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A STUDY OF MIRATIVITY IN JAPANESE AND TURKISH

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ABSTRACT

Mirativity is a relatively recent, notable concept in linguistic typology. It is known that expressions of mirativity have no grammatical connection to evidential systems in many languages, while in other languages, person marking systems and aspectual forms can have meanings associated with new, unexpected knowledge and surprise (Aikhenvald, 2012, p. 436). Turkish is one of the languages in which an evidential marker, *-miş*, has mirative extensions. Similarly, in Japanese, mirative meanings are conveyed through the grammatical form *-ta*. In this study, we present the control of exclamatives and contexts on the mirative meanings comparatively in Turkish and Japanese using Aikhenvald's classification. Our findings indicate that mirativity is a subclass of modality as a separate category from tense and aspect in both Japanese and Turkish, and their miratives are in relation to evidentiality.

Key Words: mirativity, mirative meanings, exclamatives, Turkish, Japanese

JAPONCA VE TÜRKÇEDEKİ MİRATİV İFADELER ÜZERİNE

ÖZET

Mirativity (Hayret olgusu), dilbilim tipolojisinde nispeten yeni ve dikkate değer bir kavramdır. Mirativ ifadelerin birçok dilde kanıtsallık ile dilbilgisel bir bağlantısı bulunmazken, diğer dillerde kişi ve görünüş işaretleyicileri yeni bilgi, zihinsel hazırsızlık ve şaşkınlık anlamlarını barındırabilir (Aikhenvald, 2012, p. 436). Türkçe kanıtsallık ekinin (*-miş*) mirativ anlam uzantısı olduğu dillerden biridir. Benzer şekilde, Japoncada mirativ anlam gramatik bir şekil (*-ta*) ile ifade edilir. Bu çalışmada, Aikhenvald'ın sınıflandırması kullanılarak Japonca ve Türkçede bağlamların ve ünlemliklerin mirativ anlamları üzerindeki kontrolü karşılaştırmalı olarak tartışılmıştır. Bu çalışmada elde edilen bulgular, her iki dilde de mirativity

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olgusunun zaman ve görünüş sistemlerinden ayrı olarak kiplik kategorisinin bir alt sınıfı olduğunu ve kanıtsallık ile bağlantılı olduğunu göstermektedir.

Anahtar Kelimeler: mirativity olgusu, mirativ anlamlar, ünlemler, Türkçe, Japonca

INTRODUCTION

Mirativity is a relatively recent, notable concept in linguistic typology. The term was primarily linked to the semantic category and its prevalence as a grammatical category was pointed out by DeLancey (1997). This linguistic realization is manifested by many different ways within a language or across languages such as grammatical/verbal markers, pronouns, exclamation marks and overtones. “The range of mirative meanings across the world’s languages subsumes sudden discovery, surprise, unprepared mind, counter-expectation and new information to the speaker (and also the audience or the main character of a story)” (Aikhenvald, 2012, p. 435) indicated as below.

- i. sudden discovery, sudden revelation or realization (a) by the speaker, (b) by the audience (or addressee), or (c) by the main character;
- ii. surprise (a) of the speaker, (b) of the audience (or addressee), or (c) of the main character;
- iii. unprepared mind (a) of the speaker, (b) of the audience (or addressee), or (c) of the main character;
- iv. counterexpectation (a) to the speaker, (b) to the addressee, or (c) to the main character;
- v. information new (a) to the speaker, (b) to the addressee, or (c) to the main character. (Aikhenvald, 2012, p. 437).

According to Aikhenvald (2012), along with specifying “tense” in a language as present, past, remote past, or past versus non-past, we need “to specify the subset of the range of mirative meanings grammaticalized in the language” (p. 437). From this point of view, this paper presents a fresh look at a number of issues regarding the mirative meanings based on Aikhenvald’s classification above in Turkish and Japanese. Before the comparative discussion, we will sketch in tense, aspect, modality, evidentiality and mirativity categories in both Turkish and Japanese.

1. Tense, Aspect, Modality, Evidentiality and Mirativity in Turkish

1.1. Tense

“In Turkish, the primary tense differentiation is between past and non-past. The suffixes involved in the expression of present and future tense (-*I*)*yor*, -

mAktA and *-(y)AcAK*) are markers of relative tense. The verbal suffixes¹ [of past tense] *-DI* and *-mİş* ... express past events that are viewed as a completed whole” (Göksel and Kerslake, 2005, pp. 284-285).²

(1) Araba al-dı-m.³

Car buy-DI-1SG
'I (have) bought a car.'

