be at work to explain the scope interpretation in

1702   (81). At the same time, however, if we take the scope reading availability as a set of event

1703   reading in terms of some compositional view, it seems also possible to say that (81) manifest

1704   scope interpretations between the two quantifiers: the IO with the existential quantifier is part of

1705   the eventuality associated with the verb meaning for the idiomatic meaning, and as such it has a

1706   scope interaction with the DO consisting of the universal quantifier. For the 'one > every'

1707   reading, the sentence is a set of eventuality in which Hana takes control of all the guys, where the

1708   IO with the existential quantifier, as being part of the idiomatic interpretation, has wide scope

1709   over the DO with the universal quantifier. Here, the controlling event occurs as one event, i.e.

1710   Hana takes control of all the guys at the same time. This is comparable to the quantifier scope

1711   interpretation regarding a sentence with non-idioms like (23) in the text: under the 'some >

1712   every' reading Hana gave all the books to a particular kid and this giving event occurred as one

1713   event, i.e. all the books were given to a particular kid at the same time. For the 'every > one'

1714   reading, the sentence is a set of eventuality in which for each guy Hana takes control of him, and

1715   this reading arises when the IO with the existential quantifier, which is part of the eventuality

1716   that the verb describes, has narrow scope with respect to the DO with the universal quantifier.

1717   Here, the sentence means that different guys are controlled by Hana at different times, resulting

1718   in multiple controlling events. This is comparable to the 'every > some' reading of the non-

1719   idiomatic sentence in (23) in the text in which there are multiple events such that different books

1720   were given to a possibly different kid at different times.

1721   Finally, regarding the data in (81), an anonymous reviewer points out that they seem to be

1722   associated with contextual manipulations. While contextual manipulation can lead to an

1723   inaccurate judgment about scope facts, we feel that this point is not something we can argue

1724   about with the reviewer, especially given that there is no exact definition of contextual

1725   manipulation; see also footnote 24. Central to our assumption throughout the paper is that

1726   providing a context for native speakers would facilitate acceptability judgments but that a

1727   context does not create a new scope possibility; if a sentence has no relevant scope interpretation,

1728   no context would create it.

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Appendix B

In this appendix, we sketch ditransitive idioms in Japanese, and show that the asymmetric theory in conjunction with the selection principle captures the asymmetric distributions of idioms in Japanese. We also note the rarity of the DOC idioms in Japanese[55], thereby pointing out a general tendency to disfavor functional heads like Appl and Voice in idiom formation as noted in Section 4.3. Our argument is based on Miyagawa and Tsujioka (2004) according to which a sentence is the PDC if the Goal is inanimate, but a sentence is the DOC if the Goal is animate. Based on this, they adopt the applicative-head structure in the sense of Marantz (1993) and explain additional properties of the Japanese ditransitives. Miyagawa (2012) later notes that Japanese manifests the same scope asymmetry as English, and discusses in detail the asymmetry of *kata* nominalization between the PDC and the DOC adopting Myers' (1984) generalization, supporting a null head approach (Marantz, 1993; Pesetsky, 1995). Assuming that their approach is correct, what is relevant to this paper is that if the PDC and the DOC are built on the asymmetric structures in accordance with Miyagawa and Tsujioka (2004) and Miyagawa (2012), the ditransitive idiom patterns in Japanese should also follow from the asymmetric theory. In what follows we show that this prediction is borne out.

As illustrated in (82)[56], for the PDC, three classes are robustly attested: Class 2 and Class 3 are fixed (i.e., non-alternating idioms), while some idioms in Class 1 alternate with Class 4 in the

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[55] We thank Satoshi Tomioka (personal communication) and Takae Tsujioka (personal communication) for pointing this out to us.

