A COMPARATIVE STUDY OF THE TENSE-ASPECT SYSTEM BETWEEN JAPANESE AND ENGLISH: A FOUNDATION FOR A PEDAGOGICAL GRAMMAR OF JAPANESE USING LEARNERS' KNOWLEDGE OF THEIR MOTHER TONGUES*

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I. *Introduction*

One of the most important purposes of the pedagogical grammar of Japanese is production (Iori 2015a, 2016, 2017). For this purpose, the grammar must build on learners' knowledge of their mother tongues, and concisely describe the language to be acquired. Systematic descriptions based on comparative studies are needed for the former.

In this paper, I propose a tense-aspect system for modern Japanese based on the pedagogical grammar of Japanese and compare it with English. If the comparison is basically accurate, similar comparisons of tense-aspect systems between other European languages and Japanese should only need minor adjustments corresponding to differences between the former and English.

Using Japanese descriptions, this paper develops a common framework to use when teaching tense and aspect in Japanese.

II. *Pedagogical Grammar of Japanese Using Learners' Knowledge of Their Mother Tongue*

The motivation for this paper basically follows Zhang (2011), who argues that it is possible in adult L2 acquisition to make successful use of positive transfers while suppressing negative transfers. I adopt this view, which can be conceived of as "Japanese language education using knowledge of learners' mother tongues", and argue that it is a fruitful source of study to acquire a "grammar for production".

III. *Viewpoints Required in Comparative Studies*

As comparative study is important for Japanese language education using learners' knowledge of their mother tongue, I will briefly introduce in this section some relevant studies I deem important for Japanese language instruction.

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1. From Meaning to Form: Halliday (1994)

I begin with Halliday (1994), one of the most important works by this outstanding linguist. Halliday argues in this book that the most important characteristic of functionalism is its treatment of grammar as a process for mapping meaning onto form, which sharply contrasts with the formalist viewpoint that grammar is a way of mapping form onto meaning (Halliday, 1994:xiv).

While most comparative studies have taken a formalist perspective, typified by Chomsky, with positive outcomes, I argue this Hallidian functionalism perspective is essential for comparative study. Specifically, the formalist approach to comparative study tends to be restricted by *a priori* dogma that limits the comparison to grammatical concepts and parts of speech thought to be comparable in its theories.

Such formalist studies should be meaningful if their goal is to determine a 'universal grammar' or the like. It is, however, reasonable to think that comparative studies based on meaning are more useful for language education because, when learning an L2, learners essentially want to express in L2 what they can express in L1.

Since the Hallidian approach is based on meaning, researchers must constitute an analytic model to show how a common meaning can be mapped into different forms in two languages. When using a formalist approach, on the contrary, such a model is not required because a common form, or structure, between two languages is assumed theoretically.

It is regrettable, however, that in most Hallidian research on Japanese, researchers follow a Chomskian assumption of presuming a common structure between Japanese and English, and they tend to obtain few new findings, thus having little impact on the study of the Japanese language.

I have shown that the framework of Halliday and Hasan (1976) can well explain cohesion in Japanese texts (Iori 2007. See also Iori forthcoming a). In this paper, I attempt to describe the tense-aspect system of Japanese and compare it with English in a meaning-based framework.

2. Setting Semantic Field: Miyajima (1983)

Miyajima (1983) describes differences in how ideas in the semantic field of motion verbs are articulated in European languages. His work well explains differences between the meanings accessed in the two languages, providing useful insights to reference when attempting to compare two languages in a meaning-based framework.

For example, when comparing two verbs meaning "to fly in"—*hereingeflogen* in German with *tobikondekuru* in Japanese—we find that despite having almost the same constructions, semantically speaking, both *her-* and *ein-* are adverbs while all of *tobi-* (fly), *konde-* (come into), and *kuru* (come) are verbs.[1]

By comparison, while English has two expressions meaning "come in"—the condensed form of "enter" and the analytic "go/come in," it lacks the condensed form in the meaning of

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[1] *Konde-* is an infinitive form of *-komu*, which is a verbal morpheme never used independently (*i. e.*, a bound morpheme), while *tobu* (infinitive form: *tobi-*) and *kuru* can be used as either an independent word or as a verbal morpheme.

"go/come out" and thus has only the analytic "go/come out." The condensed form is lacking because while English borrowed "entrer (enter)" from French, it did not borrow "sortir (go out)."

Miyajima says that "motion [*idou*]" is a universal phenomenon. [...] However, it differs somewhat from language to language in terms of how it is encoded (Miyajima 1983＝1994: 43). This paper gives us an important and concrete implication when we consider how the same meaning is mapped into different languages, which is one of the theoretical research questions of this paper.

3. Importance of Comparison: Inoue (2013)

The following remarks by Inoue (2013:182) are important for comparative study.

(1) Comparing two languages or cultures involves arranging the characteristics of each and determining the "reasonable point(s)" by which "one can view both sides in a fair way."

