The Essential Requirement for an Independent Sentence (Preliminary)

KAZUKO INOUE

Center for Language Sciences

Kanda University of International Studies

The aim of this paper is to answer the question: "What does a clausal structure need to have in order to qualify as an independent non-elliptical utterance?" Accepting Hazout's proposal to assume that a Hebrew verbless sentence has pro generated as the first person external argument of VP and raised to the specifier position of Finite Phrase (FinP) in the CP zone passing through the Spec of *v*P and the Spec of TP if TP is generated. In order to support this assumption linguistic facts concerning Gensyo-bun (sentences expressing the speaker's perception of on-going events or existence of states at the speaking time) and Kankaku-bun (sentences expressing the speaker's perception at the speaking time, both without the tense specification, are presented in this paper. This attempt has been successful to a certain extent, clarifying the characteristics of pro whose existence requires not only the fine structure of TP but also the well articulated structure of CP. By positing pro a verbless sentence or a sentence without the tense specification can be interpreted as a full finite sentence.

0. Introduction

It has been generally assumed that the finite tense, represented as [±present] (in the case of English) or [±perfect] (in the case of Japanese), is the essential requirement for a sentence to be independent. This paper challenges this assumption, claiming that there are a variety of independent sentences without meeting this essential requirement. This group includes sentences called "sentences of direct description" in Inoue (2007), i.e. sentences describing the ongoing events or states (Gensyo-bun (GS)) and sentences stating the speaker's perception at the speaking time (Perception Sentences (Kankaku-bun (PS)) , adding the third type called "verbless sentences" by Ilan Hazout (2010). The example sentences in (1) are from Hzout.

(1)   a.   Dan xole.   'Dan is in the library.'   (Hazout (1))
         b.   Dan ba-library.   'Dan is in the library.'

(1a) has a reduced marking of agreement between subject and predicate (number and gender but not person), while (1b) has no marking of this kind.

These facts indicate that this kind of sentences lack some of the most typical characteristics of full finite sentences, especially the presence of the tense marking. Still they are interpreted as full finite sentences. These sentences are called in this paper "Non-standard Independent Sentences: NSI.

This paper is concerned with the question, "Why are the sentences lacking the essential requirement for independent sentences (NSI), namely the presence of the tense marker, are admitted as independent sentences?"

It is assumed that the feature [+tense] carried by T, the head of Tense Phrase (TP), has an important functional role in deriving those special type of sentences. The feature [+ tense] is usually subcategorized by the feature [±Perfect] or [±Present], but in the case of NSI [+tense], an abstract tense marker, is not further sub-classified, which is the most crucial feature of NSI. It is shown in this paper that this assumption is supported by various behaviors of NSIs.

Section 1 summarizes the characteristics of Gensyo-bun (GS), Perception sentences (PS) and verbless sentences, followed by the comparison of GS and PS with verbless sentences in Section 2. Section 3 offers the analysis based on the assumption that pro is generated as the first person external argument of the vP and raised to the Specifier Position of Finite Phrase (Fin P) in the CP zone passing through the Spec of TP if TP is projected. (Assumption I)

The aim of this paper is to answer the question raised by Hazout: "What does a clausal structure need to have in order to qualify as an independent non-elliptical utterance?"

1. Gensyo-bun (GS) and Kankaku-bun (PS)[1]

This section presents some examples together with the special characteristics of GS and PS. Some GS examples that show one of their special characteristics are presented in (2).

(2)   a.   kyositu-ga   sawagasi-i
            class-room Nom   noisy-Pres
            'The class-room is noisy.'

         b.   sakana-o yaku nioi-ga   su-ru
            fish Acc   broil   smell Nom   do-Pres
            'There is smell of broiling fish.'

         c.   takusii-ga   ku-ru
            taxi-cab Nom   come-Pres
            'A taxi-cab is coming.'

         d.   saifu-ga   na-i
            purse Nom   miss-Pres
            'The purse is missing.'

