Case Phrases 'Left Alone' Before Complementizers, and the Semantics of Case Forms

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1. Introduction Can Japanese accept a standard theory pursued originally in the scope of English and proposed as a universal theory?

2. A Phenomenon That is a Problem to the Standard Framework Case phrases, for example, accusative phrases, can occur without their 'head' verb occurring, but are interpreted with the corresponding relation 'recovered' from context in some contexts, e.g., (1b) as a response to (1a), (3b) as a response to (3a), while this is not the case in other contexts, e.g., (2b) as an answer to (2a).

(1) a. kodomo-ga koinu-o **sodate-ru**.

    b. **káme-o-to** sensee-ga i-tta.

(2) a. nani-o   **sodate-ru**-to,   kodomo-wa ikimono-no-koto-o rikais-uru?

    b. * **kame-o-to**,   kodomo-wa   ikimono-no-koto-o rikais-uru.

(3) a. kodomo-wa bondei-go-**ga wakar-u**.

    b. **súwahiri-go-o-to** sensee-ga i-tta.

(All of their English counterparts are ungrammatical without verb, as in *The teacher said that *(they will raise) turtles* for (1b).)

The phenomenon, as seen in (1b) and (3b), would falsify the valence/content assumption of the HPSG theories, inter alia Sag 1997, if the language motivates no phantom verb, or specifically copula, or phantom relation independently on the compositionality of syntax and semantics. It follows from the principle of compositionality that there is no relation or inherent meaning described by verb immediately before the complementizer *to* in (1b). **Conditional Clause:** Bender 2001 claims that without the phantom copula postulated in, e.g., *When your birthday?* in African American Vernacular of English (AAVE), there would be no valence list from which the *wh*-phrase of a predicative phrase *when* is 'extracted' or slashed (117). Such an analysis as in [*when*$_i$ [$_{NP}$ *your birthday* [$_{VP}$ e$_{copula}$ e$_i$]]] is made possible with the postulated empty verb. In contrast with AAVE, there is no need to have the valence list of a verb from which the *wh*-phrase *nan-sai* is 'extracted' or slashed since *wh*-phrases are never 'extracted' or slashed in Japanese from

the beginning, as in *akachan-ga* **nan-sai**-*ka* in contrast with *akachan-ga issai-(da)*. If the 'extraction' analysis or the HPSG 'slash' analysis is extended to relative clauses, there will yet be no evidence to postulate the empty copula found since *∗watashi · wa* [[*akachan · ga* e$_i$ e$_{copula}$] *toshi*$_i$] *· o wasure · ta* is ungrammatical. **Main Clause:** The HPSG accounts assume that the contents of noun phrases with a case form value structure-share with parts of the content of their immediately larger constituent ONLY THROUGH THE VALENCE OF THEIR HEAD VERB. The 'head' verb *sodateru* does not occur before the complementizer in (1b), and so, the accusative phrase is not interprted. **Plausible Analysis I:** If one use of the complementizer *to* is analyzed as similar to a finite transitive verb, then the content of the complementizer phrase will need to contain a phantom relation holding between its actor for the subject, and its undergoer for the object. This violates the principle of compositionality. **Plausible Analysis II:** Suppose a phrasal rule is added to the grammar that identifies a case phrase that the verb of the previous sentence can select as subject or object, as a finite sentence in its pragmatic specifications. This incorrectly predicts that the case form values of noun phrases occurring without its head verb are limited only to those of the noun phrases that the previous verb selects as subject or object, as falsified by (3b). If it were revised in such a way that there is no CAT(egory) specification NP[*nom*] in the pragmatic specifications of the NP[*acc*] in (3b), then there would be no device that associates the noun phrase with the wanted semantic role of the relation described by the verb **understand'**. See Merchant 2004 for nondirect interpretation approaches, which I assume violate the compositionality.

