An Aesthetic View of Poetic Sentences via Functional Grammar

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Abstract

Poetic sentences often behave freely from grammatical constraint while maintaining almost full linguistic message transmitting power. This is at first consideration somewhat mysterious language phenomenon, which further dexterously gives full play to their attractive power on reader's soul. In this paper we take HAIKU, classical Japanese short poetic sentence as a typical example of beautiful sentence. By using the concept of functional grammar and season-word ontology, we try to approach the secret of taciturn beauty in poetic sentences. The beauty of HAIKU is often said to exist in ellipses, abbreviation and suggestions; eloquent mutism. Various events and situation that suggests tacitly the deep emotion and feelings of writer are described in a very short and simple sentence which is composed of 5-7-5 letters words or phrases.

In this paper we will introduce a Functional Grammar as a device for analyzing the meaning and construction of HAIKU. The Functional Grammar claims that every sentence is composed of two categories: kernel sentence and meta-sentence. We show typical examples of meta-sentences and kernel sentences obtained from HAIKU, and try to reveal the secrets of aesthetic beauty of ultimately simple sentence, HAIKU.

Keywords ― Poetic Sentence, Haiku, Aesthetics, Secret of Beauty, Eloquent Mutism, Functional Grammar, Kernel Sentence, Mata-Sentence, Seasonal Word Ontology, Saijiki, Haiku-Ontology, Haiku-Upper-Ontology, Meta-Ontology

I   Introduction

Poetic sentences often behave freely from grammatical constraints. Especially the poetic sentences, such as Haiku are often far beyond the grammatical completeness while bringing an incredibly attractive power on human's linguistic sensitivity.

Thus we can expect the techniques for composing impressive sentences or making persuasive

talks through the study on poetic sentence constructions. Though there are many genres or styles in poetic sentences, in this paper we take HAIKU, classical Japanese short poetic sentence as a typical example of beautiful persuasive sentence. By using a functional grammar concept we try to elucidate the secret of simple sentential beauty. The essence of beauty of HAIKU is often said to exist in ellipses, abbreviation and suggestions: eloquent mutism. Various events and situation that suggests tacitly the deep emotion and feelings of writer are described in a very short and simple sentence which is composed of 5-7-5 letters words or phrases.

Usually HAIKU never talks directly about the emotion or declaration of writer's mind; it only suggests them by using other simple words that describe weather, plants, animal, climate or scenic beauty. Haiku is always expecting and inviting the readers' conjecture or imagination.

HAIKU is now going out from the classical region of Japanese culture or literary arts, and becoming a international model of sentential beauty. On this ground we have taken HAIKU and its English translation as a poetic sentence corpus, which is to be analyzed through Functional Grammar in order to investigate the secret of beautiful and simple sentence construction.

The main point of Functional Grammar is that it regards every sentence is composed of two types of sentences: kernel sentence and meta-sentence. Meta-sentence can be understood as a sentence structuring operator, while kernel sentence is a simple structured, mono-predicate sentence. Kernel sentence has obvious translation of canonical form, while meta-sentence represents logical-semantic structure of sentence which takes kernel sentence(s) as its dominating variable(s). From meta-sentences we can draw a lot of useful semantic information.

We show typical examples of meta-sentences obtained from HAIKU corpus. We expect that through meta-sentences, the essence of the simple beauty in HAIKU can clearly extracted. This extracted essence will give some hints to compose beautiful sentences together with fundamental language teaching methods.

Let us show a simple and easily understandable example of HAIKU and its associated meta-sentence together with an English translation.

空の青引き寄せむとて凧あげる　　　　　　　　　　　　　　　　新田透舟　　　（Hj）

　Hj = Sora-no Ao Hiki-yose-mu tote Tako Ageru　　Nitta Toushu

　He = Flying the kite ----- makes me feel like drawing the blue sky with kite-string.

Mj（Kj1, Kj2, Kj3）= Kj1, Kj2, tote Kj3

　Kj1= Sora-no Ao

　Kj2= Hiki-yose-mu

Kj3= Tako Ageru

Haru-no sumi-kitta aozora-ni Tako-wo ageteiru-to, naiyara sora-no ao-saga Tako-to issho-ni hikiyose-rareru youda. Haru-no Aozora-wa kokoro-ga ookiku hiraku-youda.

