### Ellipsis of SAY, THINK, and DO in Japanese subordinate clauses: A constructional analysis

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### 1 Introduction

This paper discusses the Japanese constructions exemplified with (1a), (2a), and (3a), which appear to involve "omission" of the predicate heading the subordinate clause. The missing predicate can be "recovered" as a suspensive form (i.e., the gerund or infinitive form) of the lexemes: IU 'say', OMOU 'think', or SURU 'do', as in (1b,c), (2b,c), and (3b).

- Ken-ga ["Ohayoo"-to {a. Ø/b. itte/c. ii}] haitte kita.
   K.-Nom good.morning-Quot {Ø/say.Ger/say.Inf} enter.Ger come.Pst 'Ken came in, (saying) "Good morning"."
- Ken-wa ["Masaka"-to {a. Ø/b. omotte/c. omoi}] furikaetta.
  K.-Top no.way-Quot {Ø/think.Ger/think.Inf} look.back.Pst
  'Ken looked back, (thinking to himself) "No way".'
- (3) Ken-wa [akanboo-o se-ni  $\{a. \emptyset/b. shite\}$ ] atari-o shibaraku sansaku-shita. K.-Top baby-Acc back-Dat  $\{\emptyset/do.Ger\}$  vicinity-Acc for.a.while stroll.Pst 'Ken strolled around for a while, (carrying) the baby on his back.'

The elliptic and non-elliptic versions are not always interchangeable, the former being subject to additional syntactic and interpretative restrictions. I will develop an SBCG-analysis of these constructions (i) which captures these restrictions and (ii) which does not postulate a covert element in the place of the missing verb. For convenience, I will call the constructions presented in (1a), (2a), and (3a) the SAY-, THINK-, and DO-ellipsis construction, respectively, and group the first two under the name of the QV-ellipsis construction (QV = quotative verb).

It is worth noting here that the these constructions do not involve the canonical kind of ellipsis, where (i) the missing element is semantically recovered with the aid of contextual cues (as in: *Has he left? – No, he hasn't*  $\emptyset$ ), and (ii) the elliptic and non-elliptic versions are semantically equivalent. In these respects they are reminiscent of the English [*the* + Adj.] construction (Pullum 1975; Lyons 1992), as in: *The rich exploit the poor and the poor exploit the poorer* (notice that "the rich" here is not semantically equivalent to "the rich people", but rather to bare "rich people" with generic reference). The analysis to be presented below is similar to the one proposed by Lyons for the [*the* + Adj.] construction, which in spirit is "constructionalist".<sup>1</sup>

# 2 Background: Basic facts about the infinitive and gerund clause constructions

The suspensive clause construction (Susp-Cx), which subsumes the infinitive and gerund clause constructions (Inf-Cx and Ger-Cx), refers to a hypotactic structure where the subordinate clause is headed by a predicate in its infinitive form (adverbial form) or gerund form (te-form).

In the literature, the Susp-Cx has often been considered to semantically convey only the logical conjunction of the two component clauses, on a par with the English *and*-coordination structure (e.g., Fukushima 1999; Lee and Tonhauser 2010). This view, however, does not hold scrutiny; if the Inf-Cx and Ger-Cx merely represent logical conjunction, then (4b) is expected not to be pragmatically odd, in a similar way as the English sentence provided to illustrate its intended interpretation.

(4)	a.	Hiroshi-wa man'nenhitsu-o Ginza-no depaato-de {kai/katte}, sono
		HTop fountain.pen-Acc GGen department.store-Loc buy.Inf/buy.Ger that
		man'nenhitsu-o chichioya-ni purezento-shita.
		fountain.pen-Acc father-Dat present.Pst
		'Hiroshi bought a fountain pen at a department store in Ginza, and he gave it to his father.'
	h	#Ilizabi wa shishi wa mi wan'nanhitan a munananta shi(ta) aana wan'nanhitan a Cia

b. #Hiroshi-wa chichioya-ni man'nenhitsu-o **purezento-shi**(te), sono man'nenhitsu-o Ginza-no H.-Top father-Dat fountain.pen-Acc present.Inf(Ger) that fountain.pen-Acc G.-Gen

<sup>&</sup>lt;sup>1</sup>Lyons (1992) proposes a rule along the lines of (i), which does not posit a covert head noun.

<sup>(</sup>i) Adjective Head Rule (Human)

a. The sequence: [the + Adj.] may constitute a plural NP referring to humans.

b. If the adjective is [-nationality], then the NP obligatorily receives the generic interpretation. If the adjective is [+nationality], then the NP optionally receives the generic interpretation.

depaato-de katta. department.store-Loc buy.Pst (Hiroshi {gave/will give} his father a fountain pen, and he bought it at a department store in Ginza.)