[56] Note that Miyagawa and Tsujioka (2004) argue for the base generation approach to the [Theme-Goal] and [Goal-Theme] orders in Japanese. But see others (e.g. Yatsushiro 1998) who pursue a different approach in which the [Theme-Goal] order is derived from the [Goal-Theme] order. Since we follow Miyagawa and Tsujioka's (2004) argument in this paper, we indicate Class 3 and Class 6 as [NP$_{Acc}$ PP$_{Dat}$ Verb] and [NP$_{Acc}$ PP$_{Dat}$ Verb], respectively.

1751 DOC. For the DOC, Class 4 and Class 5 are both attested, but they are restricted to a relatively

1752 small number compared to the PDC idioms: we were able to find several idioms for Class 4 and

1753 for Class 5. Also, Class 6 seems to be missing.

1754

1755 (82) Logical possibilities for idiomatic forms in Japanese ditransitives

PDC	Existent?	DOC	Existent?
Class 1 [PP$_{Dat}$ NP$_{Acc}$ Verb]	Yes	Class 4 [PP$_{Dat}$ NP$_{Acc}$ Verb]	Yes (several idioms)
Class 2 [PP$_{Dat}$ NP$_{Acc}$ Verb]	Yes	Class 5 [PP$_{Dat}$ NP$_{Acc}$ Verb]	Yes (several idioms)
Class 3 [NP$_{Acc}$ PP$_{Dat}$ Verb]	Yes	Class 6 [NP$_{Acc}$ PP$_{Dat}$ Verb]	No

1756

1757 Below we show how the asymmetric approach can handle the idiom patterns and why the

1758 symmetric approach runs into difficulty. First, as illustrated in (83), Class 1 consists of the verb

1759 and its accusative NP to the exclusion of its inanimate dative PP; Class 4 contains the verb and

1760 its accusative NP excluding its animate dative PP. Note also that we have only been able to find

1761 several possible idioms from Class 4, whereas there are many idioms from Class 1.

1762

1763 (83) Class 1 [PP$_{Dat}$ NP$_{Acc}$ Verb]

1764 a. Taroo-wa   imadani   genko-ni   **te-o/te-mo**   **ire-te**   **i-na-i.**

1765   Taro-Top   yet   draft-Dat   **hand-Acc/hand-also putting.in**   **be-Neg-Pres**

1766 'Taro has not (even) revised the draft.'   Kishimoto (2008), Page 146, Example (8b)

1767 b. More idioms: *oti-o tukeru* (fall-Acc attach) 'give a punch line'; *asi-o nobasu* (leg-Acc extend)

1768 'travel farther'

1769

1770 (84) Class 4 [PP_Dat NP_Acc Verb]^57

1771 Taroo-ga   Sachi-ni   **kaminari-o**   **otosi-ta**.

1772 Taro-Nom   Sachi-Dat   **thunder-Acc fall-Pst**

1773 'Taro got angry at Sachi.'

1774

1775 Under the asymmetric theory in combination with the selection principle, Class 1 and Class 4 are

1776 straightforwardly explained. For Class 1, the verb selects its accusative NP. For Class 4, Appl

1777 selects a verb, and the verb selects the accusative NP. Note here that Appl must be a part of the

1778 idiom as this class only appears in the DOC.

1779   Also, some idioms in Class 1 and Class 4 alternate between the PDC and the DOC.

1780

1781 (85) Alternating Class 1 [PP_Dat NP_Acc Verb] ~ Class 4 [PP_Dat NP_Acc Verb]

1782 a. Taroo-wa   Sachi-ni/giron-ni   **netu-o**   **ageru**.

1783   Taro-Top   Sachi-Dat/discussion-Dat   **fever-Acc**   **raise**

1784   'Taro has a crush on Sachi.'; 'Taro had active discussion.'

1785 b. More idioms: *mizu-o sasu* (water-Acc pour) 'interrupt'; *kuti-o kiku* (mouth-Acc hear)

1786 'mediate'

1787

1788 Under the asymmetric theory, this fact is straightforwardly explained (in a similar way that we

---

[57] One might say that the following idioms from Kishimoto (2008) could also be of this class.
However, we are suspicious of this, because the object *mune* 'chest' can occur with different verbs;
so it seems to be the case that the idiom here is just the object, not the object and the verb.