Inoue (2015) discusses this concretely using Feng's (2006) comparison of responses by Chinese people when they cannot accept an invitation compared to those of Japanese people. While Chinese people give the fact of declination first, Japanese give the reason first, which confuses Chinese listeners.

Inoue concluded, as shown in (2) below, that two things are related in this case, and the only difference between the two languages is which aspect is given more weight in the communication in each language, but that "whether or not one says clearly" (Feng 2006) is not the essential point.

(2) a. Whether "talking in accordance with the reactions of addressee" (Chinese) or "avoiding saying something that may disappoint the addressee" (Japanese) is regarded as more important.
  b. Whether "ending a talk by saying the important information first" (Japanese) or "continuing a talk by giving the addressee chance(s) to ask" is thought to be more important (Chinese).

IV. *Description of the Tense-aspect System of Japanese*

This section describes the Japanese tense-aspect system, keeping the above points in mind.

1. Standard Description in the Japanese Descriptive Linguistics: Kudo (1995)

Kudo's (1995) tense-aspect system, developed based on Okuda (1978)'s framework, is considered the standard description of the Japanese tense-aspect system in descriptive Japanese linguistics (*Nihongogaku*).[2] Kudo's system can be summarized as shown in Table 1.

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[2] Moriyama (1988) is also important work which must be referenced.

TABLE 1   TENSE-ASPECT SYSTEM IN JAPANESE (1) (Kudo 1995; Iori 2012)

		Aspect	
		Perfective	Imperfective
Tense	Non-past	ru-form[3]$(-\phi^{4}-(r)u)^{5}$	teiru-form(-tei-ru)
	Past	ta-form$(-\phi$ -ta)	teita-form(-tei-ta)

2. Argument from L2 acquisition: Cui (2009)

In Table 1, the teiru-form and teita-form are regarded only as *tei + ru* and *tei + ta*, respectively. However, L2 acquisition research has highlighted that the difficulty L2 learners experience with the two forms differs depending on the combination of the usage of the aspect (progressive/resultative) and tense.

Cui (2009), one of the most important studies on the topic, ranks Japanese tenses as follows in order of increasing difficulty from a to c:

(3) a. present progressive
    b. past progressive, present resultative
    c. past resultative

Inagaki (2015) and Run (2017), partially refuting Cui (2009), suggest that the items in (3) should be listed instead as in (4), again in order of increasing difficulty:

(4) a. present progressive
    b. past progressive
    c. present resultative
    d. past resultative

3. Description of the Tense-aspect System of Japanese (revised)

In Table 1, I present a revised version of the tense-aspect system in Japanese based on the arguments in section Ⅳ.2 (Iori 2014).[6]

4. Basic Usage

The Japanese tense-aspect system should be separated into two usages: basic and derived. Table 2 shows the basic usage, which consists of the progressive and resultative tenses.

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[3] The ru-form is used in the non-past declarative sentence-final positions (with/without politeness).

[4] Φ shows that an element without overt forms exists.

[5] Perfective and imperfective include the combination of aspect and tense (Okuda 1978; Kudo 1995). Aspect is unmarked in morphology in the perfective, and is marked by -tei- in the imperfective. The non-past of verbs is marked by -(*r*)*u*. -Ru is used in weak verbs, or *itidan dousi* in Japanese, while -u is used in strong verbs, or *godan dousi*. For more details, see Iori (2012, 2017).

[6] For the description of the system for L2 leaners, see Iori and Shimizu (2016).

TABLE 2   TENSE-ASPECT SYSTEM IN JAPANESE (2) (BASIC USAGE)

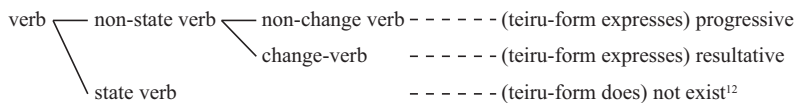|		Aspect				Function of -ru/-ta
		Perfective	Imperfective			
			No opposition	Progressive	Resultative	
		Non-state verb	State verb	Non-change verb	Change verb Motion verb	
Tense	Future	ru[7]	ru	teiru darou	teiru darou	Observation time[8]
	Present	×	ru	teiru[7]	teiru	
	Past[9]	ta[7]	ta	teita[7]	teita	

1) Important points of the basic usage shown in Table 2

   The following sections explain the main points from Table 2.

2) Classification of verbs

   Japanese verbs are classified from the aspectual viewpoint as shown in Figure 1 (Cf. Okuda 1978[10])[11]:

FIGURE 1   CLASSIFICATION OF VERB

verb ⎯⎯ non-state verb ⎯⎯ non-change verb - - - - - - (teiru-form expresses) progressive

                         change-verb   - - - - - - (teiru-form expresses) resultative

       state verb   - - - - - - (teiru-form does) not exist[12]

   We can check whether a verb is a non-change verb or change verb using the following syntactic tests (Cf. Vendler 1967)[13,14]:

   (5) a. If "interval words" + φ can co-exist with a verb and if "interval words + de" cannot, the verb is a non-change verb.
       b. If "interval words + φ" cannot co-exist with a verb and if "interval words + de" can, the verb is a change verb.

