

Non-universality of reflexive analysis for anticausativization Evidence from the Hokkaido dialect of Japanese

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Abstract

Anticausativization is a morphological process where a certain morphological marking incurs the suppression of the causing event and of the external argument. Koontz-Garboden (2009) advocated an analysis where the semantic operation responsible for anticausativization is reflexivization, i.e., co-indexing of external and internal arguments. He argues that this analysis is applicable to anticausativization “in general,” i.e., not only to anticausativization with reflexive morphemes but also to anticausativization employing other types of morpheme as a marker of anticausativization. This paper examines the viability of this universal characterization, using the data from the Hokkaido dialect of Japanese.

Keywords: anticausativization, spontaneous suffix, causing event

1 Introduction

Anticausative is a notion advocated by Nedjalkov and Sil'nickij (1973) in the context of the typology of the causative alternation. Anticausativization is a morphological process where a certain morphological marking incurs the removal of the external argument and the causing event. The directionality of derivation in anticausativization is opposite to that in causativization from the viewpoint of transitivity alternation. The opposite directionality of causative and anticausative derivation is illustrated by the French examples in (1) and (2).

Causativization is a morphological process increasing the valence. In the transitivization in

(1), the valence of the predicate increases from one to two. Anticausativization decreases the valence of the verb. In the intransitivization in (2), where the transitive subject is removed and the object corresponds to the intransitive subject, valence decreases from two to one. The morphologically marked predicate is the transitive counterpart in causativization, while it is the intransitive counterpart in anticausativization. The schema in (3) illustrates the opposite directionality of the derivation. The notation ‘+ α ’ stands for the morpheme added as an expression of derivation. The precedence relation between verb and ‘ α ’ is irrelevant and varies across languages.

Some languages employ the verb of doing or making as a morphological expression of causativization as in the case of the French example in (1) and its English translation. Other languages employ a verbal suffix like Japanese *ik-ase-ru* ‘go-CAUS-NPST’. Some languages employ the reflexive pronoun as a morphological expression of anticausativization. French, exemplified in (2) is

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- (1) a. *Jean y est allé.* ‘Jean went there.’ (Gibson & Raposo 1986) [Intransitive]
 b. *Cela y fera aller Jean.* ‘That will make Jean go there.’ (Gibson & Raposo 1986) [Derived transitive]
- (2) a. *Jean brisera le verre.* ‘John will break the glass.’ (Grimshaw 1982) [Transitive]
 b. *Le verre se brisera.* ‘The glass will break.’ (Grimshaw 1982) [Derived intransitive]

(3) Causativization and anticausativization

	Causativization			Anticausativization		
Transitive	Subject	Object	Verb+ α	Subject	Object	Verb
		↑			↓	
Intransitive	Subject		Verb	Subject		Verb+ α

such a language. Other languages employ a morphological expression other than the reflexive pronoun. In a recent paper, Koontz-Garboden (2009) proposed an analysis regarding anticausativization as a by-product of reflexivization. As shown in Section 2, this analysis has the advantage that the exclusion of the verbs specifying the external argument as agent found in some languages is automatically accounted for.

The aim of this paper is two-fold: to argue the non-universality of the reflexive analysis, on the basis of the data from the Hokkaido dialect of Japanese, and to examine the conditioning factor of the crosslinguistic variation of the range of anticausativization.

The structure of the paper is as follows. The reflexive analysis of anticausativization advocated by Koontz-Garboden is introduced in Section 2. Section 3 provides the data from the Hakkaido dialect. The semantic and syntactic properties of anticausativization in the Hokkaido dialect are presented in this section. The range of derivational sources for anticausativization in this dialect is wider than that predicted by the reflexive analysis. This fact casts a doubt on the universality of the reflexive analysis. The analysis for the Hokkaido dialect anticausativization is proposed in Section 4. The causing event suppression analysis for anticausativization is proposed in this section. This analysis is also useful for capturing the syntactic difference among the lexically related intransitive predicates. Section 5 considers the source of the crosslinguistic variation of anticausativization.

The differences on the condition for anticausativization among languages come from the differences regarding the morphological expression employed for anticausativization. Section 6 concludes the discussion.

2 Koontz-Garboden’s reflexive analysis and its prediction

The most common analysis of anticausativization is a deletion analysis where the deletion of the causing event is regarded as a primary effect and the syntactic and semantic characteristics of the anticausative construction result from this deletion operation. The inchoativization rule in Grimshaw (1982: 104) is an explicit formalization of the deletion analysis.

- (4) Inchoativization (Grimshaw 1982: 104)
 $\text{Pred}_{\text{cause}}: \text{CAUSE (x, BECOME (Predicate (y)))} \rightarrow$
 $\text{Pred}_{\text{inch}}: \text{BECOME (Predicate (y))}$

Sasaki & Yamazaki (2006) advocated a deletion analysis for the Hokkaido dialect anticausativization parallel to Grimshaw’s analysis of anticausativization in Romance languages. Under the deletion analysis, the removal of the external argument, a syntactic effect, and the accomplishment-to-achievement aspectual shift, a semantic effect, accompanying with anticausativization are direct consequences of the deletion of the causing event.

Koontz-Garboden (2009) denies the deletion analysis and proposes a reflexive analysis for anticausativization, where the coindexing of an external argument with an internal argument is responsible for the non-realization of the external argument in the anticausative constructions. The

- (7) a. *Juan rompió la mesa.* (agent)
 Juan broke the table
 ‘Juan broke the table.’
 b. *El hacha rompió la mesa.* (instrument)
 the axe broke the table
 ‘The axe broke the table.’
 c. *El huracán rompió la mesa.* (natural force)
 the hurricane broke the table
 ‘Juan broke the table.’
 d. *El peso de los libros rompió la mesa.* (stative causing event)
 the weight of the books broke the table
 ‘The weight of the books broke the table.’ (Mendikoetxea 1999: 1589)
- (8) a. *El panadero cortó el pan.* (agent)
 the baker cut the bread
 ‘The baker cut the bread.’
 b. **El pan se cortó.* (*por sí solo*)
 the bread REFL cut (by self only)
 ‘*The bread cut/was cut by itself.’ (Mendikoetxea 1999: 1522)

reflexivization does not always yield anticausative constructions. The reflexivization in (5) has anticausative reading, while, in (6), reflexivization has reflexive meaning and the overt NP is interpreted as an agent.

- (5) *El vaso se rompió.*
 the cup REFL broke
 ‘The cup broke.’
- (6) *Kim se cortó.*
 Kim REFL cut
 ‘Kim cut himself.’

The anticausative reading is restricted to a certain range of reflexivization. Koontz-Garboden argues that the reflexivization operation results in anticausativization when the external argument is an effector, a generalized semantic role corresponding to not only agent but also instrument, natural force and so on (Van Valin & Wilkins 1996), but it results in reflexive-type construction like Kim dressed herself when the external argument is an agent. This generalization is based on the fact that the verbs of which reflexivization results in anticausativization, e.g. *romper* ‘break’, co-occur with non-agent external arguments as illustrated in (7), but that the verbs not undergoing anticausative reflexivization select only agents as their external arguments as illustrated in (8). For the verbs like *romper* ‘break’, the coindexing of the external argument with the internal argument does not yield the

subject, a sole overt NP, having agent entailments, “because the lexical specification of alternating verbs like *romper* ‘break’ is such that the participant in the causing event is thematically underspecified (Koontz-Garboden 2009: 86).” Thus, the agentive restriction for the anticausativization is due to the thematic underspecification of the causing event.

The reflexive analysis of anticausativization is mainly based on Spanish, a language employing reflexive pronouns for the morphological marker of anticausativization, but “[the] analysis is intended not simply as one of a particular language, but as one that covers anticausativization in general” (Koontz-Garboden 2009: 80). The universal characterization (“in general”) of the reflexive analysis is supported by the fact that this analysis is applicable to the anticausativization in Ulwa, a Misumalpan language spoken in Nicaragua. Koontz-Garboden’s analysis is summarized as in (9).

- (9) *Reflexive analysis for Anticausativization advocated by Koontz-Garboden (2009)*
 Nature: The semantic operation responsible for anticausativization is reflexivization.
 Restriction: Anticausativization is blocked when a verb selects agent as its external argument.