Based on such observations, Oshima (2012) argues that the Inf-Cx and Ger-Cx have multiple meanings, all of which are more specific than logical conjunction, and accordingly postulates three constructs in the SBCG sense. The Inf-Cx and Ger-Cx may convey either (i) that the eventuality described in the subordinate clause ( $E_1$ ) *temporally precedes or coincides with* the one described in the main clause ( $E_2$ ), or (ii) that the propositions described by the two clauses stand in the rhetorical relation of *contrast*. Furthermore, the Ger-Cx has a third interpretation where the *resulting state* of  $E_1$  temporally subsumes  $E_2$ . The three interpretations are schematically illustrated in (5).

- (5) (Eventuality  $E_1$  and proposition  $P_1$  correspond to the subordinate clause, and  $E_2$  and  $P_2$  to the main clause.)
  - (i) "non-subsequence" interpretation:  $E_1 \leq E_2$
  - (ii) "contrast" interpretation:  $Contrast(P_1, P_2)$
  - (iii) *"resulting state" interpretation:* **ResultingState**( $E_1$ )  $\supseteq E_2$  (available only with the Ger-Cx)

The "non-subsequence" interpretation is exemplified in (4a) above; the "contrast" and "resulting state" interpretations are exemplified in (6) and (7), respectively.

- (6) Akira-wa kinoo toochaku-shi(te), Hiroshi-wa ototoi toochaku-shita.
   A.-Top yesterday arrive.Inf(Ger) H.-Top the.day.before.yesterday arrive.Pst
   'Akira arrived yesterday, and (on the other hand) Hiroshi arrived the day before yesterday.'
- (7) Ken-wa booshi-o kabutte e-o kaita.K.-Top hat-Acc put.on.Ger picture-Acc paint.Pst 'Ken painted a picture wearing a hat.'

Notice that (7) also allows the "non-subsequence" interpretation, which roughly translates as "Ken put on a hat and then painted a picture". The "non-subsequence" reading implies that Ken's putting on a hat takes place within the topic time (in Klein's 1994 sense), while the resulting state interpretation does not (and thus is compatible with a situation where Ken has not taken off his hat for years).

I take the view that the QV-ellipsis construction is a special type of the suspensive clause construction with the "non-subsequence" meaning, and that the DO-ellipsis construction is a special type of the gerund clause construction with the "resulting state" meaning.

### **3** Constraints on the QV-ellipsis construction

QV-ellipis constructions generally can be paraphrased with the gerund or infinitive form of IU 'say' or OMOU 'think'. It is not always possible, however, to elide a form of IU/OMOU heading a suspensive clause. The possibility of ellipsis depends on both syntactic and semantic factors.

On the syntactic side, the subordinate clause in the QV-ellipsis construction must consist solely of the (direct or indirect) quotative phrase, and cannot contain any other (explicit) dependent.

- (8) a. [Oogoe-de "Dareka imasen-ka?"-to \*(itte)] doa-o tataita. loud.voce-by anybody be.Plt.Neg-DO-Quot say-Ger door-Acc knock.Pst 'He knocked on the door, saying "Is anybody here?" in a loud voice.'
  - b. [**Boku-ni** "Jaa-na"-to \*(itte)] dete itta. me-Dat bye Quot say-Ger door-Acc exit.Ger go.Pst 'He left the room, saying "Bye" to me.'

The subject of the subordinate clause is not necessarily co-referential with the one of the main clause; however, conforming to the aforementioned constraint, it cannot be explicitly expressed (Fujita 2000).

On the semantic side, the interpretation of the QV-ellipsis construction is more restricted than that of the "non-subsequence" variety of the suspensive clause construction (Oshima and Sano 2011). As mentioned above, the latter entails that  $P_1$  and  $P_2$  both hold, and that  $E_1$  is *not* temporally subsequent to  $E_2$ . Oftentimes, it further conversationally implicates a more specific relation between  $P_1$  and  $P_2$  or  $E_1$  and  $E_2$ , in a similar way as the English *and*-coordination construction might implicate a causal relation, manner relation, etc. (as in: *Hans pressed the spring and the drawer opened*).

- (9) a. Basu-ni notte, kaisha-ni itta. bus-Dat ride.Ger company-Dat go.Pst 'He went to work, taking a bus' (manner relation conversationally implicated)
  b. Ishi-ni tsumazuite, koronda. stone-Dat stumle.Ger fall.Pst
  - 'He stumbled on a stone and fell.' (causal relation conversationally implicated)

Interestingly, the SAY-ellipsis construction cannot be used to describe a situation where  $P_1$  is (naturally inferred to be) the cause/reason of  $P_2$ ; in other words, it entails that  $P_1$  is *not* the reason of  $P_2$ .