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   [7] *-Ru*/*-Ta*/*-Teiru*/*-Teita* are the abbreviated forms of the ru-/ta-/teiru-/teita-forms, respectively.

   [8] *-Ru*/*-Ta* in teiru-/teita-form express the observation time or reference time. For more details, see Iori (2014).

   [9] Past perfective *-ta* and past imperfective *-teita* have similar but different usages (Iori 2018).

   [10] Terms used in Figure 1 are my own, based on Okuda (1978). See Iori (2017).

   [11] Terms in Japanese are as follows:
      Non-state verb→*hizyoutai dousi*, State verb→*zyoutai dousi*
      Non-change verb→*hihenka dousi*, Change verb→*henka dousi*

   [12] Okuda (1978) merges state verbs and "type 4 verbs" in Kindaichi (1950) into "state verbs." Note that, even when there is a formal contrast of the ru-form and teiru-form (as in *niru*: "to resemble"), Okuda does not admit aspectual contrast if the two verb forms do not show the contrast of the perfective and imperfective. Okuda calls such a case "false aspect" (or *nise-asupekuto* in Japanese).

   [13] "Interval words + φ" corresponds to "for + interval words" in English, while "interval words + de" corresponds to "in + interval words".

   [14] Strictly speaking, (5) is a test frame to check if a verb is atelic/telic.

(6) Taro {ok 1zikan-ϕ/#1zikan de} hasitta.[15] → "Hasiru (run)" is a non-change verb.
        1 hour   in ran
   "Taro ran {ok for an hour/#in an hour}."

(7) Koori wa {*10pun-ϕ/ok 10pun de} toketa.[16] → "Tokeru (melt)" is a change verb.
   Ice TOP   minute   melted
   "The ice melted {*for 10 minutes/ok in 10 minutes}."

3) Motion verbs

In Japanese, the teiru-form of motion verbs expresses that the agent is at the place the movement heads for (i.e. they express the resultative aspect), and cannot express the process (i.e., progress), in sharp contrast with English. Therefore, we can see the following contrast:

(8) Taro wa   Oosaka ni itteiru.
      TOP Osaka to go-IMP-PS
   "Taro has gone to Osaka."

(9) *Taro wa ima Oosaka ni itteiru. Imagoro wa sinkansen no naka da to omou.
          Now   of inside COP I think
   "Taro is going to Osaka. I think he is on the Shinkansen now."[17]

(10) ok Taro wa ima, Oosaka ni mukatteiru. Imagoro wa sinkansen no naka da to omou.
                     head for-IMP-PS
    "Taro is heading for Osaka. I think he is on the Shinkansen now."

5. Derivational Usage[18]

There are five so-called "derivational" usages: repetition, experience-record, perfect, counterfactual, and adjectival usage.

1) Repetition

Repetition can be expressed using both the teiru-form and ru-form; the former implies more temporality.

(11) Taro wa {konogoro/ hitotuki   mae   kara/ϕ} asa   6zi ni okiteiru.
      TOP these days one month before since   morning 6   in wake up-IMP-PS
   "Taro is waking up 6 o'clock in the morning {these days/ϕ}".
   "Taro has been waking up 6 o'clock since last month."

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[15] The latter is grammatical if the course Taro ran is limited, so we can get the following contrast.
   (a)Taro wa 10kiro-o {*1zikan-ϕ/ok 1zikan-de} hasitta.
        TOP km ACC
   "Taro ran 10 km {*for an hour/ok in an hour}."

[16] Abbreviations used in this paper are as follows.
   ACC: Accusative, COND: Conditional, COP: Copula, DUR: Durative, FT: Future,
   IMP: Imperfective, NOM: Nominative, PERF: Perfective, PF: Perfect, POL: Polite,
   PS: Present, PST: Past, TOP: Topic

[17] This sentence is grammatical in English but not in Japanese.

[18] The usage discussed in this section is called "derivational" because, in contrast to "basic usage," there are no restrictions by verb types, as shown in Figure 1.

(12) Taro wa {?konogoro/??hitotuki   mae kara/ϕ} asa   6zi ni okiru.
                                                          wake up-PS
     "Taro wakes up at 6 o'clock in the morning {?these days/??since last month/ϕ}."