In the examples in (2) the present tense markers, *i* for adjectives, and *ru* for verbs, denote events or states taking place or existing at the present time.

Compare the sentences in (2) with those in (3) with some examples of neutral descriptive sentences.

(3)   a.   moo sukosi-de   ronbun-ga   dekiaga-ru
            some more time in   paper Nom   finished-Pres
                            (*ru* denoting the future time)
            'It will be a short time before the paper will be finished.'

         b.   ato 10-pun de   basu-ga   ku-ru
            in   ten minutes   bus Nom   come-Pres
                            (*ru* denoting the future time)
            'The bus will come in ten minutes.'

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[1] Inoue (1973, 2009) provides detailed description of PS and GS.

In the sentences in (3) action verbs with *ru* are interpreted as expressing the events not completed at the present time, so that they denote the events in the future or habitual occurrences of the event. This is one of the main reasons why *ru* and *i* in the NSI are assumed to be root verb endings, not the tense markers.

1.2. PS examples and their characteristics

(4)	a.	sabisi-i	b.	natukasi-i
		lonely-Pres		feel yearning for-Pres
		'(I am) lonely.'		'(I) feel yearning for ( ).'
(5)	a.	ita-i	b.	atu-i
		ach-Pres		hot-Pres
		'Aches!'		'Hot!'
(6)	a.	kanji-ru	b.	omo-u
		feel-Pres		think-Pres
		'(I) feel __.'		'(I) think __'
(7)	a.	osie-te hosi-i	b.	yasumi-ta-i
		teach- want-Pres		rest- want-Pres
		'(I) want to be taught.'		'(I) want to rest.'

The salient characteristics of the PS are: a. It allows only the first person subject, which is not overtly expressed; b. The predicates (verbs and adjectives) in the PSs are psychological or perception predicates; c. *Ru* and *i* are attached to a verb and an adjective respectively.

1.3. Verbless Sentences and Clause Structure

This section starts with the summary of Ilan Hazout (2010) on verbless sentences.

1.3.1. Verbless sentences in Hebrew:

(8)	a.	Dan xole. 'Dan is sick.'	(Hazout (1))
	b.	Dan ba- library. 'Dan is in the library.'	

(8a) has a reduced marking of agreement between subject and predicate (number and gender but not person), while (8b) has no marking of this kind. Neither of them has the tense marking, which means that these sentences lack some of the most typical characteristics of full finite

sentences. Both (8a) and (8b), when used as root sentences, are most naturally interpreted as sentences with the present tense. Due to the absence of a verb, neither of them involves the overt marking of tense.

1.3.2. Analysis as reduced clauses

There is an idea of treating the kind of sentences exemplified in (8) as reduced clauses.

(9)   Dan   *hu*   sar   ba-   memsala.   (H. (2))
           he   minister   in the   government
        'Dan is a cabinet member.'

The view that the pronominal form *hu* (he) in (9) is a realization of the Φ-feature specification of I(nfl) is incomplete, since it cannot deal with the sentences like those in (8).

1.3.3. Small clauses

What is essential to the notion of a small clause is that a small clause structure involves no (abstract) functional items(s) that encode information regarding tense. The sentence in (10) is an example of a small clause.

(10)   John considers [Mary intelligent].
           (the underlined part is thought of as an instance of embedded predication (clausal) structure.)

1.4. The relevant question

This section contains some attempts to answer the question: What is essential in the structure of a clause for it to be able to stand on its own as an independent sentence?

1.4.1. Mouchaweh's claim (1986): Verbless sentences like (8a-b) should be viewed as root small clauses.

1.4.2. Benmamoun (2000, 2008) offers arguments against Mouchaweh's hypothesis concerning root small clauses, based on the observation of similarities between the grammar of full verbal sentences and that of verbless sentences regarding certain grammatical properties and processes.