3.1. A Framework Koga 2000 proposes an *argument and adjunct-head phrase*, which identifies, e.g., *kame o sodateru*, as an argument and adjunct-head phrase, and an analysis of case forms, as exemplified as the feature specifications of *kame o* in Figure 1. Case phrases modify verb. Their MAJ(or Category) is *k*. In Koga 2000, KFORM, to specify a case form value, is one of the HEAD features, of which their values structure-share with those

$$
\begin{bmatrix}
\text{MAJ } \boxed{1} \\
\text{HEAD } \boxed{2} \\
\text{COMPS } \boxed{3} \\
\text{ARG} \cdot \text{ST } \boxed{5} \\
\text{CONTENT } \boxed{6} \\
\text{NON} \cdot \text{HEAD} \cdot \text{DAUGHTER } kame\ o \\
\quad \boxed{4}
\begin{bmatrix}
\text{MAJ } k \\
\text{HEAD }
\begin{bmatrix}
\text{KFORM } acc \\
\text{MOD }
\begin{bmatrix}
\text{MAJ } v \\
\text{ARG} \cdot \text{ST }
\begin{bmatrix}
\text{REL}_{\text{ACC}}
\begin{bmatrix}
\text{ARG } turtle\prime(x_{quan}) \\
\text{REL}_{\text{QUAN}} \{(X,Y) \mid X \cap Y \neq \emptyset\}
\end{bmatrix}
\end{bmatrix}
\end{bmatrix}
\end{bmatrix} \\
\text{COMPS } end \\
\text{ARG} \cdot \text{ST} - \\
\text{CONTENT } no \\
\text{NON} \cdot \text{HEAD} \cdot \text{DAUGHTER } ... \\
\text{HEAD} \cdot \text{DAUGHTER } ...
\end{bmatrix} \\
\text{HEAD} \cdot \text{DAUGHTER } to \\
\begin{bmatrix}
\text{MAJ } \boxed{1}\ q \\
\text{HEAD } \boxed{2}
\begin{bmatrix}
\text{VFORM } finite \\
\text{MOD }
\begin{bmatrix}
\text{MAJ } v \\
\text{ARG} \cdot \text{ST } [\text{REL}_{\text{QUOTE}} \boxed{7}]
\end{bmatrix}
\end{bmatrix} \\
\text{COMPS }
\begin{bmatrix}
\text{FIRST } \boxed{4}
\begin{bmatrix}
\text{MAJ } k \\
\text{HEAD } [\text{MOD } [\text{ARG} \cdot \text{ST } \boxed{7}]]
\end{bmatrix} \\
\text{REST } \boxed{3}\ end
\end{bmatrix} \\
\text{ARG} \cdot \text{ST } \boxed{5} - \\
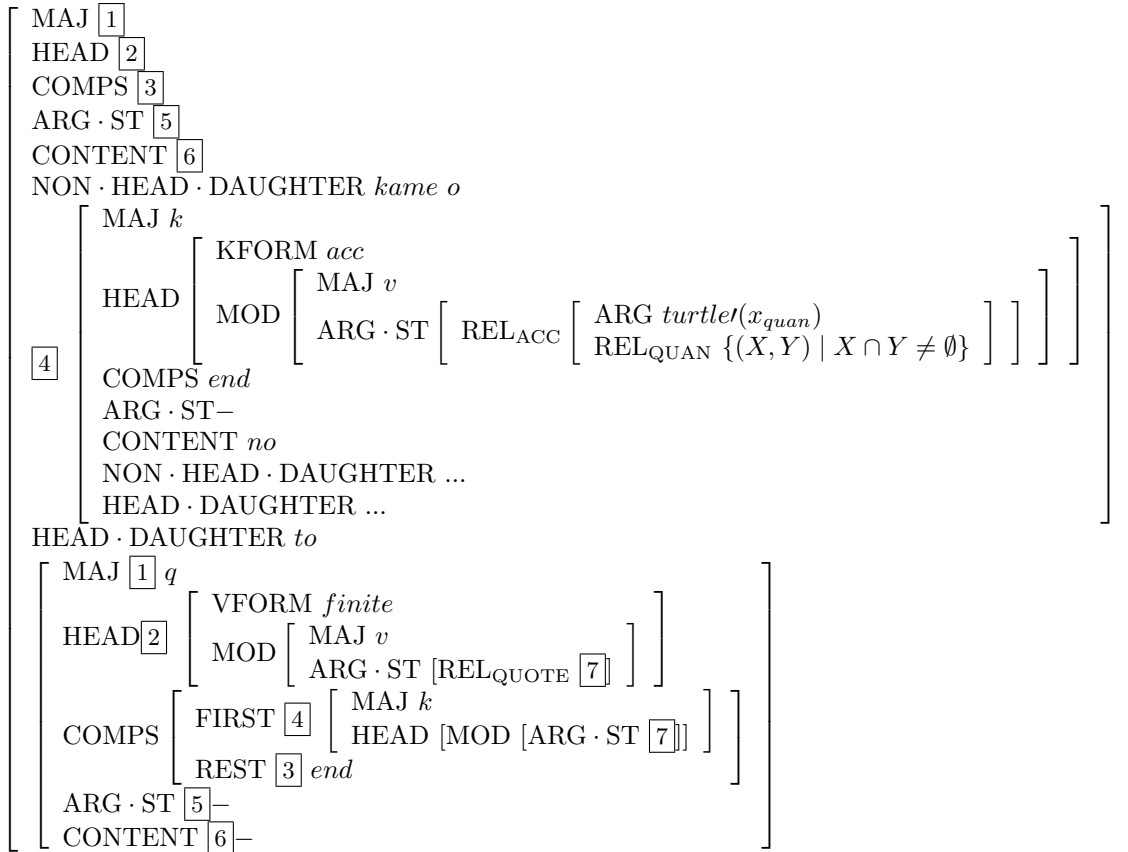\text{CONTENT } \boxed{6} -
\end{bmatrix}
\end{bmatrix}
$$