2) "Perfect" in Kudo (1995)'s sense

Kudo (1995) uses "perfect" to captures both the "experience record" and "perfect" usages described in this paper. This is, however, an overly simplistic account: experience-record expresses effects of past events that remain in the present (Figure 2), while the perfect simply expresses the temporal sequential relation (Figure 3). The direction of the effect, indicated by dashed arrows, are opposite.
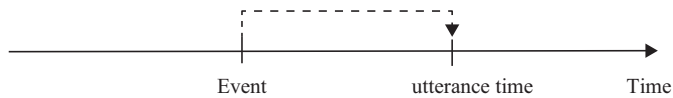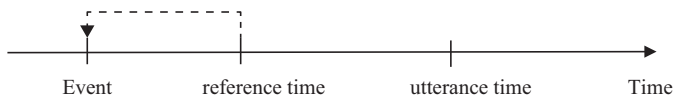
FIGURE 2   EXPERIENCE-RECORD

FIGURE 3   PERFECT

3) Experience-record[19]

Experience-record, or *keiken-kiroku* in Japanese, implies that the effect of past events remains in the present; this usage can be subdivided into three types:

Type A
   (13) Natsume Soseki wa 1867 nen ni umareteiru.[20](ok umareta/*umareta ko ga aru)
                       TOP   year in be born-IMP-PS be born-PST/be born -PF
        "(Lit.) Soseki Natsume has been born in 1867."
        "Soseki Natsume {ok was born/*has been born} in 1867."

Type B
   (14) Kare wa   koukouzidai   Kanana de kurasiteiru. Dakara, eigo   ga   umai.
          TOP   high school days Canada in live-IMP-PS So   English NOM good
        (ok kurasita/ok kurasita ko ga aru[21])
          live-PST   live   -PF
        "He has lived in Canada in his high school days, so he is good at English."
        "He {ok lived/ok has lived} in Canada in his high school days.～"

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[19] This type is discussed in depth in Inoue (2001). Note that this usage is almost exclusively restricted to the present (past or future usage is very rare).

[20] This type is commonly used in texts describing history.

[21] "V-ta ko ga aru" is a perfect form, which expresses one's experience of V requiring, contrary to the teiru-form, some interval of time between the event and the utterance time.

Type C

(15) (Setting: A detective is reporting information he collected on a criminal to his boss.)

Han'nin   wa   3ka   mae ni sono mise de susi   o   tabeteimasu.[22]

Criminal TOP 3 days ago in that store at sushi ACC eat-IMP-POL-PS

(*tabemasita/*tabeta ko ga arimasu)

  eat-POL-PST/eat -PF-POL-PS

"(Lit.) The criminal has eaten sushi at the restaurant three days ago."[23]

"The criminal {*ate/*has eaten} sushi at the restaurant three days ago."

4) Perfect

Perfect, or *kanryou* in Japanese, expresses that an event had occurred, occurred, or will have occurred before the reference time.

(16) Kaizyou ni tuita   toki,   konsaato wa   hazimatteiru-darou.[24] (Future perfect)

Hall   to arrive-PST when concert TOP begin-IMP-FT

"The concert will have begun when we arrive at the hall."

(17) Konsaato wa ima   hazimatta. (Present perfect[25])

              Now begin-PST

"The concert has begun."

(18) Kaizyou ni tuita   toki,   konsaato wa   hazimatteita. (Past perfect)

Hall   to arrive-PST when concert TOP begin-IMP-PST

"The concert had begun when we arrived at the hall."

5) Counterfactual

Counterfactuals in modern Japanese are usually expressed using the teiru-form and the teita-form, corresponding to the subjunctive past and subjunctive past perfect, respectively.

(19) Ima okane ga {areba/attara}, ano kamera o   katteiru. (Counterfactual present)

Now money NOM be-COND   that camera ACC buy-IMP-PS

"I would buy that camera if I had enough money."

(20) Ano toki okane ga {areba/attara}, ano kamera o katteita. (Counterfactual past)

That time   buy-IMP-PST

"I would have bought that camera if I had had enough money."

Note that in both cases, ba-/tara-clauses (both are conditional subordinate clauses) are

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[22] Note that in this type, *teiru* (containing present morpheme) not *teita* (containing past) is used, although adverbs denote the past. Compare (15) with the following.

   (b) Kare wa 3ka mae sono mise de sushi o {ok tabeta/*taberu}.

       TOP   ACC   eat-PST/eat-PS

     "He {ok ate/*eats}" sushi at the restaurant three days ago.

[23] A shop assistant who witnessed the criminal usually uses the teita-form, i.e., past progressive, because he observed the criminal.

   (c) Han'nin wa 3ka mae kono mise de sushi o {ok tabeteimasita/?tabeteimasu}.

                   This   eat-IMP-POL-PST/ eat-IMP-POL-PS

     "The criminal {ok was eating/?has eaten} sushi at this restaurant three days ago."

[24] -*Ta* in subordinate clause usually expresses relative tense (Mihara 1992; Iori 2012).

[25] Present perfect in modern Japanese is expressed by the ta-form. For more detailed discussion, see Iori (2015b).

needed for the teiru-/teita-forms to be interpreted as counterfactual, in sharp contrast to their English counterparts.

(19) (Watasi wa) ano kamera o <u>katteiru</u>.
     I   TOP   buy-IMP-PS
     "I have bought that camera."
Cf. (19) "I <u>would buy</u> that camera." (Ok as a subjunctive past.)
(20) (Watasi wa) ano kamera o katteita.
     I   TOP   buy-IMP-PST
     "I had bought that camera."
Cf. (20) "I <u>would have bought</u> that camera." (Ok as a subjunctive past perfect.)