1.4.3. The main purpose of Hazout (2010) is to present two additional arguments in favor of Benmamoun's position rejecting the idea that verbless sentences are root small clauses. His arguments are based on certain differences between verbless sentences and familiar cases of embedded small clauses. It is argued that these differences follow if the hypothesis of root small clauses is abandoned in favor of viewing the relevant types of sentences as full, finite sentences.

Assumption I: The sentences like those in (8) are full finite sentences.

1.4.4. Arguments supporting Assumption I
There is a possibility of rendering two types of interpretation to sentences like those in (11): Atmospheric and Predicative Interpretations.

(11) a. Ha- manoa kar.   (Hebrew)   (H. (3))
          The engine cold
          'The engine is cold.'
          (the property of a certain concrete object denoted by the subject) (predicative)
          (with an overt referential NP/DP or PRO as its subject)
      b. Kar   hayom
          cold   today
          'It's cold today,' (describes a weather condition)
          (atomospheric)
          (with expletive pro as its subject)

As for root verbless sentences, only atmospheric interpretation is possible.

1.4.4.1. Two arguments are presented to support Assumption I.
(a) the possibility of atmospheric interpretation
(b) the impossibility of predicative interpretation in sentences of this kind.

(12) a. Ha-se'ela   [im mi   le-deber] lo 'omedet al ha-perek.
          the question   with whom to talk   not "currently an issue
          'The question with whom to talk is not currently an issue.'

b. *Ha- se'ela [eyx le- hitbarer se Dina xola]
the question how to become,clear that Dina sick
lo 'omedet al ha-perek.
not "currently an issue"
"The question how for it to become clear that Dina is sick is
currently not an issue."

(H. (5))

(13) a. Ha- pitaron *hu* [li- xtov al kax ba- ition].
the solution he to write about that in.the newspaper
"The solution is to write about that in the newspaper."

b. *Ha-pitaron *hu* [le- hikatev al kax ba- iton].
the solution he to be.written about that in the newspaper
"The solution is for it to be written about in the newspaper."

(H. (6))

(14) a. Efsar [li- xtov al kax ba- iton].
possible to write about it in the newspaper
"It is possible to write about it in the newspaper."

b. *Efsar [le- hikatev al kax ba- iton].
Possible to be written about that in the newspaper
"It is possible to be written about that in the newspaper."

(H. (7))

In the (a) sentences the main predicate within the embedded infinitival clause has an external θ-role available for assignment to a subject, whereas the (b) sentences have (infinitival) impersonal predicates that have no external θ-role to assign.

Impersonal infinitives of this kind are admitted only as complements of raising predicates or in their finite form as the predicates of finite sentences.

(15) a. Alul le- hitbarer se Dina xola.
may to become clear that Dina sick.
"It may turn out that Dina is sick."
(The EPP[2] is satisfied in both the matrix and the embedded

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[2] The EPP is given in (17a).

infinitival clauses; pro starts out as the subject of the embedded infinitive, satisfying the EPP and moves up to the matrix subject position to satisfy the EPP of the higher clause.)

    b.   Asuy le- hikatev   al   kax   ba-   iton.
           May to be.written about that in.the newspaper
           "It may be written about in the newspaper."

                                            (H. (8))

(16)   a.   Hitbarer   se   Dina xola.
           Became.clear   that Dina sick
           "It became clear that Dina is sick."
           (The EPP is satisfied by expletive pro licensed by [+ tense]T.)

    b.   Nixtav   al   kax   ba-   iton.
           written about that in.the newspaper
           "It was written about in the newspaper."

                                            (H. (9))

1.4.4.2. The principles to account for these facts

(17)   a.   Clauses both finite and infinitival, must have a subject (Extended Projection Principle: EPP).

    b.   In Hebrew this requirement may be satisfied by expletive pro in cases where no subject θ-role is assigned.

    c.   Expletive pro in Hebrew is only licensed as the specifier of the finite [+tense] T. Therefore it may only be the subject of a finite clause.

The root verbless sentence (18), which allows only atmospheric interpretation, should be accounted for by the same principles as those that explain the grammaticality of (16a-b).