(15)   a. *mune-o kasu* (chest-Acc lend) 'let…challenge'
        b. *mune-o kariru* (chest-Acc borrow) 'challenge'

1789   have explained the alternating classes in Korean): the alternating idioms consist of only the verb

1790   and its accusative NP, and so they can show up as part of either the PDC or the DOC.

1791   However, the symmetric theory encounters difficulty with the alternating idioms. Recall that

1792   this was also the problem for the data in Korean as well as the data in English (Bruening 2010).

1793   On this account, idioms are fixed expressions associated only with certain lexical heads, P$_{loc}$ for

1794   the PDC and P$_{have}$ for the DOC. This means that we have to include [P$_{loc}$ + NP$_{Acc}$] in one case

1795   but [P$_{have}$ + NP$_{Acc}$] in the other. But, we suspect that there would have to be a structure that

1796   involves both P$_{loc}$ and P$_{have}$ for the idiomatic interpretation.

1797   Second, we turn to Class 2 and Class 5, in which the verb and its internal arguments have an

1798   idiomatic interpretation. For Class 2, the verb selects the accusative NP and the dative PP in

1799   accordance with the selection principle in the asymmetric structure. Thus, the selected items can

1800   be interpreted idiomatically.

1801

1802   (86) Class 2 [PP$_{Dat}$ NP$_{Acc}$ Verb]

1803   a. Sachi-ga   **kan'oke-ni**   **kata'asi-o**   **tukkonde-iru**.

1804   Sachi-Nom   **coffin-Dat**   **one.leg-Acc**   **put.in-Prog**.

1805   'Sachi is old and has not much longer to live.'

1806   b. More idioms: *(tanin-no) kao-ni doro-o nuru* ((others-Gen) face-Dat mud-Acc paint) 'bring

1807   shame on (others)'; *kokyoo-ni nisiki-o kazaru* (hometown-Dat silk-Acc decorate) 'return in

1808   glory' (Kishimoto, Page 158, Example 31)

1809

1810   For Class 5, Appl selects the dative PP and the verb, and the verb selects the accusative NP;

1811   here, Appl must be part of the idiom as these idioms can only occur in the DOC. Similar to Class

1812   4, Class 5 is not robustly attested. Below, we list only one example of this class.

1813

1814   (87) Class 5 [NP_Dat NP_Acc Verb]

1815   Sachi-ga   **teki-ni**   **sio-o**   **oku-ta**.

1816   Sachi-Nom   **enemy-Dat**   **salt-Acc**   **send-Pst**

1817   'Sachi save an enemy in a difficult situation'

1818

1819   One might say that the idiom here is just the accusative NP *sioo* 'salt' and the verb *okuru* 'send'

1820   to the exclusion of the dative PP *tekini* 'enemy', because the meaning of *tekini* 'enemy' can be

1821   predicted from the literal meaning (i.e., it is a part of the compositional meaning). However, this

1822   is not correct, since if we replace *tekini* 'enemy' with a different NP, like *Masa*, for instance, the

1823   idiomatic meaning suddenly disappears (Satoshi Tomioka, personal communication).

1824   Third, Class 3 and Class 6 contain the verb and its dative PP. We have found a number of

1825   idioms in Class 3, but Class 6 seems to be missing.[58]

---

[58] Note that Kishimoto (2009) classifies the following expressions as examples of a ditransitive idiom, but we suspect that these are not true idioms for the following reasons.

(16)   a. Ken-wa   Mari-o   teki-ni   mawasi-ta/si-ta.
            Ken-Top   Mari-Acc   enemy-Dat   turn-Pst/do-Pst
            'Ken and Mari are now enemies.'
        b. Ken-wa   Mari-o   mikata-ni   tuke-ta/si-ta/mots-ita.
            Ken-Top   Mari-Acc   supporter-Dat attach-Pst/do-Pst/hold-Pst
            'Ken and Mari are now on the same side.'