6) Adjectival usage

Teiru-forms can be used adjectivally as follows.

(21) Mearii wa   aoi   me   o   siteiru.
     Mary TOP blue eye ACC do-IMP-PS
     "Mary has blue eyes."
(22) Yoshiko wa kireina kimono o kiteiru.
                  Beautiful   wear-IMP-PS
     "Yoshiko wears a beautiful kimono."

Note that in this usage, the ta-form is preferred to the teiru-form in noun-modifying positions.

(21) Aoi me o {(?)siteiru   /ok sita} Mary
                    Do-IMP-PS/do-PST
     "Mary, who has blue eyes."
(22) Kireina kimono o {(?)kiteiru   /ok kita} Yoshiko
                         Wear-IMP-PS/wear-PST
     "Yoshiko, who wears a beautiful kimono."

6. Summary

Table 3 summarizes the tense-aspect system in Japanese (× indicates that almost no cases exist.)

TABLE 3   TENSE-ASPECT SYSTEM IN JAPANESE (3) (DERIVATIONAL USAGE)

	Repetition	Experience-record	Perfect	Counterfactual	Adjectival	Function of -ru/-ta
Future	×	×	teiru darou	×	×	
Present	teiru	teiru	ta	teiru	teiru	Reference time
Past	teita	×	teita	teita	teita	

* In counterfactual, ba-/tara- clauses are obligatory.
* -Ru/-Ta functions as a reference time in perfect and counterfactual tenses (Iori 2014).

As Tables 2 and 3 show, the Japanese tense-aspect system is composed of only a few

morphemes (-ϕ-, -*tei*-, -*ru*, -*ta*) and subordinate clauses (-*ba*/-*tara* clauses), and the functions of -*ru*/-*ta* (observation time and reference time).

Based on the temporal components shown in the tables, Japanese can be considered to have six tense components, as shown in Table 4.

TABLE 4   JAPANESE TENSE SYSTEM

Past perfect	Past	Present perfect	Present	Future perfect	Future
teita	ta	ta	teiru/ru	teiru darou	ru

* Present tense of non-stative verbs corresponds to "basic usage" (progressive/resultative).

There are other aspectual forms expressing duration, or *keizoku* in Japanese[26].

TABLE 5   FORMS EXPRESSING DURATION IN JAPANESE

Tense of -ru/-ta	Observation time	Reference time	
	Duration at observation time	Duration until reference time	Duration from reference time
Future	tuzuke(ϕ/tei)ru darou[27]	×	×
Present	tuzuketeiru	tekita/tekiteiru[28]	teiku (darou)[29]
Past	tuzuke(ϕ/tei)ta[27]	tekiteita	teitta

The following are examples of each case[30]:

(23) a. Ame wa gogo   mo hurituzukeru darou. (DOT-Future-PERF)
    Rain TOP afternoon also fall-DUR-FT
    "It will continue to rain in the afternoon."
  b. Watasi ga   kaeru toki   mo ame wa turituzuketeiru darou. (DOT-Future-IMP)
    I   NOM return when also   fall-DUR-IMP-FT
    "It will continue to rain when I go back to home."
(24) Ame wa izen hurituzuketeiru. (DOT-Present)
          Still fall-DUR-IMP-PS
    "It is still raining."
(25) a. Ame wa sono hino gogo mo hurituzuketa. (DOT-Past-PERF)
           That day   fall-DUR-PST
    "It continued to rain in the afternoon of that day."
  b. Watasi ga kaeru toki mo awe wa izen furituzuketeita. (DOT-Past-IMP)
                      still fall-DUR-IMP-PST
    "It was still raining when I went back home."

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[26] Duration in this sense is that of Aktionsart; its aspectual meanings differ from perfective/imperfective (Cf. Teramura 1984; Moriyama 1988; Nitta 2009). Therefore, -*tuzukeru* has a syntagmatic relation with -*tei*-, meaning they can co-exist in a sentence.

[27] In the future and past of a duration at a given observation time, ϕ indicates perfective and -*tei*- imperfective.

[28] -*Tekuru* is a grammaticalized form of *kuru* (come). There is little difference between -*tekita* and -*tekiteiru*.

[29] -*Teiku* is a grammaticalized form of *iku* (go).

[30] Abbreviations are the following.
   DOT: duration at observation time; DURT: duration until reference time;
   DFRT: duration from reference time.

(26) a. Ima   made takusan hon   o   yondekita. (DURT-Present-PERF)
　　　Now until many   book ACC read-COME-PST
　　　"I have read many books."
　　b. Ima   made takusan hon   o   yondekiteiru. (DURT-Present-IMP)
　　　Now until many   book ACC read-COME-IMP-PS
　　　"I have read many books."
(27) Kare wa zyuken   mae ni takusan no hon o yondekiteita. (DURT-Past)
　　　he   take exam before many   of   read-COME-IMP-PST
　　　"He had read many books before he took the examination."
(28) Kare wa korekara   mo e   o   kaiteiku darou. (DFRT-Present)
　　　He TOP from now on also picture ACC paint-GO-FT
　　　"He will continue to paint pictures in the future."
(29) Sono mati no zinkou   wa sore ikou hetteitta. (DFRT-Past)
　　　That town of population TOP that after decrease-GO-PST
　　　"The population of the town continued to decrease in number after that."