(2) Araba al-mış.

Car buy-MIŞ
'(Apparently) S(he) (has) bought a car.'

Present tense is indicated by the verbal suffixes *-(I)yor* and *-mAktA*, which are markers of progressive aspect. “Progressive aspect, which presents a situation as ongoing at a particular point in time, is equivalent in tense terms to ‘relative present’” (Göksel and Kerslake, 2005, p. 286).

(3) Ali Japonya-da çalış-ıyor.

Ali Japan-LOC work-IYOR
'Ali works/is working in Japan.'

(4) Bu konu üzerinde çalış-makta-yım.

This matter on work-MAKTA-1SG
'I work/am working on this matter.'

For expressing future events, verbal markers *-AcAK* and *-(I)yor* are mainly used. “Among the verbal suffixes, the only explicit marker of future tense is *-AcAK*, [and] *-(I)yor* is regularly used with future reference when talking about events that are scheduled or fixed” (Göksel and Kerslake, 2005, p. 287).

(5) Bu tatlı-yı çok sev-ecek-ler.

This desert-ACC so much like-ACAK-3PL
'They will love this desert so much.'

(6) Yarın Ankara-ya gid-iyor-um.

Tomorrow Ankara-DAT go-IYOR-1SG
'I am going to Ankara tomorrow.'

¹ Because this paper mainly deals with grammatical/verbal markers of mirativity rather than the other factors expressing surprise or new information such as overtones, we mention verbal suffixes, but not copular markers or their use in nominal sentences.

² According to the rules of vowel harmony and consonant alternation in Turkish, most suffixes are variable in form, which are illustrated in capital letters (e.g. *-(I)yor*: [-(-i)yor], [-(-i)yor], [-(-u)yor], [-(-ü)yor]; *-mAktA*: [-maktA], [-mekte]; *-(y)AcAK*: [-(-y)acak], [-(-y)acağ-], [-(-y)ecek], [-(-y)eceğ-]; *-DI*: [-dı], [-di], [-du], [-dü], [-tı], [-ti], [-tu], [-tü]; *-mİş*: [-miş], [-miş], [-muş], [-mü]; *-(A)r*: [-(-a)r], [-(-e)r], [-(-i)r]; *-(y)Abil*: [-(-y)abil], [-(-y)ebil]; *-mAlI*: [-malı], [-meli]).

³ The examples whose source is not specified belong to the authors.

The use of *-(I)yor* as a marker of planned future events shows that the event will occur predictably as scheduled. On the other hand, the use of *-AcAK* in the contexts such as the example above would indicate more independent predictions.

1.2. Aspect

Comrie (1976) classifies grammatical aspect into two main types: perfective and imperfective. The former indicates the view of the situation “from the outside as a completed whole, with both its starting point and the endpoint visible, [while the latter refers to the view] from the inside as being incomplete and ongoing at the time in question” (Göksel and Kerslake, 2005, p. 288). In Turkish, perfective aspect is conveyed through the verbal suffixes *-DI* and *-miş*, and imperfective aspect is conveyed through the verbal suffixes *-(I)yor*, *-mAktA* and the aorist form *-(A)r* (ibid.).

Perfective aspect

- (7) a. Dün üç saat uyu-du-m.
Yesterday 3 hour sleep-DI-1SG
'I slept for three hours yesterday.'
- b. Üç saat uyu-muş-um.
3 hour sleep-MIŞ-1SG
'I seem to have slept for three hours.'

Imperfective aspect

- (8) a. Şu anda kitap oku-yor-um. (Progressive)
Now book read-YOR-1SG
'I am reading a book now.'
- b. Ayşe her sabah bir saat yürü-yor. (Habitual)
Ayşe every morning 1 hour walk-YOR
'Ayşe walks for an hour every morning.'
- c. Bu ilaç-ın çok sayıda yan etki-si ol-duğ-u
This medicine-GEN a lot of side effect-POSS.3SG be-VN-POSS.3SG
bilin-mekte-dir. (Progressive)
be known-MAKTA-GM
'It is known that this medicine has a lot of side effects.'
- d. Türkiye her yıl mısır ithal et-mekte-dir. (Habitual)
Turkey every year corn import-MAKTA-GM
'Turkey imports/is importing corn every year.'
- e. *Şu anda film izle-r. (Progressive)
Now movie watch-R
'S(he) watches a movie in her/his free time.'
- f. Boş zaman-lar-ı-nda film izle-r. (Habitual)
Free time-PL-POSS.3SG-LOC movie watch-R
'S(he) watches a movie in her/his free time.'