- (10) a. Hiroshi-wa ["Futorimashita-ne" to #(itte)] Yumi-o azen-to saseta.
   H.-Top become.fat.Pst.Plt-DP Quot say.Ger Y.-Acc appalled-Adv do.Caus.Pst
   'Hiroshi appalled Yumi, saying "You've gained some weight, haven't you?".' (causal relation present)
  - b. Hiroshi-wa ["Futorimashita-ne" to (itte)] Yumi-no hara-o tsutsuita.
    H.-Top become.fat.Pst.Plt-DP Quot say.Ger Y.-Ger belly.Acc poke.Pst
    'Hiroshi poked Yumi's belly, (saying) "You've gained some weight, haven't you?".' (causal relation absent)

The THINK-ellipsis construction, on the other hand, requires that either the causal relation hold between  $P_1$  and  $P_2$ , or the manner relation hold between  $E_1$  and  $E_2$ .

- (11) a. ["Moo doose maniawanai" to (omotte)] hashiru-no-o yameta. already anyway be.on.time.Neg.Prs Quot think.Ger run.Prs-Pro-Acc stop.Pst 'He stopped running, (thinking) "I won't make it anyway".' (causal relation present)
  - b. ["Dare-ni-demo shippai-wa aru" to (omotte)] jibun-o nagusameta.
    who-Dat-even mistake-Top exist.Prs Quot think.Ger self-Acc console.Pst
    'He consoled himself, (thinking) "Anyone can make a mistake".' (manner relation present)

# 4 Constraints on the DO-ellipsis construction

The necessary conditions for the elision of *shite* (the gerund form of SURU 'do') heading a subordinate clause include (12) (Teramura 1983).

- (12) a. The subordinate clause contains an accusative NP, a dative NP, and no other item.
  - b. Either (i) *shite* means possession, or (ii) the dative NP describes an "accompanying circumstance" (e.g., place, time, reason, instrument) of  $E_2$  or  $P_2$ .

In this paper I focus on the "possession"-type (exemplified by (3) above), and excludes the "accompanying circumstance"-type from consideration.

SURU interpreted to mean possession is an achievement verb referring to an action of taking rather than a state of holding. The gerund clause headed by its gerund form, *shite*, is ambiguous between the "non-subsequence" and "resulting state" interpretations (or, between the "take" and "hold" interpretations).

(13) Ken-wa [kan-biiru-o te-ni shite], uta-o utatta.

K.-Top can-beer-Acc hand-Dat do.Ger song-Acc sing.Pst

- (i) 'Ken took a can of beer in his hand, and sang a song.' (non-subsequence reading); OR
- (ii) 'Ken sang a song, holding a can of beer in his hand.' (resulting state reading)

The DO-ellipsis construction allows only the "resulting state" interpretation.

(14) Ken-wa [kan-biiru-o te-ni Ø], uta-o utatta.
K.-Top can-beer-Acc hand-Dat song-Acc sing.Pst
'Ken sang a song, holding a can of beer in his hand.' (resulting state reading only)

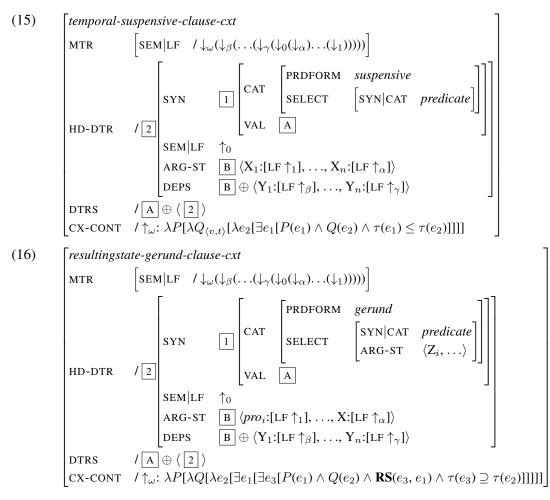
The subject of the subordinate clause of the DO-ellipsis construction must be co-referential with that of the main clause, and cannot be overtly expressed. This is a property that holds of Ger-Cx's in their resulting state interpretation in general.

As is the case for the QV-ellipsis construction, the subordinate clause of the DO-ellipsis construction resists modification with an adverbial (although the judgment is somewhat subtle).

#### 5 An SBCG formulation

I propose that the verb-less subordinate clause in the QV-ellipsis construction is a special subtype of the suspensive clause with the "non-subsequence" sense, and that the verb-less subordinate clause in the DO-ellipsis construction is a special subtype of the gerund clause with the "resulting state" sense.