V. *A Model for Comparison with Other Languages: A Comparison with English*

　　In this section, I compare the Japanese tense-aspect system described above with its English counterpart, consulting Kashiwano (1999) for details of the English language. In other words, the comparison will be made using the Japanese system, shown in Tables 2 to 5, as a model. Tables 6 to 9 show the results of this comparison.

TABLE 6   TENSE-ASPECT SYSTEM IN ENGLISH (1)[31]

| | Perfective | Imperfective | |
		Progressive	Resultative
	Non-state verb	State verb	Non-change verb Motion verb[32]	Change verb[33]
Future	will+Inf	will+Inf	will be+PsPrt	will be+PstPrt
Present	×	present form	is+PsPrt[34]	is+PstPrt[34]
Past	past form	past form	was+PsPrt[34]	was+PstPrt[34]

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[31] Abbreviations are as follows: Inf: infinitive, PsPrt: Present participle, PstPrt: Past participle.

[32] A sharp contrast between English and Japanese is observed in motion verbs: the former expresses progressive, while the latter expresses resultative.
　　(d) ok Taro is going to Osaka. I think he is on the Shinkansen now. (progressive)
　　(e) * Taro wa ima Oosaka ni itteiru. Imagoro wa sinkansen no naka da to omou.
　　　(=(9)) (ungrammatical under the interpretation (d))

[33] In English, this type is usually recognized as an adjective.
　　(f) The glass {will be/is/was} broken.
　For example, (f) "be+broken" should be interpreted as an adjective, contrary to Japanese, in which "wareteiru darou/wareteiru/wareteita" are all interpreted as a future/present/past form of "wareru (break; intransitive)," i.e., resultative. Note that Brazilian Portuguese is, in this respect, more similar to Japanese than English. For more details, see Toffori (2017).

[34] "Is" and "was" in Tables 6 and 8 are the representative forms of all persons and numbers.

TABLE 7   TENSE-ASPECT SYSTEM IN ENGLISH (2)

	Repetition	Perfect(1)[35]	Perfect(2)[35]	Counterfactual
Future	×	×	will have+PstPrt	×
Present	present form	have+PstPrt	have+PstPrt	would[36]+Inf
Past	used to+Inf	×	had+PstPrt	would have+PstPrt

TABLE 8   ENGLISH TENSE SYSTEM

Past perfect	Past	Present perfect	Present	Future Perfect	Future
had+PstPrt	past form	have+ PstPrt	present form /is+PsPrt[34]	Will have+ PstPrt	will+Inf

TABLE 9   FORMS EXPRESSING DURATION IN ENGLISH

Tense of -ru/-ta	Duration at observation time
Future	×
Present	have been+ PsPrt
Past	had been+ PsPrt

As can be seen in Tables 6 to 9, when compared with its Japanese counterpart, the tense-aspect system corresponds in most cases at the morpheme level. Note that, however, there is less correspondence in resultative usage.

VI.   *Conclusion*

In this paper, I attempted to describe the Japanese tense-aspect system, as a basic study for Japanese language teaching, using the learners' knowledge of their mother tongues, and compared it with its English counterpart. Tables 2, 3, 6 and 7 show the corresponding patterns, which are presented again here.

TABLE 2   TENSE-ASPECT SYSTEM IN JAPANESE (2) (BASIC USAGE) (recited)

		Aspect				Function of -ru/-ta
		Perfective	Imperfective			
			No opposition	Progressive	Resultative	
		Non-state verb	State verb	Non-change verb	Change verb / Motion verb	
Tense	Future	ru	ru	teiru darou	teiru darou	
	Present	×	ru	teiru	teiru	Observation time
	Past	ta	ta	teita	teita	

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[35] Perfect (1) and Perfect (2) correspond to experience-record and perfect in Japanese respectively.
[36] "Would" is the representative form of modal auxiliary verbs such as should and could.

TABLE 3   TENSE-ASPECT SYSTEM IN JAPANESE (3) (DERIVATIONAL USAGE) (recited)

	Repetition	Experience-record	Perfect	Counterfactual	Adjectival	Function of -ru/-ta
Future	×	×	teiru darou	×	×	
Present	teiru	teiru	ta	teiru	teiru	Reference time
Past	teita	×	teita	teita	teita	

TABLE 6   TENSE-ASPECT SYSTEM IN ENGLISH (1) (recited)

	Perfective	Imperfective		
			Progressive	Resultative
	Non-state verb	State verb	Non-change verb Motion verb	Change verb
Future	will+Inf	will+Inf	will be+PsPrt	will be+PstPrt
Present	×	present form	is+PsPrt	is+PstPrt
Past	past form	past form	was+PsPrt	was+PstPrt

TABLE 7   TENSE-ASPECT SYSTEM IN ENGLISH (2) (recited)

	Repetition	Perfect(1)	Perfect(2)	Counterfactual
Future	×	×	will have+PstPrt	×
Present	present form	have+PstPrt	have+PstPrt	would+Inf
Past	used to+Inf	×	had+PstPrt	would have+PstPrt

These tables show that the tense-aspect systems in Japanese and English have a one-to-one correspondence, which means that the Japanese system should be rather easy for native and proficient English speakers to learn.