As is seen in (8) above, imperfective aspect has “a further distinction between progressive and habitual. [In progressive aspect,] it is presented as being ongoing or continuing at the temporal reference point. Habitual aspect, on the other hand, indicates that a situation is incomplete ... not at the level of any specific occurrence but in the sense that it is part of a *recurrent pattern*, which is shown as ongoing at the temporal reference point” (Göksel and Kerslake, 2005, p. 289). In Turkish, *-(I)yor* and *-mAktA* express both progressive and habitual aspect, but the aorist form *-(A)r* expresses only habitual as indicated above.

1.3. Modality

The verbal suffixes of modality are classified according to their modal meanings by Göksel and Kerslake (2005) as follows.

-(A)r may present:

(i) “a generalization, general rule, or statement of principle” (p.294)

(9) İki, iki daha dört ed-er. (Generalization)

‘Two and two make four.’ (Göksel and Kerslake, 2005, p. 295)

(10) Başbakan, Cumhurbaşkanı tarafından görevlendiril-ir. (General rule)

‘The Prime Minister is appointed by the President.’ (ibid., p. 296)

(ii) “an assumption or hypothesis” (p. 295)

(11) Mehmet geç gel-ir. (Assumption)

‘Mehmet will (probably) be late.’ (ibid., p. 299)

(12) Senden iyi mühendis ol-ur. (Hypothesis)

‘You would be a good engineer.’ (ibid., p. 298)

-(y)Abil and *-mAlI* may present:

(iii) “a statement concerning the possibility or necessity of the occurrence of an event or state” (p. 295)

(13) Bugün yağmur yağ-abil-ir. (Possibility)

‘It may/could rain today.’ (ibid., p. 302)

(14) Önce annene sor-malı-sın. (Necessity)

‘You must first ask your mother.’ (ibid., p. 306)

-mIş may present:

(iv) “a statement based upon knowledge acquired indirectly” (p. 295)

(15) O gün Ayşe’nin annesi biraz rahatsız-mış. (Indirect knowledge)

‘Apparently Ayşe’s mother was not very well that day.’ (ibid., p. 310)

The suffix *-mIş* mentioned above is evidential marker, which indicates a source of indirect knowledge. Because evidentiality is another

major category of speaker-generated modality, we will discuss it separately in the next section.

1.4. Evidentiality and Mirativity

In Turkish, the constructions with the verbal suffix *-miş* tend to have ambiguous interpretations without a context as illustrated in (16).

- (16) İzmir'e kar yağ-mış.
İzmir-DAT snow-MIŞ
'It (has) snowed in İzmir.'

This is because *-miş* is used for a range of functions expressing evidential notions and having mirative extensions in addition to its perfect use, which conveys inference, hearsay, or surprise to the listener (Slobin and Aksu, 1982). We can distinguish the interpretations of the example (16) through contexts as follows.

- (17) Bak, yer-ler bembeyaz, İzmir'e kar yağ-mış. (Inference)
Look ground-PL pure white İzmir-DAT snow-MIŞ
'Look! The ground is pure white. (It looks) it has snowed in İzmir.'
- (18) Hava durumu-na göre, İzmir'e kar yağ-mış. (Hearsay)
Weather report-DAT according İzmir-DAT snow-MIŞ
'According to the weather report, it has snowed in İzmir.'
- (19) Aa! Nasıl olur? İzmir'e kar yağ-mış. (Surprise)
Oh! How come? İzmir-DAT snow-MIŞ
'Oh! How come? It has snowed in İzmir.'

These types of evidentials which are related to the mirative meanings in languages such as Turkish generally have been focused on the unprepared mind and surprise of the speaker (Slobin and Aksu, 1982; DeLancey, 1997). Moreover, setting apart the evidential marker *-miş*, the copular *-(I)mış* is used to indicate new discovery as an element of surprise (Göksel and Kerslake, 2005, p. 311). In this study, we attempt to touch upon all the mirative meanings classified in Aikhenvald (2012) for a comparative discussion of Japanese and Turkish.