Koontz-Garboden’s reflexive analysis is attractive in that it seems to be useful for capturing the crosslinguistic tendency of the anticausative alternation. Haspelmath (1993) argues that the absence

of agent-oriented meaning components is the most important condition on inchoative/causative alternations. Haspelmath's generalization is cited below.

- (10) A verb meaning that refers to a change of state or going-on may appear in an inchoative/causative alternation unless the verb contains agent-oriented meaning components or other highly specific meaning components that make the spontaneous occurrence of the event extremely unlikely. (Haspelmath 1993: 94)

Anticausativization is an inchoative/causative alternation with valence reduction and has the tendency stated in the generalization in (10). Koontz-Garboden's observation of the agentive verb exclusion is a specific type of the generalization in (10).

The exclusion of the verbs specifying their external argument as agent is embodied in Koontz-Garboden's reflexive analysis. On the other hand, for the deletion analysis, this restriction is stated as an external condition.

If the reflexive analysis is available for anticausativization "in general" as argued by Koontz-Garboden, all the languages with anticausativization should obey the agentive restriction. In other words, Koontz-Garboden's reflexive analysis predicts that no languages permit anticausativization from a verb selecting only agent as its external argument. If there is a language allowing anticausativization based on the verbs selecting only agent as their external argument, the universality of Koontz-Garboden's reflexive analysis is questioned.

In the next section, I would like to show anticausativization data from the Hokkaido dialect of Japanese and examine the availability of the reflexive analysis.

3 Anticausative constructions in the Hokkaido dialect of Japanese

The Hokkaido dialect of Japanese employs a spontaneous suffix /*rasar*/ as a morphological expression of anticausativization. This section introduces the morphological characteristics of the spontaneous suffixation and the relevant data for the

discussion, i.e., the three usages of spontaneous predicates, syntactic and semantic properties of anticausative constructions, and the semantic properties of the corresponding active sentences. It will be clarified that Koontz-Garboden's analysis is not applicable for the anticausativization in the Hokkaido dialect.

3.1 Spontaneous voice morphology

Most of Japanese dialects, including the Tokyo dialect, have three productive morphological voice processes, namely, passive (*V-rare*), causative (*V-sase* (for some dialects, *V-rase*)), and potential (*V-e/rare*). In addition to these voice suffixes, the Hokkaido dialect has the other voice suffix, namely, the spontaneous suffix.

The morphological composition of the spontaneous predicate is 'verb root + *rasar*'. When the verb root ends with a consonant, spontaneous suffix *-rasar* undergoes suffix-initial consonant deletion. Compare the spontaneous predicate forms with consonantfinal verb root and vowel-final verb root in (11). The underlined phoneme is the target of deletion.

Suffix-initial consonant deletion is widely found in verbal stem formation, such as passive and causative predicate formation (/nom-rare/[nomare] 'drink-PASS', /nom-sase/[nomase] 'drink-CAUS'), and non-past (/nom-ru/→[nomu] 'drink-NPST'), imperative (/nom-re/→[nome] 'drink-IMP') formation.

The spontaneous predicate has three usages: unintentional, potential, and derived inchoative. The sentences in (12) exemplify the three usages.

In the unintentional usage, exemplified in (12a), the valence of original verb root remains intact¹ and the sentence bears the unintentional reading. The

¹In (12a), the case marking of the direct object turns into nominative. But this case alternation is optional and the theme argument can be marked with accusative. In the usage of unintentional reading, both the external argument and the internal argument are realized and the valence of the verb is two, the same as the corresponding active transitive sentence.

(11) *Suffix-initial consonant deletion*

Consonant-final verb root	Vowel-final verb root
/nom-rasar-ru/ 'drink-SP-NPST'	/tabe-rasar-ru/ 'eat-SP-NPST'
[nomasaru]	[taberasaru]

- (12) a. *Watasi = wa gohan = ga tabe-rasa-ru.* (unintentional)
 1sg=TOP rice=NOM eat-SP-NPST
 'I can't stop myself eating rice.'
- b. *kono pen = wa joku kak-asar-u.* (potential (middle))
 this pen=TOP well write-SP-NPST
 'This pen writes well.'
- c. *o:kina maru = ga kak-arat-te-ru.* (derived inchoative)
 big circle=NOM draw-SP-GER.be-NPST
 'A big circle has been/was drawn.'

(13) a. Passive construction with oblique external argument

<i>taro: = wa ozi:san = ni situke-rare-ta.</i> (from Sasaki and Yamazaki 2006)
Taro=TOP grandfather=DAT discipline-PASS-PST
'Taro was disciplined by his grandfather.'

b. Derived inchoative construction undergoing the external argument removal

<i>(*dareka = nijotte) ko:te: = ni o:kina maru = ga kak-arat-ta.</i>
someone=by ground=DAT big circle=NOM write-SP-PST
'A big circle was drawn.'

potential usage, exemplified in (12b), describes the attribute of the subject. This usage is comparable with the English middle construction in that it is the construction of property description derived from the eventive construction. The derived inchoative usage, exemplified in (12c), derives the inchoative intransitive sentence from the transitive sentence.

3.2 Syntax and semantics of inchoatives derived through spontaneous suffixation

In this subsection, I will argue that the derived inchoative usage illustrated in (12c) can be regarded as an anticausative construction, due to its syntactic and semantic properties.

The derived inchoative construction exemplified in (12c) has syntactic commonality with the passive construction in that, in both constructions, the external argument is demoted. However, the way of demotion is different. In the passive construction, the external argument can be realized in the oblique form. On the other hand, the external argument is removed in the derived inchoative construction. See the examples in (13).

The contrast with the passive construction indicates that the derived inchoative construction is

intransitive not only from the syntactic view point but also from the semantic view point since the agent cannot appear even in the oblique form.²

The difference between passive and derived inchoative is also found in the candidate for promotion to subject. As illustrated in (14), in passivization based on ditransitive verbs, not only the direct object but also the indirect object can be promoted to subject.

On the other hand, the candidate of promotion to subject is restricted to the direct object in the derivation of inchoatives.

In the anticausativization from locative alternation verbs, the derived subject corresponds to the direct object in the active sentence. The examples in (16) illustrate that both the location direct object and the theme object are candidates for promotion.

The derived inchoatives share grammatical properties with underived achievement verbs. The commonality is found in the co-occurrence restriction with time adverbials and the interpretation of progressive forms (*V-te i-ru* 'V-GER be-NPST').

²Shibatani (1985) argues that the prototypical passive is syntactically intransitive while semantically transitive.

- (14) a. Active (ditransitive) (from Sasaki and Yamazaki 2006)
dareka = ga sinse:sjo = o taro: = ni okut-ta.
 someone=NOM application=ACC Taro=DAT send-PST
 ‘Someone sent Taro an application.’
- b. Passive, $S_1 \rightarrow \text{Obl.}_2$, $\text{DO}_1 \rightarrow S_2$ (from Sasaki and Yamazaki 2006)
sinse:sjo = ga dareka = kara taro:- = ni okur-are-ta.
 application=NOM someone=ABL Taro=DAT send-PASS-PST
 ‘An application was sent to Taro by someone.’
- c. Passive, $S_1 \rightarrow \text{Obl.}_2$, $\text{IO}_1 \rightarrow S_2$ (from Sasaki and Yamazaki 2006)
taro: = wa dareka = kara sinse:sjo = o okur-are-ta.
 Taro=TOP someone=ABL application=ACC send-PASS-PST
 ‘Taro was sent an application by someone.’
- (15) a. Active (ditransitive) (from Sasaki and Yamazaki 2006)
dareka = ga sinse:sjo = o taro: = ni okut-ta.
 someone=NOM application=ACC Taro=DAT send-PST
 ‘Someone sent Taro an application.’
- b. Spontaneous, $\text{DO}_1 \rightarrow S_2$ (from Sasaki and Yamazaki 2006)
sinse:sjo = ga taro: = ni okur-asat-ta.
 application=NOM Taro=DAT send-SP-PST
 ‘An application was sent to Taro.’
- c. Spontaneous, $\text{*IO}_1 \rightarrow S_2$ (from Sasaki and Yamazaki 2006)
**taro: = ga sinse:sjo = o okur-asat-ta.*
 Taro=NOM application=ACC send-SP-PST
- (16) a. Location subject in anticausative with locative alternation verb
 線画の黒部分が塗らさってたり...^{*1}
Senga = no kuro-bubun = ga nur-asat-te-tari ...
 line drawing=GEN black part=NOM paint-SP-GER.be-and
 ‘The black part of the line drawing is painted and ...’
- b. Theme subject in anticausative with locative alternation verb
 ポテチにチョコが塗らさってるものを。^{*2}
potetsji = ni tsjoko = ga nur-asat-te-ru mono = o
 potato chips=DAT chocolate=NOM paint-SP-GER.be-NPST thing=ACC
 ‘... the potato chips with chocolate coating’

^{*1} <http://a2y.skr.jp/pict/make/05.html>

^{*2} http://blogs.dion.ne.jp/zero_cat/archives/2856058.html

The achievement predicates co-occur with inclusive time adverbials while they are incompatible with durational time adverbials as illustrated in (17). The examples in (18) shows that the derived inchoatives behave in the same way.