（In an azure sky I am flying a kite while feeling that I can draw the blue sky by pulling the kite string. Oh what a nice and blue spring sky it is! It makes my mind broad and open.）

He（Ke1, Ke3, Ke2）= Ke3 Ke2（=Vt N feel like Ving）Ke1
Ke1 = "Blue Sky"
Ke2（=Vt N feel like Ving）= "makes me feel like darwing "
Ke3= "flying a kite"

Reference and association are important to feel sympathy for admiring the spring blue sky which makes people mind wide open.

R（K1, K2, K3）= ｛Time=Spring, Cold winter was over, Place=maybe a park or an open square where people are gathering and talking.｝

Ⅱ　Aesthetics in Haiku

Straightaway let us take a look at the aesthetic behavior of Haiku reflected in only one character change. That is in previous Haiku, let us make a change from "ageru（あげる）" to "agaru（あがる）":

空の青引き寄せむとて凧あがる　　　　　　　　　　　　　　透舟　　　（H'j）

H'j = Sora-no Ao Hiki-yose-mu tote Tako Agaru　　　Transparent Boat

In alphabet also only one character change from "e" to "a". But this very small microscopic change causes a very big meaning change.

（Hj）凧あげる——Tako Ageru：using Transitive Verb

The Haiku writer is flying a kite so as to draw the blue sky to his hand. In a clear and open sky he is full of energy and want to fetch the blue sky. A refreshed and magnanimous feeling is expressed strait.

（H'j）凧あがる——Tako Agaru：using Intransitive Verb

In this case the concerning kite seems to have his own will and ability to control his flying. It is this kite that tries to fetch a blue sky.

The evaluation: which is more feasible or beautiful Haiku is depending on a reviewer's sense of beauty and poetic mind.

The point of this section is that in poetic sentences like Haiku, very small portion of word or letter may affect drastically the aesthetics of itself. This is why the Haiku is difficult to understand and deeply meaningful.

Ⅲ　Meta-sentence and Fragmental Syntax

Note: The description of this chapter is quoted from ［Y. Nitta（2012-10）］ which gives precise definition of meta-sentence together with illustrative usage examples.

First of all we claim that every sentence is composed of two categories: kernel sentence K and meta-sentence. M（） Let us denote K as a kernel sentence and M（） as a meta-sentence. Meta-sentence behaves like a function over kernel sentence, thus we can write:

$S = M(K)$

Here S denotes a sentence. If we would like to emphasize that sentence S is written by language j or language e, then we would write:

$Sj = Mj(Kj)$ or $Se = Me(Ke)$

where, Mj means the meta-sentence in language j, and Ke means kernel sentence in language e.

If we denote the translation between language j and language e as Tran, $Tran: Sj \rightarrow Se$

Then at the same time, $Tran: Mj() \rightarrow Me()$ represents the bilingual alignment between language j and e, whose concrete example will be shown later.

1　Explanation about kernel sentence K:

The "kernel" designates the kernel of sentential meaning and the kernel of translation. Roughly speaking the kernel sentence has a simple predicate-and-argument structure, that is one verb and dominating noun(s). Kernel sentence can be a form of no verb(-phrase), that is of noun(-phrase) only.

The kernel sentence has usually an obvious translation of canonical form and has high possibility of pseudo symmetrical translation property.

If sentence K has the symmetrical translation property, then

$$\mathrm{Tran}\ (K) = K' \text{ and } \mathrm{Tran}^{-1}\ (K') = K$$

In case of pseudo- symmetrical translation property,

$$\mathrm{Tran}^{-1}\ (K') = K$$

The antonym of "symmetrical translation property" is "directional translation property", that is

$$\mathrm{Tran}^{-1}\ (\mathrm{Tran}\ (S)) \neq S.$$

If sentence S has symmetrical translation property, then this sentence is easily translatable and has obvious translation. Thus these kinds of sentences are expected to form some baseline for overall translation.