However, as learners rarely fully utilize this knowledge, many errors often remain in learners' speech in terms of tense and aspect, even at the advanced level (Takanashi 2013).

The following are some of the tasks that will be addressed in future works.

First, we need to examine the correspondence of the system proposed in this paper in order to increase accuracy as a comparative study.

Second, we should compare English with other European languages (or languages having similar system to English) by modifying the English system proposed in this paper, or by using the English system as a model that enables comparisons between Japanese and other languages.

Third, we should compare the Japanese tense-aspect system with Chinese, which lacks tense as a grammatical category; this would enable comparisons to be made between Japanese and Southeast Asian languages such as Vietnamese and Thai, which have similar systems to Chinese.

The results of those comparisons will facilitate teaching the tense and aspect of the Japanese language and deepen our understanding of these grammatical categories.

REFERENCES

Cui Yazhen (2009) "SRE riron kara mita nihongo tensu asupekuto no syuutokukennkyuu" [Study on the acquisition of Japanese tense and aspect from the viewpoint of SRE Theory], *Nihongokyouiku*. 142: Tokyo.

Feng Fei (2006) *Nihonjin to Tyuugokuzin to no komunikeesyon* [Communication between Japanese and Chinese]. Izumi Syoin: Osaka.

Halliday, M.A.K. (1994) *An Introduction to Functional Grammar* (2nd Edition). London: Edward Arnold.

Halliday, M.A.K. & Ruqaiya Hasan (1976) *Cohesion in English*. London: Longman.

Inagaki, Shunji (2015) "Tyuugokugowasya ni yoru nihongo no tensu-asupekuto no syuutoku" [Acquisition of Japanese tense and aspect by Chinese speaking learners], *Tyuugokugowasya no tame no nihongokyouikukenkyuu*. 6, Nittyuu Gengo Bunka Syuppannsya: Osaka.

Inoue, Masaru (2001) "Gendai Nihongo no "ta"" [*Ta* in modern Japanese], Tsukuba Gengo Forum(ed.) *Ta no Gengogaku*. [Linguistics on *ta*], Hituzi Shobo: Tokyo.

Inoue, Masaru (2013) *Soodattanda Nihongo! Aiseki de damatteirareruka* [That's it Japanese! Can you remain silent when sitting with others?]. Iwanami Shoten: Tokyo.

Inoue, Masaru (2015) "Taisyou kenkyuu ni tuite kangaeteoku beki koto" [What should be kept in mind in contrastive studies] *Hitotsubashi Nihongokyouiku Kenkyuu*. 5, Koko Syuppan: Tokyo.

Iori, Isao (2007) *Nihongo ni okeru tekisuto no kessokusei no kenkyuu* [Study on Cohesion in Japanese text]. Kurosio Syuppan: Tokyo.

Iori, Isao (2012) *Atarasii Nihongogaku Nyuumon* (dai 2han) [An introduction to new Japanese linguistics (2nd edition)]. 3A Network: Tokyo.

Iori, Iori (2014) "Notes on the Subjunctive Mood in Modern Japanese", *Hitotsubashi Journal of Arts and Sciences*. 55-1, Hitotsubashi University: Tokyo.

Iori, Isao (2015a) ""Sansyutu no tame no bunpou" ni kansuru itikousatu" [A note on "grammar for production"], in Joro Abe, Isao Iori and Takuzo Sato(eds.) *Bunpou danwa kenkyuu to Nihongokyouiku no setten* [Interactions between researches on grammar and discourse and Japanese language education]. Kurosio Syuppan: Tokyo.

Iori, Isao (2015b) "Gendai Nihongo ni okeru tensu-asupekuto taikei ni tuite no itikousatu" [A note on the tense-aspect system in modern Japanese], Handout presented to 141st Kanto Nihongo Danwakai.

Iori, Isao (2016) ""Sansyutu no tame no bunpou" kara mita wa to ga" [*Wa* and *ga* from the viewpoints of "grammar for production"], Isao Iori, Takuzo Sato and Naoki Nakamata (eds.) *Nihongo bunpoukenkyuu no hurontia* [Frontiers of Japanese grammatical researches]. Kurosio Syuppan: Tokyo.

Iori, Isao (2017) *Ippo susunda nihongobunpou no osiekata* 1 [An advanced guide on how to teach Japanese grammar to foreign learners 1]. Kurosio Syuppan: Tokyo.