The progressive forms of activity verbs and accomplishment verbs have progressive reading as illustrated in (19). However, the progressive form of achievement verbs is interpreted as the resulting state. The example (20) does not have the meaning ‘Someone is dying’. The resultative interpretation of the progressive form of achievement verbs is a widely attested property in the dialects of the eastern Japan, which have only one marked aspectual form, namely progressive (*V-te i-ru*) and lack the progressive/perfect (*V-yor-u/V-tor-u*) opposition.

The progressive form of derived inchoatives is interpreted as the resulting state. The example (21) does not stand for the on-going process of drawing the circle but it indicates that the circle has already been drawn. The derived inchoative shows a commonality with underived achievement verbs also in the interpretation of the progressive form.

The commonality illustrated above indicates that the aspectual property of derived inchoatives is that of achievement.

The aspectual properties of the corresponding active constructions are also important when considering the grammatical properties of derived inchoatives. The table in (22) illustrates the proportion of the corresponding active verbs sorted by lexical aspect. The data shown in the table were

- (17) a. Achievement predicate with inclusive time adverbial
Itizikan = de sin-da. (from S & Y 2006)
 in an hour die-PST
 ‘It took (him) one hour to die’
 b. Achievement predicate with durational time adverbial
 **itizikan sin-da.* (from S & Y 2006)
 for an hour die-PST
- (18) a. Derived inchoative with inclusive time adverbial
Itizikan = de ko:te: = ni o:kina maru = ga kak-asat-ta. (from S & Y 2006)
 in an hour ground=DAT big circle=NOM draw-SP-PST
 ‘A big circle has been drawn in an hour.’
 b. Derived inchoative with durational time adverbial
 **itizikan ko:te: = ni o:kina maru = ga kak-asat-ta.* (from S & Y 2006)
 for an hour ground=DAT big circle=NOM draw-SP-PST
- (19) a. Activity verb (progressive reading)
ojoi-de-ru.
 swim-GER.be-NPST
 ‘(Someone) is swimming.’
 b. Accomplishment verb (progressive reading)
hige = o sot-te-ru.
 Beard=ACC shave-GER.be-NPST
 (Someone) is shaving his beard (have not shaved it off yet).’
- (20) Achievement verb (resulting state reading)
sin-de-ru.
 die-GER.be-NPST
 ‘(Someone) has died (and s/he is no longer alive).’
- (21) Spontaneous (resulting state reading)
ko:te: = ni o:kina maru = ga kak-asat-te-ru.
 ground=DAT big circle=NOM draw-SP-GER.be-NPST
 ‘A big circle has been drawn on the ground.’

gathered through the internet research using Yahoo! API.

(22) Aspectual properties of the derivational source

Aspect	Number	Proportion
State	0	0%
Achievement	142	6.1%
Activity	382	18.8%
Accomplishment	1,524	75.1%

The majority of the verbs serving as derivational source is accomplishment verbs. The activity verbs are the second-most frequent source of inchoative derivation. When the activity verbs serve as the base of inchoative derivation, the verb phrase denotes a change of state as illustrated in the example (23). When the verb phrase with an activity predicate does not denote a change of state as exemplified in (24), the derivation is ruled out.

- (23) *saise:botan = ga os-asat-te-ru*
 replay button=NOM push-SP-GER.be-NPST
 ‘The replay button is on.’
 ⇐ *saise:botan-o os-*
 replay button-ACC push
 to push the replay button’
- (24) **senaka = ga os-asat-te-ru*
 back=NOM push-SP-GER.be-NPST
 ⇐ *senaka = o os-*
 back=ACC push
 ‘to push someone’s back’

The derivational base in (23) denotes both activity ‘pushing’ and change of state ‘the replay button turns on from off’. Looking at the phrasal level, the aspectual property of the derivational base in (23) is accomplishment. We can say that the derived inchoatives are based on the accomplishment structures in most cases and the condition is determined by the phrasal property not by the inherent lexical meaning of the verb, as illustrated in (25).³

(27) Accomplishment verbs as a source of anticausativization

Verbs	Number	Verbs	Number	Verbs	Number
<i>mak-</i> ‘roll, wind’	223	<i>tor-</i> ‘take (a photo/video)’	35	<i>kitae-</i> ‘train’	8
<i>tum-</i> ‘load’	181	<i>kum-</i> ‘cross, program’	34	<i>migak-</i> ‘polish’	8
<i>okur-</i> ‘send’	131	<i>har-</i> ‘stretch’	30	<i>tatam-</i> ‘fold’	7
<i>dak-</i> ‘hold’	104	<i>nuw-</i> ‘sew’	29	<i>or-</i> ‘break, bend’	7
<i>har-</i> ‘stick’	99	<i>tak-</i> ‘kindle’	20	<i>hak-</i> ‘put on, wear’	7
<i>kak-</i> ‘write’	88	<i>kak-</i> ‘draw’	19	<i>tozi-</i> ‘close’	6
<i>tutum-</i> ‘wrap’	61	<i>mor-</i> ‘fill, pile’	14	<i>sibor-</i> ‘squeeze’	6
<i>musub-</i> ‘tie’	50	<i>hum-</i> ‘step on’	11	<i>hurikom-</i> ‘transfer (money)’	6
<i>tak-</i> ‘boil’	43	<i>sas-</i> ‘stab’	11	<i>am-</i> ‘knit’	6
<i>hos-</i> ‘dry’	41	<i>jak-</i> ‘burn, grill’	10	<i>kaw-</i> ‘buy’	5
<i>ok-</i> ‘put’	40	<i>kir-</i> ‘cut’	9	etc.	83
<i>nur-</i> ‘paint’	37	<i>hor-</i> ‘dig’	8	Total	1,542
<i>sik-</i> ‘lay’	37	<i>hor-</i> ‘carve’	8		

- (28) a. 半身が5・6本, ドレットと焼かかった... 鮭... (すみません寝起きなもんで)*³
hammi=ga *5-6 pon* *dodetto* *jak-asat-te-ta*
 half-slice=NOM 5 or 6 CL thoroughly burn-SP-GER.be-PST
 ‘5 or 6 slices of half cut salmon had been grilled.’
- b. *dareka=ga* *hammi=o* *5-6 pon* *jai-ta.* (agent subject)
 someone=NOM half-slice=ACC 5 or 6 CL burn-PST
 ‘Someone grilled 5 or 6 slices of half cut salmon.’
- c. **sumibi=ga* *hammi=o* *5-6 pon* *jai-ta.* (natural force subject)
 charcoal fire=NOM half-slice=ACC 5-6 CL burn-PST

*³ <http://bbs.wess.co.jp/come2/test/read.cgi?/RSR/1154183002/1-100>

is found in not only the Hokkaido dialect but also dialects spoken in the northern Tohoku region in the main island of Japan.⁴ Nichols, Peterson and Barnes (2004) describes the north-eastern Eurasia, along with North America, as an area where transitivity morphing is dominant. Most of the Japanese dialects are consistent with Nichols et al’s observation, where the sole productive transitivity alternation morphology is causativization, a transitivity alternation. The dialects spoken in the northern main island and Hokkaido do not conform to this characterization. They are bidirectional with respect to transitivity alternation, having both causativization and anticausativization. Concerning the transitivity alternation, the northern dialects, including the Hokkaido dialect, resemble the languages spoken in the neighboring area, namely, Ainu (Bugaeva 2004) and Nivkh (Nedjalkov, Ohtani and Xolodovic 1995), both of which employ reflexive

morphemes as an expression of anticausativization. For the commonalities and differences among these languages and the Hokkaido dialect, readers may refer to Sasaki (2009).