Figure 1: The Feature Specifications of *kame o to*

of its head. When an accusative phrase modifies verb, it specifies, in the argument structure (ARG-ST) of the verb, that the value of the relation abstractly case-registered as *acc(usative)* (REL$_{\text{ACC}}$) structure-shares with the content of its complement noun phrase. The ARG-ST value is the argument structure of a phrase, which structure-shares with that of its head daughter. This is different from the HPSG theories. The CONTENT value of the verb *sodateru*, for example, as structure-sharing with its ARG-ST value, is specified in its lexical entry as containing [ARG *raise*$\prime(x_{nom})(y_{acc})$]. The argument slots of the relations are lexically filled in with variables as if they are the contents of pronouns associated with the contents of particular noun phrases.

3.2. A Lexical Analysis of *to* I propose that *to* is lexically specified as the feature specifications of *to* in Figure 1. There is one lexical entry of the quoting morpheme *to* that takes a case phrase as its complement. When a quoting phrase modifies verb, it specifies that the REL$_{\text{QUOTE}}$ value in the argument-structure (or ARG-ST value) of the verb structure-shares with the ARG-ST value of the verb that a case phrase will specify that contains the abstractly-case resgistered REL feature with its value being the content of the noun phrase, as

exemplified as the ARG-ST|REL$_{\text{QUOTE}}$ value in Figure 1. The quoting phrase *kame o to* is identified as a *comp-head* phrase by the *comp-head phrase*, as in Figure 1. I assume that such a relation as [ARG *raise*$\prime(x_{nom})(y_{acc})$] is recovered by higher order unification as the background for the focus from the context **in pragmatics**, as the accusative phrase in *káme-o-to* in (1b) computed as ASSERT<[REL$_{\text{ACC}}$ $\{Y \mid Y \cap \{x \mid turtle\prime(x)\} \neq \emptyset\}]_{focus}$, [ARG $\{x \mid child\prime(x)\} \cap \{x \mid raise\prime(x)(y_{acc})\} \neq \emptyset]_{background}$>.

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