(18)   Kar kan hayom.
           cold here today   "It is cold here today."

(18) has a clausal structure that provides the context needed for the licensing of expletive pro, i.e. [+tense]T. In this way the expletive pro is

licensed, and the EPP is satisfied, which makes atmospheric interpretation freely available.

1.4.4.3. Predicative adjunct: a small clause having PRO as its subject

(19) a. [PRO 'ayefin ve re'evim axare slosa yamim ba-
              tired   and hungry after three days in.the
       midbar] ha- 'efsarut
       desert the possibility

                                                    (H. (14))

b. ha- yexida se   notra   la-*nu* hayta le- hikana
   the only   that was.left to-us was   to surrender
   "Tired and hungry after three days in the desert, the only possibility left to us was to surrender."
   (PRO is co-referential with the pronominal clitic *–nu* 'us', which is embedded within a relative clause modifying the subject *efsarut* 'possibility'. Therefore, theoretical option of adjunct small clauses must be assumed to exist.)

(20) a. Kar ve gasum kan hayom   (with expletive pro)
       cold and rainy here today
       "It is cold and rainy here today."

b. *[Kar ve gasum] Dan lo   roce   la- lexet la- avoda
    cold and rainy   Dan not wants to go   to work

The conjoined predicate *kar ve gasum* 'cold and rainy' is perfectly admissible as the main predicate of a root verbless sentence such as (20a), but it is unacceptable as an adjunct in (20b), which means that (20a) and (18) has a structure where a subject is required and this requirement can only be satisfied by expletive pro. The only element that can function formally as the licenser of pro in these cases is finite ([+tense]) T. The grammaticality of (20a) and (18) can be regarded as evidence that in these cases, unlike that of the adjunct clause in (20b), a finite T occurs as part of the clausal structure. Therefore, (20a) and (18) cannot be regarded as root small clauses.

1.5. The contexts of "personal" embedded infinitival clauses

The contexts in which only ("personal") embedded infinitival clauses can occur are those whose predicates assign a subject θ-role. ((12)-(14)) In

this case the subject could only be PRO. When the main predicate of an infinitival clause in such contexts is an adjective like *kar* 'cold', it may only render predicative interpretation.

(21) Ha- se'ela [matay li- hyot kar (klapey zarim)] lo
the question when to be cold toward foreigners not
'omedet al ha-perk.
"currently an issue"
"The question when to be cold (toward foreigners) is not currently an issue."

<div align="right">(H. (19a))</div>

The availability of predicative and atmospheric interpretations to predicates like *kar* 'cold' depends on what element is taken to be the subject of such a predicate: overt NP/DP, PRO, expletive pro.

(22) a. The predicative interpretation is given when the subject is PRO.
b. The predicative interpretation is ruled out for complements of raising predicates.

(23) Kar kan.
cold here

(24) proi alul [ei li- hyot kar].
May to be cold "It may be cold"

A raising structure like (24) may only accept expletive pro, not PRO, as an abstract subject (which moves from the lower to the higher subject position).

1.6. (a) Due to the lack of verbal inflection in (23) generic/arbitrary interpretation of pro is ruled out (leaving as the only admissible option expletive pro, which does not require referential identification). (b) If we accept the claim that (23) is a full finite sentence (i.e., a TP) and not a small clause, combined with the well-established generalization that PRO is excluded as subject of finite (i.e., [+tense]) clauses, then we can answer the question why (a generically interpreted) PRO, the so-called PRO of arbitrary references, is ruled out as subject in a sentence like (23).

Conclusion:

(a) The verbless sentence in (23) is a full finite TP not a root small clause.

(b) A small clause, as traditionally understood, is without the element essential to its qualification as an independent non-elliptical assertion.

2. Comparison of Verbless Sentences with GS and PS

This section is devoted to the comparison of Verbless sentences with GS and PS.