First, as noted in O'Grady (1998), idioms have a meaning that is not a simple function of the literal meaning of their parts, and they manifest a high degree of conventionality in the choice of their items.

1826 (88) Class 3 [NP_Acc PP_Dat Verb]

1827 a. Taroo-wa   omotta   koto-o   **kuti-ni**   **dasu**.

1828   Taro-Top   thought   thing-Acc   **mouth-Dat** **let.out**

1829   'Taro says what's on his mind'   (Miyagawa and Tsujioka 2004, Page 20, Example 52a)

1830 b. More idioms: *omote-ni dasu* (front-Dat let.out) 'express'; *kemu-ni maku* (smoke-Dat wind)

1831 'mystify' (Kishimoto 2009, Page 148, Example 11)

1832

1833 The existence of Class 3 is expected under the asymmetric theory: the verb selects the P, which

1834 in turn selects the PP.[59] Thus, the verb and the dative PP receive an idiomatic interpretation. Also,

1835 that Class 6 is missing is expected under the current approach. Following the selection principle,

1836 Appl selects the verb, and the verb selects the dative PP; note that Appl must be part of the idiom

1837 because these idioms can only occur in the DOC. Therefore, the accusative NP cannot be

1838 excluded from the idiom in the asymmetric structure. Thus, the asymmetric theory explains the

1839 lack of idioms of this form.

That said, the meaning of 'enemy' and 'supporter' can be predicted from the literal meaning of their parts. As glossed in the translation, 'enemy' and 'supporter' are in fact a part of the compositional meaning, and therefore it is not necessarily the case that they should be interpreted as part of the idiomatic expression. Second, as pointed out by Satoshi Tomioka (personal communication) in (16a) we can replace the verb *mawasi* 'turn' with different verbs such as *suru* 'do' (note that for some speakers this sentence is marginally available though). Likewise in (16b) the verb can be replaced with *suru* 'do' and *motsu* 'hold', while retaining an idiomatic interpretation. Give these facts, it is not clear whether the above data are purely idiomatic expressions.

[59] A reviewer points out that if Class 3 [NP_Acc PP_Dat Verb] is possible, the pattern [NP_Acc NP_Dat Verb] where all of the elements are interpreted idiomatically should be possible. Note, however, that as we state in the text in Class 3 the verb selects P and P selects the NP (see (73a)). Also, not all selected arguments of the verb should be part of the idiom, since nothing higher than the verb is part of the idiom (see (73b)). Thus, it is not necessarily the case that the pattern [NP_Acc NP_Dat Verb] is existent.

1840   Under the symmetric approach, however, these classes are problematic. One main idea of the

1841 symmetric theory is that the two types of ditransitives are symmetric and that they differ in terms

1842 of a lexical component. Therefore, if the two structures are symmetric, we should expect the verb

1843 and the dative PP to form an idiom in both the PDC and the DOC. The fact that we see this idiom

1844 in the PDC but not in the DOC is an asymmetry that needs an explanation. At this point, it seems

1845 that there is no systematic way for the symmetric theory to allow one class, but to disallow the

1846 other class because things should be symmetric.

1847   Hence, putting this observation together with the discussion of the Korean idioms in Section

1848 4.3, our proposed asymmetric theory has advantages over the symmetric analysis. From a

1849 theoretical perspective, the advantage that such an analysis offers is that it enables us to provide a

1850 straightforward account of asymmetric patterns of ditransitive idioms in Korean, Japanese, and

1851 English. From an empirical perspective, it constitutes the compelling evidence for the view that a

1852 functional head is rarely able to trigger a special interpretation of the verb (e.g., idiomatic

1853 meaning), as noted in Marantz (1984), Kratzer (1996), and Kim (2013).

1854

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