I assume (departing from Oshima 2012) that in a suspensive clause construction, the subordinate clause is an adverbial dependent of the verb,<sup>2</sup> and is the locus where the temporal/aspectual meaning is introduced. Specifically, I postulate that construct (15) licenses a suspensive clause with the "non-subsequence sense", and construct (16) licences a gerund clause with the "resulting state" sense ( $\tau$  represents a function that maps eventualities to their times).



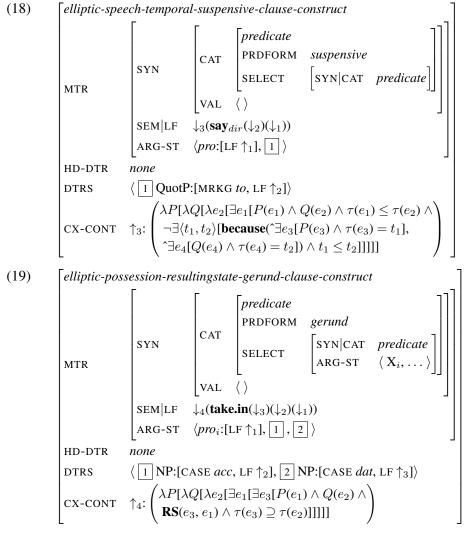
By way of comparison, (17) illustrates what I assume to be a construct licensing a declarative clause headed by an finite predicate, a member of whose DEPS list is possibly a suspensive clause.

(17)  $\begin{bmatrix} declarative-clause-cxt \\ MTR & \begin{bmatrix} SYN & 1 & ! \begin{bmatrix} VAL & \langle \rangle \end{bmatrix} \\ SEM | LF & \downarrow_{\omega}(\downarrow_{\beta}(\dots(\downarrow_{\gamma}(\downarrow_{0}(\downarrow_{\alpha})\dots(\downarrow_{1}))))) \end{bmatrix} \\ HD-DTR & 2 \\ \begin{bmatrix} SYN & 1 & \begin{bmatrix} CAT & \begin{bmatrix} predicate \\ PRDFORM & finite \end{bmatrix} \\ VAL & A \end{bmatrix} \\ \begin{bmatrix} SEM | LF & \uparrow_{0} \\ ARG-ST & B & \langle X_{1}:[LF \uparrow_{1}],\dots,X_{n}:[LF \uparrow_{\alpha}] \rangle \\ DEPS & B & \oplus & \langle Y_{1}:[LF \uparrow_{\beta}],\dots,Y_{n}:[LF \uparrow_{\omega}] \rangle \end{bmatrix} \\ DTRS & A & \oplus & \langle 2 & \rangle \\ CX-CONT & \lambda P_{\langle v,t \rangle} \exists e_{0}[P(e_{0})] \end{bmatrix}$ 

(18) and (19) present the feature specifications for one variety of the QV-ellipsis construction (the SAY-

<sup>&</sup>lt;sup>2</sup>See Bouma et al. (2001) and references therein for motivation for treating adverbials as verbal dependents.

ellipsis construction with a direct quote) and for the DO-ellipsis construction. Their DTRS attributes are specified to be singleton and doubleton respectively, which guarantees the absence of an explicit subject or an adverbial within it. The presence of ARG-ST is required to constrain anaphoric binding into the head-less subordinate clause, as well as to express the obligatory co-reference between the subjects of the main and subordinate clause in the DO-ellipsis construction.<sup>3</sup>



The semantic values of (18) and (19) are more specific than those of (15) and (16), which provides justification for treating the former as subtypes of the latter.

### **Selected References**

Bouma, G. et al. (2001) Satisfying constraints on extraction and adjunction. *NLLT* 19; Fujita, K. *Kokugo inyoo koobun no kenkyuu*. Izumi Shoin; Lee, J. & J. Tonhauser (2010) Temporal interpretation without tense. *J. of Semantics* 27; Oshima, D. (2012) On the semantics of the Japanese infinitive/gerund-clause constructions. *Proc. of the 19th HPSG Conf.*; Oshima, D. & S. Sano (2011) On the characteristics of Japanese reported discourse. *Quotatives*. John Benjamins; Przepiórkowski, A. (2001) ARG-ST on Phrases. *Proc. of the 7th HPSG Conf.*; Teramura, H. "Futai jookyoo" hyoogen no seiritsu no jooken. *Nihongogaku* 2(10).

<sup>&</sup>lt;sup>3</sup>See Przepiórkowski (2001) for justification for allowing phrasal expressions to have ARG-ST (and its extension DEPS).