2.1. Similarities

(25) a. Both VLS and GS require (a) the abstract [+tense], which is raised to Finite Phrase (FinP) and interpreted to denote the present states or events.

      b. The subject of VLS pro carries [+tense] even though there is no syntactic tense marking in the sentence. The subject of GS is a referential DP, but the verb is in the root form without the syntactic tense marking. Thus, VLS and GS lack the most typical characteristics of full finite sentences.

(26) Oh! Samu! "Cold!"   (with the root form of the adjective "cold")
      cold   (without the tense specification)

(25) c. Neither VLS nor GS has the predicative function. (i.e. They render only the meaning of "thetic judgment"[3] in Kuroda's sense.)

      d. Neither VLS nor GS admits PRO as its subject.

      e. Both VLS and GS project up to vP, and pro of VLS and the referential DP of GS are external arguments of VLS and GS respectively.

(27) hora mon no tokoro ni   hito-kage   (VLS)
      See! Gate   place   at   person-shadow
      "See!   There is a shadow of a person at the gate."

(28) kodomo-tati ga   hasi-ru, hasi-ru
      children   Nom   run-Pres run-Pres
      "Children run and run."   (GS)

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[3] Kuroda (1972) proposes two types of sentence, one expressing the categorical judgment involving the "theme-rheme" relation, and the other expressing the direct perception of the on-going events or existing states.

(25)　f.　Both VLS and GS as root sentences express events or states taking place or existing at the present time.

2.2.　Summary

(29)　a.　PS: expresses the first person's atmospheric perception: *samui, atui, tumetai* (cold, hot, cold or cool).　The same as the Hebrew VLS.　(with pro as the subject)

　　　b.　GS: expresses the first person perception of the events involving the third person.

(30)　nedoko-ga　　tumeta-i　(with a referential subject)
　　　bed　　Nom　cold
　　　"The bed is cold."

2.3. Differences
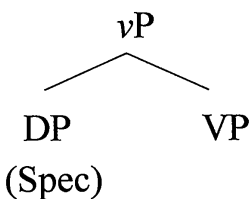
(31)　a.　VLS requires the expletive pro as the subject, while GS requires a referential DP.

　　　b.　GS has the overt subject, while VLS does not.

3. Analysis

The theoretical bases are first given in Section 3.1, with additional assumptions following in 3.2.

3.1. The process of Merge

The process of Merge proposed by the Minimalist Program is assumed to apply recursively deriving hierarchical structures, keeping the parameter [±head initial].　Since Japanese is a language with [—head initial], a DP (determiner phrase) is merged with a verb, deriving [$_{VP}$ DP verb].　Post-positional phrases (PP) with their semantic specifications are merged with VP one by one building up the hierarchical structure regardless whether the VP is with or without a DP.　Then, VP, the head, is projected to vP, providing the specifier (Spec) position.

(32)　a.　[$_{v}$P DP VP]　　　　b.　　　　vP

　　　　　　　　　　　　　　　　　　　DP　　　VP
　　　　　　　　　　　　　　　　　　(Spec)

The insertion of lexical items is carried out at this stage.   PRO and pro can also be inserted under DP.   Thus, the phonetically empty elements like PRO and pro are candidates for the lexical insertion.   Unlike the standard lexical items PRO and pro cannot stay in the vP-Spec position, because they have to get referential interpretation somehow.

3.2. The deep structures of GS and PS

Both GS and PS are projected to VP, with PS, without the external argument, staying under VP, while GS whose external argument (EA) occupying the vP-Spec position, its head VP functions as the head in vP. The structure (33) shows their positions.