Iori, Isao (2018) *Ippo susunda nihongobunpou no osiekata* 2 [An advanced guide on how to teach Japanese grammar to foreign learners 2]. Kurosio Syuppan: Tokyo.

Iori, Isao (2019) "Imiryouiki kara kangaeru nihongo no tensu-asupekuto taikei no kizyutu" [A description of Japanese tense-aspect system based on the semantic field], *Gengo Bunka*. 55, Hitotsubashi University: Tokyo.

Iori, Isao(forthcoming a) *Nihongo sizihyougen no bunmyakusizi youhou no kizyututeki kenkyuu* [A descriptive study of anaphoric usage of Japanese demonstratives]. Hituzi Shobo: Tokyo.

Iori, Isao (forthcoming b) "Tensu-asupekuto no kyouiku" [Education of Japanese tense and aspect], Isao Iori and Takumi Tagawa (eds.) *Nihongo no tensu-asupekuto kenkyuu o toinaosu. Dai1kan Suru no sekai* [Rethinking the study on Japanese tense and aspect. Vol.1 The world of *suru*]. Hituzi Shobo: Tokyo.

Iori, Isao & Shimizu, Yoshiko (2016) *Zyoukyuu Nihngo bunpou ensyuu: Zikan o arawasu hyougen* [Seminar of Advanced Japanese: Temporal expressions]. 3A Network: Tokyo.

Kashiwano, Kenji (1999) *Kaitakusya Sousyo 9: Tensu to Asupekuto no gohou* [Kaitakusya Monograph 9: Usage of (English) tense and aspect]. Kaitakusya: Tokyo.

Kindaichi, Haruhiko(1950) "Kokugo Dousi no ichibunrui" [A classification of Japanese verbs], Reprinted in Haruhiko Kindaichi(ed.) *Nihongo dousi no asupekuto* [Aspect of Japanese verbs]. Mugi Syobo: Tokyo.

Kudo, Mayumi(1995) *Asupekuto tensu taikei to tekusuto* [Tense-aspect system and text]. Hituzi Shobo: Tokyo.

Mihara, Ken-ichi (1992) *Zisei kaisyaku to tougo gensyou* [Temporal interpretations and the syntactic phenomena]. Kurosio Syuppan: Tokyo.

Miyajima, Tatsuo(1983) "Nihongo to Yooroppago no idoudousi" [Motion verbs in Japanese and European languages], Reprinted in Tatsuo Miyajima (1994) *Goiron Kenkyuu* [Study on lexicology]. Mugi Syobo: Tokyo.

Moriyama, Takuro (1988) *Nihongo Dousizyutugobun no kenkyuu* [Study on Japanese verb sentences]. Meiji Shoin: Tokyo.

Nitta, Yoshio (2009) "Nihongo no akutionsuaruto" [Aktionsart in Japanese] *Nitta Yoshio nihongobunpou tyosakusen Dai1kan: Nihongono bunpoukategori o megutte* [Selected papers by Yoshio Nitta Vol1: On Japanese grammatical categories]. Hituzi Syobo: Tokyo.

Odlin, Terence(1989) *Language Transfer*. Cambridge University Press.

Okuda, Yasuo (1978) "Asupekuto no kenkyuu o megutte" [On the study of Japanese aspect] Reprinted in Yasuo Okuda(1985) *Gengo no kenkyuu* [Study of language]. Mugi Syobo: Tokyo.

Ran Luyun(2017) "Teirukei no siyou ni okeru tyuugokugowasya no isiki" [How do Chinese speaking learners of Japanese recognize *teiru*-form?], *Tyuugokugowasya no tame no nihongokyouikukenkyuu*. 8, Nittyuu Gengo Bunka Syuppannsya: Osaka.

Takanashi, Shino(2013) "Daigaku daigakuin ryuugakusei no bunsyouhyougen ni okeru bunpou no mondai" [Problems on the grammar found in essays written by undergraduate and postgraduate international students], *Kobe Daigaku Ryuugakusei Sentaa kiyou*. 19, Kobe University.

Teramura, Hideo(1984) *Nihongo no sintakusu to imi* 2 [Syntax and semantics in Japanese 2]. Kurosio Syuppan: Tokyo.

Toffori, Julia (2017) "*Buraziru Porutogarugo o bogo to suru nihongo gakusyuusya no kekkazason no teiru no siyoukeikou ni kansuru itikousatu*" [A study on the acquisition of resultative *teiru* by Brazil Portuguese speaking learners of Japanese], MA thesis of the Graduate School of Language and Society, Hitotsubashi University: Tokyo.

Vendler, Zeno(1967) *Linguistics in Philosophy*. Cornell University Press.

Zhang Linsheng(2011) *Sinpan Tyuugokugowasya no tame no nihongokyouikukenkyuu nyuumon* [New Edition: An introduction to the study on Japanese language teaching to Chinese

speaking learners of Japanese]. Nittyuu Gengo Bunka Syuppannsya: Osaka.