2　Explanation about meta-sentence M（）:

The meta-sentence is a kind of hyper-sentence that operate over kernel sentence(s). This operation is viewed as sentence constructing operation that makes actual surface sentence using kernel sentence(s) as its component. The essential part of meta-sentence depends on function word in Japanese and preposition and connection word in English.

Now let us see a concrete example of fragmental syntax in HAIKU, which still maintains strong message passing ability. Haiku is composed of only 17 phonetic characters, which nevertheless has strong message appealing power to readers. In compensation for this stylish conciseness, Haiku is often obliged to transcend the ordinary sentential syntax. It may lack main verb, subject and/or object, but still it maintains strong message passing ability. Let us see a typical example.

***Furuike-ya kawazu tobi-komu mizu-no oto　　　　Bashou

　　　　Furuike=old pond=Noun

　　　　ya=Function Word

　　　　kawazu=frog=Noun

　　　　tobi-komu=jump into=Verb Phrase

　　　　mizu=water=Noun

　　　　no=Postpositional Particle（designating "belonging"）

*Translation（Interpretation）:

***Kanjaku-nari Furuike-no katawara / Aogaeru Tobi-komu Mizu-no-naka / Mizu-utu Oto Hitotsu-Ari（Literal reading of Kanpei（Chinese Haiku）

***An old pond-----/A frog dives into / with a quiet splash　　　　Translated by Nitta Toushu

***An old quiet pond---- / A frog jumps into the pond / plash! Silence again.　　　　Harry Behn

The syntactic structure of original Haiku is:

　　　Subj（N）+ F + Subj（N）+ Vi + Subj（NP）

which is fragmental. Nevertheless, the sequence of Noun or Noun Phrase plus Function Word brings about deep poetic meaning.

In order to clarify the deep poetic meaning, it is useful to apply the notion of kernel sentence and meta-sentence. Let H be an original Haiku, then meta-sentence M（）and kernel sentences K1 and K2 of H make a formula:

　　　H = M（K1, R, K2）

　　　K1=Furuike-ga aru=There is an old pond.

　　　K2=kaeru-ga Mizu-ni tobi-kon-de oto-wo tate-ta=A frog jumped into water with a splash.

　　　R=Scene-event relation

In this Haiku H, the first noun old pond（Furuike）has no verb and stands alone. Some imaginary association with the noun, old pond, derives the kernel sentence K1 and relation R.

This example suggests us even one isolated noun could convey lots of information, if noun were chosen carefully.

From Chinese sentences to English or Japanese sentences, we can relatively easily obtain direct word-by-word translations. These word-by-word translations are usually of fragmental syntax, but still can transfer substantial messages. Let us see another example.

C=（Literal reading of Chinese）=Kotoshi okonau-wo ezu-tomo mata myounen ari ∕ hfurui-okoseya yaruki-wo!

A direct translation of C to English may be:

Tran（C）=this year not done, again exists next year, encourage sprits!

If we denote Sj as source language sentence, Se as target（=translated）sentence and Tran as translator between Sj and Se, then we will write:

　　　Tran（Sj）= Se

for translation between language j and language e.

We propose that each sentence S is composed of two categories: kernel sentence(s) K and meta-sentence M（）. Meta-sentence is a sentence structuring operator.

　　　S=M（K）,

　　　Tran（S）= Tran（M（K））=Tran（M）（Tran（K））.

Roughly speaking, kernel sentence K represents simple structured, mono-predicate sentence which has obvious translation of canonical form, while meta-sentence M（）represents logical-semantic structure of sentence which takes K as its dominating variable, and shows a relationship among kernel sentences.

Ⅳ　Interpretation of HAIKU by meta-sentence

HAIKU has reached the limit of simplification in its sentential form, while preserving the potentials of rich message passing ability to the readers. It depends on the imaginary association potentials of component words and phrases, especially the season words that we will treat later. This situation can be formalized in somewhat naive intuitive style as follows:

$$H = K + R$$

H: HAIKU sentence（very short simple concise（pseudo-）sentence

K: Kernel Sentence（that has canonical meaning）

R: References to outer world（Association, Conjecture）; especially the reference to Haiku Ontology

R　naturally depends on H.

$$R = f（H）\text{ or } R = f（H, K）$$

f is a function which has H and K as its objective variables. F is a meta-sentence that exists at the base of HAIKU H. The successfulness of semantic interpretation by meta-sentences will be confirmed through the translation of Japanese HAIKU into English HAIKU.