3.3 The range of derivational source

In order to examine Koontz-Garboden’s prediction, I would like to examine the range of derivational source for anticausativization in the Hokkaido dialect. The data provided in (27) represents verb roots serving as derivational bases of anticausativization. The data were gathered through the internet research and sorted by the frequency. The number in parenthesis stands for the number of data.

Koontz-Garboden (2009) argues that the verbs selecting an agent are excluded from the derivational source of anticausativization. The list in (27) includes both verbs belonging to the potential sources of anticausativization and verbs not belonging to the potential source of anticausativization under Koontz-Garboden’s analysis. Koontz-Garboden cites the examples of anticausativization based on the verbs of breaking (Spanish: *romper*;

⁴Some dialects spoken in Kanto and Chubu region display the same type of transitivity alternations. For the Utsunomiya dialect and the dialect in the Oigawa area in Shizuoka prefecture, see Kato (2000) and Nakada (1981), respectively.

- (29) a. チョキチヨキ腕毛が切らさってって...^{*4}
tsjokistjoki udege = ga kir-asat-te-t-te
 clip-clip arm hair = NOM cut-SP-GER-go-GER
 ‘The hair on arm is getting cut, clip-clip.’
 b. *kare = ga udege = o kit-ta. (agent)*
 he = NOM arm hair = ACC cut-PST
 ‘He cut the hair on his arms.’
 c. **hasami = ga udege = o kit-ta. (instrumentl)*
 scissors = NOM arm hair = ACC cut-PST

^{*4} <http://lmt16k.inudoc.staba.jp/?month=200802>

- (30) a. しかも,半額シールが貼らさっている!^{*5}
sikamo, hangaku si:ru = ga har-asat-te i-ru.
 In addition half price label = NOM stick-SP-GER be-NPST
 ‘In addition, a half price label is on it.’
 b. *ten'in = ga hangaku si:ru = o hat-ta. (agent)*
 clerk = NOM half price label = ACC stick-PST
 ‘The clerk stuck a half price label on it.’
 c. *??kikai = ga hangaku si:ru = o hat-ta. (instrumentl)*
 machine = NOM half price label = ACC stick-PST

^{*5} <http://blog.auone.jp/hideojr/>

Ulwa: *bahnaka*) and burning (Spanish: *quemar*). The corresponding verbs in the Hokkaido dialect, i.e., *or-* and *jak-*, are found in (27). In Koontz-Garboden (2009), the verbs of cutting (Spanish: *cortar*) and painting (Ulwa: *kahnaka*) are presented as verbs for which reflexivization does not result in the anticausative meanings but the reflexive-type meaning. The Hokkaido dialect verbs of cutting (*kir-*) and painting (*nur-*) are included in (27). This indicates that the agentive specification of the external argument has nothing to do with the condition for anticausativization in the Hokkaido dialect of Japanese.

One might argue that the theta-role restriction of the external argument varies from language to language even for the verb bearing the same meaning, and that Koontz-Garboden’s prediction is not falsified by the fact that the list in (27) includes verbs corresponding to both the verbs that have reflexive forms with anticausative meanings and the verbs which does not in the languages Koontz-Garboden (2009) examines. However, checking the agentive specification of each verb listed in (27) leads to the conclusion that Koontz-Garboden’s prediction is unjustified.

In most cases, transitive verbs serving as a base

of anticausativization are incompatible with the non-agent external argument as illustrated in the following examples. The (a) examples from (28) to (36) are the data gathered from the internet. The examples (b), (c) and (d) from (28) to (36) are active sentences corresponding to the anticausative (a) sentences. In all the cases, the active sentences with agent subjects were judged grammatical by my consultant. However, the acceptability of the active sentences with non-agent subjects is very low. Even the most acceptable sentences with non-agent subject, (34c) and (36c), where the rice cooker and the sewing machine bearing instrument role are in the subject position, were not judged completely grammatical. Most of the other sentences with non-agent subject were judged unacceptable. In the case of (32), the consultant was not even able to imagine a situation where the verb *musub-* ‘tie’ could be used with non-agent subject.

The examples above illustrate that the transitive verbs selecting agent as their external argument can be a source of anticausative derivation in the Hokkaido dialect of Japanese. In this dialect, the range of verbs selecting agent as their external argument is wider than that in the language Koontz-Garboden examines. The agentive verbs include not only the verb of cutting, which Koontz-

- (31) a. 何故か同じ記事が3つも書かかっていました...^{*6}
nazeka onazi kizi=ga 3-tsu=mo kak-asat-te i-masi-ta.
 somehow same article=NOM3-CL=even write-SP-GER be-POLITE-PST
 ‘Somehow as many as three identical articles are written.’
- b. *watasi=wa onazi kizi=o 3-tsu=mo kai-te simat-ta. (agent)*
 I=TOP same article=ACC 3-CL=even write-GER finish-PST
 ‘I unintentionally wrote as many as three identical articles.’
- c. **zitaku=no kompjū:ta=ga onazi kizi=o 3-tsu-mo kai-te simat-ta. (instrumentl)*
 One’s own house=GEN computer=NOM same article=ACC3-CL=even write-GER finish-PST
- d. **hutsju:i=ga onazi kizi=o 3-tsu=mo kai-te simat-ta. (cause)*
 carelessness=NOM same article=ACC 3-CL=even write-GER finish-PST

^{*6} <http://blog.livedoor.jp/nuvo/archives/2006-01.html>

- (32) a. 今日は蝶タイがうまく結ばさってる^{*7}
kjo:=wa tsjo:tai=ga umaku musub-asat-te-ru.
 Today=TOP bow tie=NOM well tie-SP-GER.be-NPST
 ‘Today, the bow tie is set well.’
- b. *boku=wa kjo:=wa tsjo:tai=o umaku musun-da. (agent)*
 I=TOP today=TOP bow tie=ACC well tie-PST
 ‘Today, I set the bow tie well.’
- Cf. My consultant cannot make a sentence with non-agent subject.

^{*7} <http://d.hatena.ne.jp/shi-to/>

- (33) a. タレがオモテ面にしか塗らさってないんですよ...^{*8}
tare=ga omotemen=ni=sika nur-asat-te-nai=N=desu=jo=ne.
 Sauce=NOM surface=DAT=only paint-SP-GER.be-NEG=POLITE.NPST=SFP=SFP
 ‘The sauce is only on the surface.’
- b. *kare=wa tare=o omotemen=ni=sika nura-nakat-ta. (agent)*
 he=TOP sauce=ACC surface=DAT=only paint.IR-NEG-PST
 ‘He spread the sauce only on the surface.’
- c. **hake=ga tare=o omotemen=ni=sika nura-nakat-ta. (instrument)*
 brush=NOM sauce=ACC surface=DAT=only paint.IR-NEG-PST

^{*8} <http://m03a076d.exblog.jp/m2005-10-01/>

- (34) a. 米が炊かかっている。^{*9}
kome=ga tak-asat-te i-ru.
 rice=NOM boil-SP-GER be-NPST
 ‘The rice has (already) been cooked.’
- b. *kare=ga kome=o tai-ta. (agent)*
 he=NOM rice=ACC boil-PST
 ‘He cooked the rice.’
- c. *?suihanki=ga kome=o tai-ta. (instrument)*
 rice-cooker=NOM rice=ACC boil-PST
 ‘The rice-cooker cooked the rice.’