(33)

vP

DP   VP

EA of GS   PS
PRO   The head (VP) of GS
pro
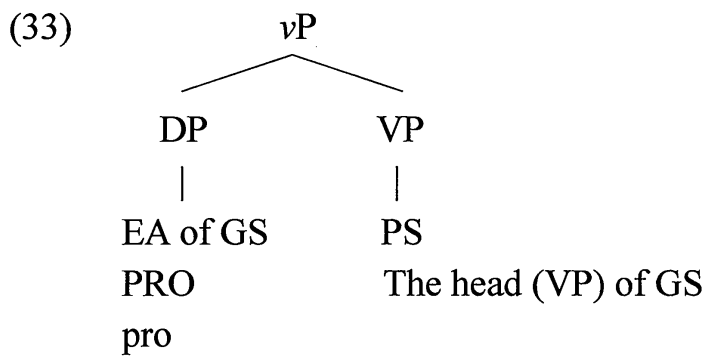
3.3. Additional assumptions

(34)   Assumption II.
         In the standard case vP is projected to TP, which in turn projected to CP (complementizer phrase).

(35)   With C as the head, CP has the following internal structure. (Rizzi 1997, 2004)

         ForceP TopP* Int(errogative) TopP* FocP ModP* TopP* FinP IP

         (The symbol * means the iterative applicability.)
         (Force P carries the specification of sentence types.   Int stands for interrogative *why*.   FocP: Focus Phrase.   ModP: Modifier Phrase.   FinP: Finite Phrase)

(36)   Assumption III:
         As is the standard case, the vP of GS and PS are projected to TP whose specifier position is occupied by pro with the semantic selectional feature [___ [+tense]].

(37) Assumption IV.

PRO and pro must be raised from the original position, the specifier of vP (vP-Spec) to FinP in the CP zone, in order to receive their referential interpretation.

(38) given below is an example of the involvement of a CP structure in sentence constructions.

(38) a. Kyoo- wa   tenki- ga   yo- i   "It's fine today."
          Today Top   weather Nom   good-Pres
      b. TopP   [$_{FinP}$ pro$_i$ [$_{TP}$ t_i [+tense]T   [$_{VP}$ GS]]
                                                      __PS__
          ‾‾‾‾   ‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾
          topic   comment   (predication)

As indicated in (38b) the referential interpretation as the speaker's perception at the present time is given when pro is raised to FinP.

3.4. The assumptions employed

The following assumptions have been employed in order to support our claim that not only verbless sentences but also GSs and PSs involve pro in their clause structures.

(39) Assumption I: The sentences like those in (8) are full finite sentences.

      Assumption II: PRO and pro must be raised from the original position, the specifier of vP (vP-Spec) to FinP in the CP zone, in order to receive their referential interpretation. In moving to the CP zone, PRO and pro accompany their heads (VP). (The "Pied Piping" Phenomenon)[4]

      Assumption III: In the standard case vP is projected to TP, which in turn projected to CP (complementizer phrase).

      Assumption IV: As is the standard case, the vP of GS and PS are projected to TP whose specifier position is occupied by pro with the semantic selectional

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[4] The pro in the vP-Spec raises to the TP-Spec position accompanying the VP, the head of vP. This phenomenon is called "Pied Piping" metaphorically.

feature [___ [+tense]].

3.4.1. Assumption I - III.

Section 1.3 is devoted to the arguments in support of Assumption I, basically specifying the contexts where verbless sentences are excluded. Assumption III has been well established, especially through the cartographic study by Rizzi and his colleagues. Assumption II is based on the linguistic facts about PRO, which requires referential identification in the CP zone.

3.4.2. Assumption IV

To support Assumption IV is the main purpose of this paper. Hazout's proposal to posit pro as the subject of verbless sentences is accepted and supported by using the Japanese data of GS, PS, and verbless sentences. Inoue (2009) claimed that GS and PS in the root forms involve the speaker's perception of on-going events or existing states. This claim is materialized by the introduction of pro, whose selectional feature is [___ [+tense]].

4. Conclusion

The attempt to support Assumption IV seems to be successful to a certain extent. It is hoped that the study of the element like pro, whose functions involve both TP and CP level categorical and semantic characterizations, will be accelerated.

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Center for Language Sciences
Kanda University of International Studies
1-4-1 Wakaba, Mihama-ku, Chiba-shi
Chiba-ken 261-0014
JAPAN

inoue@kanda.kuis.ac.jp