Paying attention to the form:

$$H - K = R$$

We would like to extract R（from H）as the reference to outer world（or circumstance）knowledge that is often stored accumulatively in Haiku Ontology. R depends on H. We can write:

$$R = f（H）\text{ or } R = f（H, K）$$

Thus later we will identify R（・）with Haiku-Ontology

The function f（ ）can be interpreted as a meta-sentence that exits at the base of HAIKU H. Note that for the notational simplicity we put $M = f^{-1}$. From now on we treat M（ ）as meta-sentence instead of F（ ）.

In the followings we will show the concrete examples of Haiku-interpretation by meta-sentence formation and reference to Haiku-Ontology.（For details See the next chapter.）

***　梅咲くや何が降っても春は春　　　　　　　加賀千代女

Hj: Ume saku-ya nani-ga futte-mo haru wa haru　　　Kaga Chiyojo

He: flowering plum----/ even if rain or snow falls / spring is spring translated by P.Donegan
［14］

Hj = K1 dearu-kara+tatoeK2 demo + zettai-ni K3

K1 = Ume-ga saku = plum is flowering

K2 = Nanika-ga furu = something falls

K3 = Haru de-aru = it is sprib now

Hj= M（K1, K2, K3）

Tran（Hj）= As plum is flowering, even if rain or snow falls, it is already and definitely spring.

The reference to the Haiku Ontology may give us the circumstance information as belows:

Ume-saku（梅咲く）plum is flowering　$\in$ Time（early spring）

$\in$ Event（taking a stroll）

$\in$ Location（a garden）

$\in$ Weather（spring drizzle）

$\in$ Participant（maybe an aged writer）

$\in$ Situation（Relaxing and welcoming the arrival of spring）

*** 陽炎（かぎろい）や人も立木もゆらゆらと　　　　新田透舟

Hj = Kagiroi ya Hito mo Tachiki mo Yura-yura to　　　Nitta Toushu

He = Heat haze shakes gently ----- both people and clump of trees.

Mj（Kj1, Kj2, Kj3）= Kj1 ya Kj2, Kj3

Kj1=Kageroi

Kj2=Hito mo Tachiki mo

Kj3=Yura Yura Yureru

Haru-no nodokas-tp nukumori-wa, hitobito-no kinchou-wo toite hotto-shita kibun-ni saseru. nagaku samui fuyu-ga owari atatakai kisetsu-ga tourai-shita-koto-wo, sasayaka-ni yorokobu kimochu-ga sunao-ni yomi-komare-te-iru.

（A calm and quiet atmosphere of spring season is described in a frank and strait fashion together with the delightful relieved feeling of welcoming warm spring arrival.）

He（Ke1, Ke3, Ke2）=Ke1 Ke3（=Vt Adv）Ke2

Ke1 = "Heat haze"

Ke3（=Vt Adv）= "shakes gently"

Ke2= "both people and clump of trees"

Reference and association are important to get the both heart-and-body-warming atmosphere

R（K1, K2, K3）= {Time=Spring, Cold winter was over, Place=maybe park or grassland where

people are gathering against a background of grove.｝

　Refering to Haiku-Ontology we may get:

Kagiroi（陽炎）Heat haze　　　∈ Time（midst of spring）

　　　　　　　　　　　　　　 ∈ Event（taking a stroll）

　　　　　　　　　　　　　　 ∈ Location（maybe a natural park or garden）

　　　　　　　　　　　　　　 ∈ Weather（Heat Haze, Mist）

　　　　　　　　　　　　　　 ∈ Participant（writer）

　　　　　　　　　　　　　　 ∈ Situation（Enjoying a short time recess）

*** 　梅が香や鳥は寝させて夜もすがら　　　　　　　　千代女

　　　 Hj: Ume-ga ka-ya tori-wa ne-sasete yo-mo sugara　　　K. Chiyojo

　　 He: the plum's fragrance ／ makes the birds sleep-----／ the night falls　　　translated by P.D.