^{*9} <http://homepage2.nifty.com/n~siesta/hitorigoto0407.html>

- (35) a. パイ生地にクレームダマンドが包まっています。^{*10}
paikizi=ni kure:mudamando=ga tutum-asat-te-masu.
 pie-sheet=DAT crème d’amande=NOM wrap-SP-GER.be-POLITE.NPST
 ‘The pie-sheet is filled with the crème d’amande.’
- b. *kare=ga paikizi=ni kure:mudamando=o tutun-da. (agent)*
 he=NOM pie-sheet=DAT crème d’amande=ACC wrap-PST
 ‘He filled the pie-sheet with the crème d’amande.’
- c. **paikizi=ga kure:mudamando=o tutun-de i-ru. (non-agent)*
 pie-sheet=NOM crème d’amande=ACC wrap-GER be-NPST

^{*10} <http://onnanoko.basso.to/ncom/ar/000/caidl/81/>

Garboden describes as an agentive verb, but also the verb of burning, corresponding to Koontz-

Garboden’s non-agentive verb. If the agentive verbs in this dialect are excluded from the

- (36) a. *なんであんな所がああ縫わさっているのか、全く理解できません！*^{*11}
nande anna tokoro = ga a: nuw-asat-te i-ru = no = ka mattaku rikai deki-masen
 why such a part = NOM like that sew-SP-GER be-NPST = NMLZ = Q completely understand can-NEG.POLITE.NPST
 ‘I cannot understand at all why such a part has been sewn like that.’
- b. *dareka = ga anna tokoro = o nut-ta.* (agent)
 someone = NOM such a part = ACC sew-PST
 ‘Someone sewed such a part.’
- c. *?misiin = ga anna tokoro = o nut-ta.* (instrument)
 sewing machine = NOM such a part = ACC sew-PST.
 ‘The sewing machine sewed such a part.’
- d. *??hari = ga anna tokoro = o nut-ta.* (instrument)
 needle = NOM such a part = ACC sew-PST
 ‘The needle sewed such a part.’

*11 <http://diary3.cgiboy.com/0/k1ra3/?d=14&y=2006&m=2>

anticausative derivation, a huge number of attested anticausative sentences are unexplained. It is clear that the reflexive analysis for anticausativization is not applicable to this dialect.

4 Analysis with causing event suppression

The previous section reveals that the range of anticausativization in the Hokkaido dialect of Japanese stretches over the limits predicted by the reflexive analysis. The data provided so far casts a doubt on the universality of Koontz-Garboden’s (2009) analysis. This section argues that the semantic effect of the anticausativization of the Hokkaido dialect of Japanese is suppression of the syntactic projection of the causing event.

As the data in the previous section illustrate, the restriction on the agent-oriented meaning components are irrelevant for anticausativization in the Hokkaido dialect. Grimshaw’s (1982) deletion analysis, cited in (4), seems to be more suitable for this situation. Grimshaw (1982) explicitly states about the effects of Inchoativization rule as follows: “For any predicate with the semantic composition CAUSE (x, BECOME (PRED (y))), a new predicate is formed (called Pred_{incho}) with the semantic composition BECOME (Pred (y)).” The agentive restriction is an external factor for the deletion analysis. For the deletion analysis, the deletion of the causing event is not a by-product of another semantic operation but it is essential in itself. If the deletion of the causing event is the primary effect of anticausativization, anticausative derivation is pos-

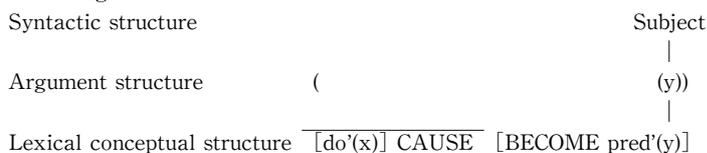
sible irrespective of the agent specification for the external argument.

The sole condition for the anticausativization in the Hokkaido dialect is that the derivational base has the aspectual property of accomplishment at the phrasal level. In the lexical conceptual structure, accomplishment has two components, namely, the causing event and the event denoting change of state. The deletion of the causing event leaves the event denoting change of state. The event denoting change of state is achievement. The derived inchoatives in the Hokkaido dialect display the aspectual properties of achievement as shown in 3.2. From this fact, Sasaki and Yamazaki (2006) advocated a deletion analysis for the Hokkaido dialect anticausativization in line with Grimshaw (1982).

However, the deletion analysis has a pitfall. The deletion of the causing event obscures the lexical semantic specification of the verb root. The predicate *kak-asat-te-ru* ‘draw-SP-GER.be-NPST’ can express the existence of a certain shape, e.g., circle, and also the manner of emergence of the shape, namely, drawing, not sewing or other activity. The deletion analysis advocated by Sasaki & Yamazaki (2006) cannot capture this point. Under the deletion analysis, the emergence and the subsequent existence of a certain shape is described by the event denoting change of state. However, the lexical semantic information on the manner of emergence of the shape is lost through the deletion of the causing event. The situation is worse for an activ-

(37) The causing event suppression analysis for the Hokkaido dialect anticausativization

For the lexical conceptual structure with accomplishment aspectual property, suppress the projection of the causing event to the argument structure.



ity verb in an accomplishment verb phrase like *saise:botan=o os-u* ‘to push the replay button (and turn the switch on)’ in (23). The anticausative sentence based on this verb phrase, *saise:botan=ga os-asat-te-ru*, is expected to have only a component denoting change of state under the deletion analysis. The lexical semantic information of the activity verb root *os-* ‘push’ is completely lost through the deletion of the causing event. The verb root *os-* becomes a semantically empty element in its anticausative form *os-asar-*. The deletion analysis results in a situation where the listener (or reader) cannot recover the lexical semantic information of *os-* from the sentence in (23). This is a counter-intuitive situation.

In order to recover the lexical semantic information belonging to the causing event, the causing event must exist at the level of lexical conceptual structure even though it does not have a corresponding syntactic expression. For the Hokkaido dialect anticausativization, I propose an analysis with the causing event suppression stated in (37). The line posited between argument structure and lexical conceptual structure stands for the locus of suppression. The projection of the external argument is blocked in (37), due to the suppression of the causing event.

In (37), the causing event meaning component exists in the lexical conceptual structure and it is recoverable, although the component does not project onto syntax. The suppression analysis for anticausativization enables us to capture the syntactic and semantic properties of anticausative sentences by the blockage of the projection of the causing event from the lexical conceptual structure to the argument structure. The removal of the

external argument is due to the non-projection of the variable corresponding to the external argument through the causing event suppression. The achievement aspectual properties of the anticausative sentences are also due to the causing event suppression. The part of lexical conceptual structure which is projected onto syntax is the part denoting change of state. If the part of lexical conceptual structure not projected onto syntax is invisible for the modification by time adverbials and the interpretation of aspectual morphology, anticausative predicates are expected to behave like achievement predicates. The suppression analysis is compatible with all the properties exhibited in 3.2.

The suppression analysis for the Hokkaido dialect anticausativization is useful for capturing the commonality with other usages of spontaneous suffixation. The suppression of semantic elements is also found in the unintentional reading usage and the potential reading usage.

In the lexical decomposition analysis on the lines of Dowty (1979) and Foley and Van Valin (1984), intentionality of event is expressed with the operator DO (adopted from Ross 1972). The semantic representation corresponding to the intentional walking is DO [walk (x)] and that corresponding to the unintentional walking is [walk (x)]. The unintentional usage of a spontaneous predicate is characterized by the lack (through suppression) of the operator DO.

Most of the examples of potential usage of the spontaneous predicates appear in the present form as exemplified in (38). Progressive forms of potential usage of the spontaneous forms are ungrammatical as illustrated in (39). The example (40b) illus-

trates that the potential usage of the spontaneous constructions is incompatible with specific time reference.

These facts indicate that the event arguments are suppressed in the potential usage of the spontaneous construction. The potential usage of the spontaneous construction is considered to be an individual-level predicate derived through the suppression of the event argument. The semantic effect of the formation of this usage is captured by Kageyama's (2006) characterization of middle formation.

In line with Kageyama's middle formation, the formation of spontaneous predicate with potential reading in (38) can be described as follows. The argument structure representation in (42c) indicates that the predicate describes the property of the instrument nominal, namely pen.