　　　　Hj = K1 wa K2-saseru Adv

　　　　K1 = Ume-no kaori = plum's fragrance

　　　　K2 = Tori-wo ne-saseru = makes the birds sleep

　　　　Adv = hito-ban-jyuu = all night long

　　　　Hj= M（K1, K2, Adv）

　 Tran（Hj）= The plum's fragrance makes the birds sleep all night long.

　Corresponding Local Haiku-Ontology maybe:

Ume-ga-Ka（梅が香）Plum's fragrance ∈ Time（midst of spring, night）

　　　　　　　　　　　　　　　　 ∈ Event（taking a night rest）

　　　　　　　　　　　　　　　　 ∈ Location（her garden）

　　　　　　　　　　　　　　　　 ∈ Weather（Heat Haze, Mist）

　　　　　　　　　　　　　　　　 ∈ Participant（writer）

　　　　　　　　　　　　　　　　 ∈ Situation（Enjoying an atmosphere of spring night）

*** 　梅が香や殊に月夜のおもしろし　　　　　千代女

　　　 Hj = Ume-ga ka-ya koto-ni tsukiyo-no omoshiro-shi　　　K. Chiyojo

　　 He : the plum's fragrance ／ makes it interesting-----／ especially that the moonlight night

　　　　Hj = K1 wa K2 wo tokubetsu-ni K3 ni-suru

　　　　K1 = Ume-no kaori = plum's fragrance

　　　　K2 = Tsukiyo = moonlight night

K3 = omoshiroi = interesting

Tran（Hj）= The plum's fragrance makes especially the moonlight night interesting.

***　我が我を置き忘れたる暑さかな　　　　　　　　千代女

Hj = Wa-ga ware-wo oki-wasure-taru atsusa-kana

He : I forget / where to put myself----/ so hot today　　　translatede by Nitta Toushu

K1 = Kyou-no atsu-sa = hot day today

K2 = Watashi = myself

K3 = Watashi-no mi-wo dokoka-ni oku-koto = to put myself

K4 = wasureru = forget

Tran（hJ）= Today is so hot that I forget where to put myself.

***　木枯らしやすぐに落ち着く水の月　　　　　　　千代女

Hj = Kogarashi-ya sugu-ni ochituku muzu-no tsuki　　　K. Chiyojo

He : chilly wind----/ the moon's reflection / soon becomes calm　　　translated by P.D.

Hj = K1 ga K2 wo V shite-iru-ga sugu-ni notV ni-naru

K1 = Kogarashi = chilly wind

K2 = Mizu-ni utsuru tsuki-kage = the reflection of the moonlight on the water surface

V = midasu = to make rumple

notV = midare-te inai, ochitsui-te iru = be not stirred, be calm

Tran（Hj）= The chilly wind makes the reflection of the moonlight rumple but soon it becomes calm.

***　おそるべき君等の乳房夏来（きた）る　　　　　西東三鬼

Hj6 = Osoru-beki kimi-ra-no chibusa natsu ki-taru　　　Saitou Sanki

He6 : shocking to see / your glamorous breasts----/ summar has come

translated by N Toushu

Hj6 = K1 ga K2 shita-ga K3 wo shirase-te kure-ta.

K1 = Osoroshi-hodo-ni kan-nou-teki-na kimira-no chibusa =your threateningly voluptuous breasts

K2 = I am shocked by

K3 = summer has come

Tran（Hj6）= The voluptuously exposed breasts of yours makes me shocked but at the same time realize that summer has come.