The level where the suppression occurs is different among the three usages: for anticausative and unintentional readings, lexical conceptual structure; for potential reading, argument structure. In spite of the difference of the level where the suppression occurs, the three usages share the characteristics of simplification of the semantic structures in the outermost layer.

The causing event suppression analysis for the Hokkaido dialect anticausativization has another advantage. It is useful also for capturing the syntactic difference among the morphologically related intransitive sentences. The resultative predicate *V-te aru* 'V-GER exist-NPST', the progressive form of an intransitive verb with lexically related transitive counterpart and the progressive form of an anticausative predicate share the semantic property: resulting state reading. Despite of this semantic similarity, they show differences concerning the compatibility with the purposive clause. I conducted a questionnaire research at Sapporo Gakuin University in which the acceptability of the sentences listed in (43)-(45) is judged by Hokkaido dialect speakers. Each set consists of a transitive sentence, a resultative sentence based on the transitive verb, a sentence with a lexically related intransitive verb and an anticausative sentence derived from

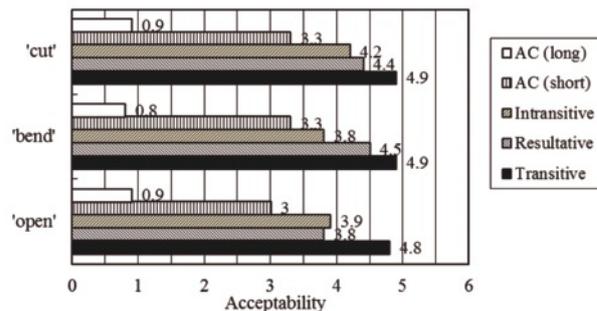


Figure 1: Compatibility with purposive clause

sitive verb and anticausative sentences derived from lexically related transitive/intransitive pair. I put the two types of anticausative constructions in the questionnaire because, in the majority of cases, the derivational base of anticausativization is a transitive verb, but, for some lexically related transitive/intransitive pairs, the intransitive counterpart tends to be selected as a derivational base. The intransitive-based anticausative derivation is attested when the intransitive counterpart is shorter than its transitive counterpart. The scale of acceptability has 6 steps from acceptable (5) to unacceptable (0).

The research was carried out on 16th April 2010, and benefited from the collaboration of 137 Hokkaido dialect speakers. The graph in Figure 1 illustrates the result. AC (long) and AC (short) stands for the anticausative based on the long verb and that based on the short verb, respectively. The numbers indicate the average of acceptability. The difference of average between each pairs of sentence is in the level of statistical significance, i.e., $p < .05$, except for the pair (43b)-(43c), resultative and intransitive of the verb of opening ($p = .536$).

The transitive verbs, *ake-* 'open', *or-* 'bend' and *kir-* 'cut', show the highest acceptability. The acceptability of this class is almost perfect. The anticausative verbs from the long verb forms show the lowest acceptability irrespective of the transitivity of the derivational base: *ake-rasar-* is based on the transitive verb while *ore-rasar-* and *kire-rasar-* are based on the intransitive verbs. The low acceptability of the anticausative verbs with purpo-

(38) *kono pen=wa joku kak-asar-u*
 this pen=TOP well write-SP-NPST
 ‘This pen writes well.’

(39) **kono pen=wa joku kak-asat-te-ru*
 this pen=TOP well write-SP-GER.be-NPST

(40) a. *kino:=no gogo sanzī=ni kono pen=de tegami=o kai-ta*
 yesterday’s 3 o’clock p.m. this pen=INST letter=ACC write-PST
 ‘(Someone) wrote a letter with this pen at 3 o’clock p.m. yesterday.’
 b. **kino:=no gogo sanzī=ni kono pen=wa joku kak-asat-ta*
 yesterday’s 3 o’clock p.m. this pen=TOP well write-SP-PST

(41) Kageyama’s (2006) Middle formation at Argument Structure
 (Ev (x <y>))

- a. Ev-suppression → (Ev^(x <y>))
- b. collateral suppression of agent → (Ev^(x^<y>))
- c. property description by lambda abstraction → λ y (Ev^(x^<y>))

(42) *kono pen-wa joku kak-asar-u*. ‘This pen writes well.’

Argument structure: (Ev(x y <w>)), x = agent, y = instrument (pen), w = theme

- a. Ev-suppression → (Ev^(x y <w>))
- b. collateral suppression of agent → (Ev^(x^y <w>))
- c. property description by lambda abstraction → λ y (Ev^(x^y <w>))

(43) Questionnaire sentences with the verb of opening

- a. *ku:ki=o irekae-ru=tameni, boku=wa mado=o ake-ta*. (transitive)
 air=ACC change-NPST=PURPOSIVE I=TOP window=ACC open-PST
- b. *ku:ki=o irekae-ru=tameni, mado=ga ake-te ar-u*. (resultative)
 air=ACC change-NPST=PURPOSIVE window=NOM open-GER exist-NPST
- c. *ku:ki=o irekae-ru=tameni, mado=ga ai-te i-ru*. (intransitive)
 air=ACC change-NPST=PURPOSIVE windows=NOM open-GER be-NPST
- d. *ku:ki=o irekae-ru=tameni, mado=ga ak-asat-te i-ru*. (anticausative (short))
 air=ACC change-NPST=PURPOSIVE window=NOM openintr-SP-GER be-NPST
- e. *ku:ki=o irekae-ru=tameni, mado=ga ake-rasat-te i-ru*. (anticausative (long))
 air=ACC change-NPST=PURPOSIVE window=NOM opentr-GER be-NPST

(44) Questionnaire sentences with the verb of bending

- a. *jomikaes-u=tameni, boku=wa pe:zi=no hasi=o ot-ta*. (transitive)
 re-read-NPST=PURPOSIVE I=TOP page=GEN edge=ACC bend-PST
- b. *jomikaes-u=tameni, pe:zi=no hasi=ga ot-te ar-u*. (resultative)
 re-read-NPST=PURPOSIVE page=GEN edge=NOM bend-GER exist-NPST
- c. *jomikaes-u=tameni, pe:zi=no hasi=ga ore-te i-ru*. (intransitive)
 re-read-NPST=PURPOSIVE page=GEN edge=NOM bend-GER be-NSPT
- d. *jomikaes-u=tameni, pe:zi=no hasi=ga or-asat-te i-ru*. (anticausative (short))
 re-read-NPST=PURPOSIVE page=GEN edge=NOM bendtr-SP-GER be-NPST
- e. *jomikaes-u=tameni, pe:zi=no hasi=ga ore-rasat-te i-ru*. (anticausative (long))
 re-read-NPST=PURPOSIVE page=GEN edge=NOM bendintr-SP-GER be-NPST

(45) Questionnaire sentences with the verb of cutting

- a. *sijo:zumi=de ar-u=koto=o simes-u=tameni, kakariin=ga tsjiketto=no hasi=o kit-ta*. (transitive)
 being used=COP.ADV exist=ACC show-NPST=PURPOSIVE clerk=NOM ticket=GEN edge=ACC cut-PST
- b. *sijo:zumi=de ar-u=koto=o simes-u=tameni, tsjiketto=no hasi=ga kit-te ar-u*
 being used=COP.ADV exist=ACC show-NPST=PURPOSIVE ticket=GEN edge=NOM cut-GER exist-NPST
- c. *sijo:zumi=de ar-u=koto=o simes-u=tameni, tsjiketto=no hasi=ga kire-te i-ru*. (intransitive)
 being used=COP.ADV exist=ACC show-NPST=PURPOSIVE ticket=GEN edge=NOM cutintr-GER be-NPST
- d. *sijo:zumi=de ar-u=koto=o simes-u=tameni, tsjiketto=no hasi=ga kir-asat-te i-ru*. (anticausative (short))
 being used=COP.ADV exist=ACC show-NPST=PURPOSIVE ticket=GEN edge=NOM cuttr-SP-GER be-NPST
- e. *sijo:zumi=de ar-u=koto=o simes-u=tameni, tsjiketto=no hasi=ga kire-rasat-te i-ru*. (anticausative (long))
 being used=COP.ADV exist=ACC show-NPST=PURPOSIVE ticket=GEN edge=NOM cutintr-SP-GER be-NPST

(46) Existential binding and argument mapping of intransitive *break* (Levin & Rappaport Hovav 1995: 108)

	Lexical semantic representation [[x DO-SOMETHING] CAUSE [y BECOME <i>BROKEN</i>]]
	↓
Lexical binding	∅
Linking rules	↓
Argument structure	⟨y⟩

sive clause is due to the low acceptability of the predicate form by itself. The spontaneous suffixation prefers the short verb root to the long verb root as its derivational base when the lexical transitive/intransitive pairs are the target of spontaneous predicate formation as mentioned in the footnote 3.