Osoru-beki Chibusa（おそるべき乳房）　$\in$ Shockingly voluptuously built breasts

$\in$ Time（midst of hot summer）

$\in$ Event（taking a night rest）

$\in$ Location（seaside shore, swimming pool bench）

$\in$ Weather（Fine）

$\in$ Participant（middle aged dirty-minded man, writer）

$\in$ Situation（Enjoying the arrival of hot summer）

***　花冷えのちがふ乳房に逢ひにゆく　　　　　　　　眞鍋呉夫

K1 ＝花冷え（桜が咲いたが寒い）

K2 ＝私は別の女に逢いにゆく

m（"乳房"）＝"女"，"愛人"

省略＝理由，気分（罪悪感と期待感（?）），

状況，全体的に暗い倦怠感，など

M（K1, K2）＝ K1 の頃，K2 という事象（行動）が発生した

花冷えのちがふ乳房　　$\in$ Time（early spring, occasionally cold day）

$\in$ Event（a secret meeting, tryst）

$\in$ Location（some love hotel or woman's house）

$\in$ Weather（maybe cloudy）

$\in$ Participant（man and woman not married）

$\in$ Situation（Going to enjoy a secret immoral love）

***　密会の窓より高し梅雨の駅　　　　　　　眞鍋呉夫

K1 ＝私は女と密会している

K2 ＝（宿泊しているホテルの）窓よりも駅が高いところにある

K3 ＝梅雨時である

M ＝ K1　そして　K2 に気づいた，時は K3

省略（不言）：なぜ駅の高さが気になるのか？　全体的心情．状況

梅雨の駅$\in$ Time（early summer, rainy season）

$\in$ Event（a secret meeting, tryst）

$\in$ Location（some love hotel just adjacent to the railway station）

$\in$ Weather（Rainy）

$\in$ Participant（man and woman committing adultery）

∈ Situation（Enjoying a secret immoral love）

***　墓洗ふ汝（なれ）の隣は父の座ぞ　　　　　　　　角川源義

　　　　Hj ＝ Haka arau nare-no tonari-wa chichi-no za-zo

　　　　　　　　　　　　　　　　　　Kadokawa Genyoshi　who survives his son.

　　　He : Washing the gravestone of my son-----／ soon I will go ／ to your next. translated by N.T.

　　　　Hj ＝ K1 shite-iru-ga K2 de-aru（K3 seyo）

　　　　K1 ＝ haka-wo arau ＝ Washing the gravestone

　　　　K2 ＝ Omae-no tonari-wa chichi-no za-de-aru ＝ your next is my position

　　　　K3 ＝ Sabishi-garazu-ni matte ina-sai ＝ Don't be lonesome and wait me for a short time

　Tran（Hj）＝ I am washing your gravestone where I will visit soon, so don't feel lonely and wait
　　　　　　my arrival.

Corresponding Local Haiku-Ontology maybe:

Haka-Arai（墓洗ひ）Washing the gravestone　　∈ **Time（autumn）**

　　　　　　　　　　　　　　　　　　　　　　∈ **Event（Visiting his son's grave）**

　　　　　　　　　　　　　　　　　　　　　　∈ **Location（graveyard）**

　　　　　　　　　　　　　　　　　　　　　　∈ **Weather（maybe cloudy）**

　　　　　　　　　　　　　　　　　　　　　　∈ **Participant（writer, survived father）**

　　　　　　　　　　　　　　　　　　　　　　∈ **Situation（Thinking of the early death of his
　　　　　　　　　　　　　　　　　　　　　　　son, Loneliness）**

***　死ぬときは箸を置くやうに草の花　　　　　　　　小川軽舟

　　　　Hj ＝ Shinu-Toki-wa Hasi-wo Oku-youni Kusa-no Hana　　　Ogawa Keishuu

　　　　　Hj ＝ K1 suru-toki-wa K2 suru-youni K3

　　　　　K1 ＝ shinu ＝ Dying

　　　　　K2 ＝ hashi-wo-oku ＝ finish eating

　　　　　K3 ＝ Kusa-no-hana ＝ Nmeless grass flowers

　Tran（Hj）＝ He ＝The way of man's dying should resemble the way to finish eating; Look
　　　　　　withered unnamed grass flowers..