Although the acceptability of the anticausative verbs from the short verbs itself is high, the acceptability of the combination of purposive clause and anticausative verbs from the short verbs is second-most lower among the constructions. The other intransitive constructions, namely lexical intransitives, *ak-* ‘open’, *ore-* ‘bend’ and *kire-* ‘cut’, and resultatives are located between transitive and anticausative. For the verbs of opening, compatibility of lexical intransitive *ak-* with purposive clause is slightly higher than that of resultative. On the other hand, for the verbs of bending and cutting, compatibility of lexical intransitives, *ore-* and *kire-*, with purposive clause is lower than that of resultatives. The relative compatibility between lexical intransitive and resultative depends on the relative length of the intransitive verb in the lexical transitivity alternation pair. The lexical intransitive verb shows higher compatibility than resultative when it is shorter than its transitive counterpart but it shows lower compatibility when it is longer than its transitive counterpart.

The predicates showing the lowest compatibility with purposive clause, i.e., anticausatives, are formed through suppression of the causing event. The other types of intransitives are considered to be formed through the other types of suppression in their semantic structures.

Levin and Rappaport (1995: 107–108) argues that the mapping between semantics and syntax of the

intransitive verbs which have transitive counterparts is characterized by the existential binding of the external argument in the lexical semantic structure. The semantics-syntax mapping of intransitive *break* in English is illustrated in (46).

If we adopt the analysis advocated by Levin and Rappaport (1995), the lexical conceptual structures of *ak-*, *ore-* and *kire-* are [do'(∅)] CAUSE [BECOME opened'(y)], [do'(∅)] CAUSE [BECOME bended'(y)] and [do'(∅)] CAUSE [BECOME cut'(y)], respectively.

The resultative predicate *V-te ar-u* is also analyzed as a predicate being derived through suppression of external argument. Matsumoto (1990) argues that the external argument of the gerundive verb ('V' of *V-te ar-u*) exists in the argument structure and the suppression of the external argument occurs in the mapping between argument structure and syntactic structure (his *f*-structure). According to Matsumoto's analysis within the framework of Lexical Functional Grammar, the association of the external argument of the gerundive verb with subject is blocked because the theme argument of the primary predicate *ar-* has already been associated with subject. The internal argument of the gerundive verb is projected onto syntax through the mechanism of the argument sharing with the theme argument of the primary predicate *ar-*. Accepting this analysis, the semantics-syntax mappings of intransitive *ore-* ‘bend’ and resultative *ot-te ar-* are schematized as in (47). For the purpose of comparison, the mapping schemata in (47) include transitive verb *or-* ‘bend’. The diagram for the argument sharing analysis is omitted in (47b) for the sake of simplicity. The suppressed variable is expressed with '∅'.

(47) a. Transitive <i>or-</i> 'bend'			
Syntactic structure	Subject		Object
Argument structure	(x		<y>)
Lexical conceptual structure	[do'(x)] CAUSE [BECOME bent' (y)]		
b. Intransitive <i>ore-</i> 'bend'			
Syntactic structure			Subject
Argument structure	(<y>)
Lexical conceptual structure	[do'(∅)] CAUSE [BECOME bent' (y)]		
c. Resultative <i>ot-te ar-</i> 'be bent'			
Syntactic structure			Subject
Argument structure	(∅		<y>)
Lexical conceptual structure	[do'(x)] CAUSE [BECOME bent' (y)]		
(48)	High	← Compatibility with purposive clause	→ Low
	Predicates without	> predicates with variable	> predicate with causing
	suppression	suppression	event suppression
	<i>Transitive</i>	<i>Intransitive, Resultative</i>	<i>Anticausative</i>

The levels where the suppression occurs are different in resultative and intransitive with lexical transitivity alternation, but the two types of intransitive predicates share the property that the suppression of the external argument is due to the suppression of a variable in semantic representation. For the anticausative, the suppression of the external argument is not due to the suppression of variable but due to that of causing event.

Under the representation in (47), the compatibility with purposive clause shown in Figure 1 can be summarized as in (48): the predicates without suppression, i.e., transitives, are more acceptable than those with the external argument suppression; the predicates with variable suppression are more acceptable than those with causing event suppression. The larger the part of semantic representation gets suppressed, the lower the compatibility becomes.

Modification of an activity event by a purposive clause is easily established when the agent is realized as an overt NP. When the variable corresponding to agent is suppressed at a certain level of semantic representation, the existence of activity (causing) event is recoverable with a certain degree

of effort, because the activity event itself is not the target of suppression though the projection of its argument, i.e., agent, is not projected onto syntax. Blockage of projection of agent adds a certain degree of difficulty to the recoverability of the activity event and decreases the compatibility with purposive clauses. On the other hand, suppression of causing event through anticausativization makes more difficult the modification of an activity event by a purposive clause because the blockage of syntactic access to the causing event is essential and the modification of the causing event by the overt adverbial expression contradicts this semantic effect.⁵

Thus, the causing event suppression analysis for

⁵To capture the difference between the verb of opening and the verbs of bending and cutting, the proposal on the representation of lexical transitivity alternation advocated by Kageyama (1996) seems to be effective. Kageyama (1996) partially agrees with Levin and Rappaport Hovav's (1995) analysis for the lexical transitivity alternation but he argues that the causing event does not exist when the intransitive counterpart is morphologically unmarked. The intransitive verb *ak-* 'open' is morphologically unmarked compared to its transitive counterpart *ake-* (*ak+e*) 'open' and, according to Kageyama's proposal, its lexical conceptual structure is BECOME open'(y). If the lexical conceptual structure of intransitive *ak-* has no causing event, *ak-* does not undergo

anticausativization is useful for analyzing the syntactic difference among the morphologically related intransitive predicates in the Hokkaido dialect.

5 Where does the difference come from?

The reflexive analysis advocated by Koontz-Garboden seems to go well at least for the languages employing reflexive morphemes as a morphological expression of anticausativization but it fails to predict the whole range of data in the Hokkaido dialect of Japanese where the spontaneous suffix is a morphological expression of anticausativization. Where does the difference come from? I argue that the difference comes from the status of the causing event suppression.

In the languages where the primary effect of anticausativization is a semantic operation other than the causing event suppression, the causing event suppression is a by-product of the primary effect. In such a case, a causative/inchoative alternation has a certain restriction concerning the causing event. The anticausativization through reflexivization in Spanish is restricted to the verbs compatible with non-agent subjects according to Koontz-Garboden (2009). Hayatsu (1989) and Sato (2005) argue that the lexical (non-productive) causative/inchoative alternation in Japanese (this is also found in the Hokkaido dialect) is possible only when the manner of activity of the transitive counterpart (accomplishment verb) is unspecified. Both are requirement of underspecification of certain aspects

any suppression in its semantic structure and the syntax-semantics mapping is fully faithful. The compatibility of *ak-* with purposive clause and that of resultative *ake-te ar-* is not in the level of statistical significance, $p=.536$, higher than .5. The preference relation between lexical intransitive and resultative is at the same level for the verb of opening although for the verbs of bending and cutting, the compatibility of intransitive verb with purposive clause is lower than that of resultative. This discrepancy can be regarded as a reflection of the difference of the composition of lexical conceptual structure. For *ak-* ‘open’, inferring the causing event, which does not exist in its lexical conceptual structure, is easier than that in the case of verbs of bending and cutting because the inference is not disturbed by the suppression.

of information on the causing event. The agentive restriction is a requirement for the thematic role of the variable in the causing event not to be specified. The restriction on the manner of activity is prohibition of the specification of matter in the causing event.

In the case of anticausativization as a by-product, the underspecified causing events are suppressed while the causing events bearing rich information are not the target of suppression. In Spanish, for the verbs with agent specification, reflexivization results in agentive reflexive not anticausative. In Japanese, the accomplishment verbs specifying the manner of activity do not undergo the existential binding of the external argument resulting in the lexical transitivity alternation. In both cases, the verbs with rich information on the causing event are excluded from anticausativization.

The notion of faithfulness may be useful for capturing the exclusion of the verbs with rich information on the causing event. Faithfulness is a notion used mainly in the field of phonology. Faithfulness constraints require the one-to-one mapping among related representations. The faithfulness constraint relevant for the discussion must be PARSE. According to Prince and Smolensky (1993: 25), “the PARSE family militates against any kind of failure of underlying material to be structurally analyzed.”

When the inchoative predicate is formed through the suppression of the causing event with rich information (such as manner of activity), the mapping from semantic to syntactic levels is unfaithful in that the information of the causing event is not projected into the syntactic structure. This situation is illustrated in (49a). On the other hand, in the case of the suppression of the underspecified causing event, the mapping from semantic to syntactic levels is more faithful than that of the suppression of the causing event with rich information in that the less information is lost. This situation is illustrated in (49b).

In Spanish, reflexivization coindexing the exter-

- (49) a. Anticausative mapping from the verb with rich information in the causing event
- | | | |
|------------------------------|----------------|--------------------------|
| Syntactic structure | | Subject |
| | | |
| Argument structure | (| (y)) |
| | | |
| Lexical conceptual structure | [do'(x)manner] | CAUSE [BECOME pred' (y)] |
- b. Anticausative mapping from the verb with the underspecified causing event
- | | | |
|------------------------------|---------------|--------------------------|
| Syntactic structure | | Subject |
| | | |
| Argument structure | (| (y)) |
| | | |
| Lexical conceptual structure | [do'(x)_____] | CAUSE [BECOME pred' (y)] |
-

nal argument (x) with the internal argument (y) results in causing event suppression, i.e., anticausativization, when the causing event suppression does not incur the unfaithful mapping of agentive specification. The suppression of an underspecified causing event is not unfaithful compared to that of a causing event with agentive specification because it lacks agentive specification of the external argument. When the accomplishment verb specifies its external argument as agent, faithful mapping of agentive specification of the causing event is guaranteed by the projection of both causing event and change of state event to syntax. Agentive reflexivization is considered to be due to the avoidance of the unfaithful mapping of semantic information on the causing event from semantic and syntactic structures.

In the case of lexical causative/inchoative alternation in Japanese, the existential binding of the external argument and the subsequent suppression of the causing event with specified manner of activity results in the unfaithful mapping of the information on causing event. For such a case, the transitive accomplishment verb does not have a corresponding intransitive verb. This restriction may be considered to be due to the avoidance of the unfaithful mapping.

For the morphology where the suppression of a certain part of the semantic structure is a primary effect, the situation is different. The semantic nature of the /rasar/ suffixation is suppression of the semantic element located in the outermost layer of the semantic structure: suppression of the voli-

tional operator DO in unintentional reading, suppression of the event argument in potential reading, and suppression of the causing event in anticausative reading.

In the anticausativization through spontaneous suffixation in the Hokkaido dialect, blockage of the projection of the causing event to argument structure is possible not only for the underspecified causing event but also for the causing event with rich information. In the case where the suppression of the causing event is the primary effect, the faithful mapping requirement is overridden by the suppression requirement of the causing event.

The suppression of the projection of the causing event onto syntax is a common property of anticausativization irrespective of the morphological expression the languages employ. As the demotion of the agent is essential for passivization (Comrie 1977), the suppression of the causing event is essential for anticausativization. What should be regarded as essential for a certain grammatical phenomenon is the crosslinguistically common property, not a property widely attested but incompatible with some languages. The object-to-subject promotion in passivization is a widely attested property and it is argued to be a fundamental property of passivization by Perlmutter and Postal (1977). However, the promotion-based view has difficulty in analyzing impersonal passives without employing an otherwise unmotivated abstract process 2→1 promotion of a dummy element (Perlmutter 1978). Regarding coindexing of the effector external argument and the internal argument as a

nature of anticausativization faces the same type of difficulty: under this view, the anticausativization from the verb selecting agent as its external argument cannot be analyzed without resorting to additional assumptions.

Regarding a certain morphological operation as an essential property of a certain grammatical process should be also avoided. Morphological expression for passivization varies from language to language: 1st person inclusive plural affix for Ainu (Tamura 2000); medio-passive ending for classical Indo-European languages; past participle (an adjectival ending) for modern European languages; suffix common to potential and spontaneous for the majority of Japanese dialects; suffix common to causativization for Mongolian; auxiliary meaning ‘eat’ in Sinhalese. The various morphological expressions for passivization are not nature but means for passivization even though their meanings have close relation to the nature of passivization. The situation is the same for anticausativization. Reflexivization is a means for anticausativization in some languages but it is not the essential property of anticausativization. Spontaneous morphology is also a means even if its semantic effect is nearly equal to the essential semantic operation for the anticausativization.

The difference between anticausativization with causing event restriction and that without causing event restriction comes from the primary semantic effect of morphology. Morphology affecting a variable in lexical conceptual structure permits a limited range of anticausativization, while morphology affecting event structure itself permits the wider range of anticausativization. Both reflexivization and existential binding affect a variable in conceptual structure. The commonality among usages of spontaneous morphology is suppression of the event structure in the outermost layer of the lexical conceptual structure. For the morphology suppressing a certain event, the internal structure of event is invisible. The wide range of anticausativization found in the spontaneous suffixation is guaranteed

by the invisibility of agent-oriented semantic specification.

6 Concluding remarks

In this paper, I examined the universality of reflexive analysis of anticausativization advocated by Koontz-Garboden (2009). The reflexive analysis is valid for a subclass of anticausativization. However, it is not applicable to anticausativization based on the spontaneous suffixation in the Hokkaido dialect of Japanese. The reflexive analysis is not universally applicable to anticausativization. This paper clarifies that the nature of anticausativization is suppression of causing event, which is essential for some languages but a by-product for some languages, and that the range of causing event suppression is determined by the morphology employed as a morphological expression of anticausativization.

The different morphology results in the different range of anticausativization. To deepen the understanding of anticausativization, the investigation of a wide range of morphology for anticausativization is necessary, not to mention the investigation of the non-reflexive morphology, and further investigation of reflexive morphology is also required. As Haspelmath (1993: 95) notes that in Russian, which employs a reflexive morpheme *-sja* for anticausativization, the verb with agent-oriented meaning component, such as *myt’* ‘wash’, serves as a base of anticausativization (*Kamni mojut-sja v reke*. ‘The stones are washed in the river.’). It is uncertain whether the reflexive analysis is compatible with Russian data or not. The validity of the reflexive analysis for the reflexive languages other than Spanish needs further examination in the future research.

Abbreviations

ABL = ablative, ADV = adverbial, ACC = accusative, CAUS = causative, CL = classifier, COP = copula, DAT = dative, GEN = genitive, GER = gerund, INST = instrumental, IR =

irrealis, NMLZ = nominalizer, NOM = nominative, NPST = non-past, PASS = passive, PST = past, Q = question marker, REFL = reflexive, SFP = sentence-final particle, SP = spontaneous, TOP = topic.

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逆使役化に関する再帰分析の非普遍性 北海道方言による検証

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要 旨

逆使役化は、外項と使役事象のイベントを引き起こす形態論的プロセスである。Koontz-Garboden (2009)は逆使役化を引き起こす意味的操作が再帰化、すなわち外項と内項の同一指示であるとする分析を提案した。Koontz-Garbodenによればこの分析は逆使役「一般」すなわち、再帰形態素を用いる逆使役化だけでなく他の形態素を用いる逆使役化にも適用可能であるという。本稿では、北海道方言のデータをもとにこの普遍的性格付けの妥当性を検証する。

キーワード：逆使役，自発接尾辞，使役事象

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