Corresponding Local Haiku-Ontology maybe:

Shinu-Toki（死ぬとき）The tome of death　∈ **Time（autumn）**

　　　　　　　　　　　　　　　　　　　∈ **Event（Person's Passing away）**

　　　　　　　　　　　　　　　　　　　∈ **Location（garden, field, or his humble house）**

$\in$ Weather（maybe cloudy）

$\in$ Participant（aged lonely male writer）

$\in$ Situation（Thinking of one's last moment calmly）

***　実のあるカツサンドなり冬の雲　　　　　　　小川軽舟

We will show only the corresponding part of haiku Ontology.

katsu-sando（カツサンド）Cutlet Sandwich $\in$ Time（winter）

$\in$ Event（Person's Passing away）

$\in$ Location（some local restaurant, serving rather simple foods usually）

$\in$ Weather（cloudy）

$\in$ Participant（aged lonely male writer）

$\in$ Situation（eating a frugal meal）

V　Season-Word Ontology for Haiku

In order to make and enjoy Haiku, it is inevitable to use SAIJIKI, a glossary of seasonal words. Usually Saijiki is a structure-less plain lists of seasonal words which often are accompanied with illustrative verses and some concise explanation. Saijki often is read as a life-course guide treating daily life style, events, foods, customs, manners and so on.

These seasonal words or phrases are mutually related and deeply bound with everyone's daily life. In this sense, Saijiki has an ontological property. In the followings we will illustrate an typical example of Saijiki as an poetic ontology and show how Saijiki is useful to understand and discern the beauty of Haiku.

In this section we will treat Haiku-Saijiki as an Ontology of Human7s daily Life. First of all we must explain and/or define the ontology.

Originally ontology is a philosophical concept of old German to investigate the essential nature of existence of all the things in this world. In the midst of highly computerized modern world, Tom Gruber used and expanded the concept of ontology to construct a universal knowledge describing system［Gruber, T.R.（1993）］.

Following his idea we can view an ontology as a kind of meta-program specification language to describe new knowledge. Remark that: from our standpoint "knowledge" means "new machine or

device manipulation knowledge". In his ontology, fundamental knowledge specification categories include: entity（individual item, object, class, set）, property, relation, condition, constraint, rule（if-then formulae）, event.

We also have to explain and introduce the concept of "upper ontology".　The upper ontology is defined to be the sub-ontology that located at the top position among all other ontologies and thus can command the entire domain of involved ontologies. The upper ontology is sometimes called otherwise such as upper-level ontology, top-level ontology, general ontology, general purpose ontology ［Takeda,H.（2004）］［Bateman, J., Henschel, R., and Rinaldi, F.（1995）］［Jurisica, I., Mylopoulos, J. and Yu. E.（1999）］.

We claim that upper ontology for human's daily life should reflect directly the intuitive understanding, natural association, commonsense of ordinary people. If this Haiku-Upper-Ontology could have a natural linkage to the common Saijiki, it would provide a good guide for understanding the aesthetics of Poetic Sentences, especially Haiku.

Next we would like to construct an Upper Ontology of Haiku Saijiki by referring the classical Saijiki such as ［R.Ohno（1994）］and ［S.Mizuhara（ed.）（2005）］.

・Upper Ontology of Haiku Saijiki（The Glossary of Seasonal Words）
　⊇ Time x Space x Event x Weather x Participant x Situation
・Time ⊇ Month, Season, esp. the end of the year, New Year, January, the Bon, the Festival of the Dead, Summer Vacation, the Tanabata, the Festival of the Weaver Star and the Cowherd Star, the Dry Season,
・Space ⊇ Location, Places of scenic beauty and historical interest, Remains and ruins, Historical building, Temple, Shrine, School, etc. Houses, Seashore, Mountain, Lake, Valley,
・Event ⊇ Festival, Ceremony,　Various activities of the school year,
・Weather ⊇ Rain, Shower, light rain, drizzle, pouring rain, the typhoon brought torrential rains, drenching rains, misty rain, drizzle, fine rain, summer afternoon shower, spring rain, spring drizzle, freezing rain, cloudy weather, haze, mist,
・Participant ⊇ Human, Animal, Abstract Thing, Machine, Vehicle,
・Situation ⊇ Mood, Atmosphere, Happy Occasion, Congratulation, Appreciation, Solemn Atmosphere, Serious Situation, Mysterious Situation, Fanny Situation,　Heart-warming Situation, Smile-provoking Situation, Sad Situation, Gloom-, Depression-, Despondency-, Miserable-,

Melancholy-, Puzzling-, Fascinating-, Irritating-, Angry-,-Situation,

Fig. 1 Upper Ontology of Haiku Saijiki

Beneath the items given in the above Upper-Ontology of Haiku, lots of keywords are assigned to locate.

Usually the top category of keyword's location assignment is, not by the alphabetical order, but by the Time and Date, that is, Month（∋ The Begging of the Year, January, February, March, April, May, June, July, August, September, August, November, December（= Shiwasu, Teacher Running）, The End of the Year,） or fine classification of Four Seasons（∋ early spring, middle spring, late spring, early summer, midsummer, late summer, early autumn, middle autumn, the harvest season, late autumn, early winter, midwinter, severe winter, late winter）

Thus each keyword is to have inevitably a lot of seasonal information and have potential to indicate some fixed time point in calendar. For this reason, each keyword is called seasonal word or phrase.

Every seasonal word carries the lots of information and message about human's daily life activity and social events in corresponding time-point; thus the Haiku, in spite of its ultimately short and concise 5-7-5 style, can convey very fruitful and imaginative messages to readers.

The gist of successful understanding or interpretation of the Haiku that you encounter occasionally is, thus you do have your own rich Haiku-Ontology or Saijki in your mind. Haiku-Ontology is doubtlessly an established profound knowledge base of long-range and huge- coverage human's activities.

Next let us try to expand profound knowledge about human's ordinary life activities which will give you a kind of mental consolation or feeling of nostalgia to your life so far.

Tako-age（凧あげ）flying a kite ∈ Time（early spring）

∈ Event（playing for rest）

∈ Location（an open space or field）

∈ Weather（fine weather with blue sky, but maybe with a breeze）

∈ Participant（maybe a young naughty boy of mischievous age）

∈ Situation（Relaxing and Refreshed, lively, sprightly）

Fig. 2 A Part of Haiku Ontology around Season-Word "Flying Kite"

Ⅵ Concluding Remark

We have viewed Japanese poetic sentences, especially a group of Haiku through using two kinds of semantic devices. One device is Functional Grammar, and the other is Haiku-Ontology or Haiku-Upper-Ontology.

Thanks to the effective power of these devices, we have successfully revealed the secret of "concise beauty" of Haiku to some extent. Haiku is an extremely simple Japanese poetic sentence, which is now a world-wide compositional model of beautiful sentence.

Most vital feature exists in Functional Grammar is the notion of meta-sentence which is a kind of operator for surface sentence formation. Meta-sentence is working over the domain of kernel sentences. The kernel sentence behaves like a fundamental element in language translation, which has canonical form of translation correspondence in target language and also has bi-directional (symmetrical) translation property. Thus kernel sentence has simple structure and is easily translatable and forms the baseline of overall translation.

Here we should note that translation can be read as a version of semantic interpretation, if we put some semantic form in translated target.

We have also introduced the notion of Haiku Ontology or haiku Upper Ontology, and then shown a trial of constructing a small version of Haiku-Upper-Ontology by using several classical Saijki as referencing corpus. Haiku Ontology gives us the profound knowledge about keyword/key phrase that composes the kernel of Haiku. Superficial mission of this keyword/key phrase is providing the temporal or seasonal information, but actually the amount of provided information is far more than that. This is the deep reason why an ultimately concise sentence, Haiku can represent or carry such a rich fruitful message in it.

Currently meta-sentences have been extracted and collected semi-automatically using naive pattern matching programs based on regular expression [A. Kinyon (2001)] [M.Saraki and Y.Nitta (2008)].

Our next step is to construct a more powerful program to extract and manipulate meta-sentences, and to make more extensive experiment to investigate the aesthetics of Haiku-like poetic sentences. The construction of more substantial Haiku Ontology is also our next goal to be pursued.

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