2. Tense, Aspect, Modality, Evidentiality and Mirativity in Japanese

2.1. Tense

Similar to Turkish, tense in Japanese is primarily classified into two terms: past and non-past (Kuno, 1973; Nakau, 1976; Soga, 1983; Ogihara, 1996).

Past

- (20) Kanojo-wa kyonen kekkonshi-ta. (彼女は去年結婚した。)
She-TOP last year get married-TA
'She got married last year.'

Non-past: future

- (21) Kanojo-wa rainen kekkonsu-ru. (彼女は来年結婚する。)
 She-TOP next year get married-(R)U
 ‘She will get married next year.’

The perfective marker *-ta* in (20) indicates the past time reference, and such sentences are ordinarily regarded as having ‘past tense’ in Japanese. In the case of (21), the verb ending *-(r)u*, gives the interpretation of non-past reference. The non-past form is ambiguous because it may refer to present readings as well as future readings such as *-(r)u* in the example (21). The present reading of *-(r)u* can be illustrated as below.

Non past: present

- (22) Kaban-no naka-ni hon-ga ar-u. (かばんの中に本がある。)
 Bag-GEN inside-LOC book-NOM exist-(R)U
 ‘There is a book in the bag.’

It is commonly noted that non-past markers indicate future readings with eventive sentences as exemplified in (21). On the contrary, present readings are only available with stative verbs such as *aru* ‘to exist/to be’ or *be+* constructions. Consequently, (22) conveys a present reading (Kuno, 1973; Nakau, 1976; Soga, 1983; Ogihara, 1996).

2.2. Aspect

Past and non-past markers have their progressive reference counterparts: progressive past and progressive non-past. This is called ‘progressive aspect’. Progressive aspect is encoded with *-Tei* as follows:

Progressive Non-past

- (23) Kare-wa Osaka-ni sun-dei-ru. (彼は大阪に住んでいる。)
 He-TOP Osaka-LOC live-TEI-RU
 ‘He lives in Osaka.’

Progressive Past

- (24) Kare-wa Osaka-ni sun-dei-ta. (彼は大阪に住んでいた。)
 He-TOP Osaka-LOC live-TEI-TA
 ‘He lived in Osaka.’

The form *-Tei* also has perfective reading, generally with achievement verbs as below:

Perfective non-past

- (25) Kanojo-wa eki-ni tsui-tei-ru. (彼女は駅に着いている。)
 She-TOP station-DAT arrive-TEI-RU
 ‘She has (already) arrived to the station.’

Unlike the progressive non-past form *-Teiru*, the progressive past *-Teita* may receive either a progressive or perfective reading with any type of verb (Nakau, 1976).

Progressive past

(26) (私は昨日 7 時に朝食を食べていた。)

Watashi-wa kinoo shichi-ji-ni chooshoku-wo tabe-tei-ta.
I-TOP yesterday 7-o'clock-at breakfast-ACC eat-TEI-TA
'I was having breakfast at 7 o'clock yesterday.'

Perfective past

(27) (私は昨日 7 時までに朝食を食べていた。)

Watashi-wa kinoo shichi-ji madeni chooshoku-wo tabe-tei-ta.
I-TOP yesterday 7-o'clock by breakfast-ACC eat-TEI-TA
'I had already had breakfast by 7 o'clock yesterday.'

Finally, *-ta* can also be used to express perfective statements.

Perfective past

(28) (私は (もう) 朝食を食べた。)

Watashi-wa (moo) chooshoku-wo tabe-ta.
I-TOP (already) breakfast-ACC eat-TA
'I have (already) had breakfast.'

2.3. Modality

In the literature, there have been specified three types of modality: epistemic, deontic and dynamic (Palmer, 1990; Nuyts, 2006). Epistemic modality refers to expressions that relate to displacement according to what is known or believed. Deontic modality is related to expressions that characterize what is permitted, required or desired. Dynamic modality expresses what courses of events are compatible with a particular body of facts and/or a subject's abilities (Kaufmann and Tamura, 2017, p. 2).

The expressions of modality in Japanese are categorized according to this threefold classification by Kaufmann and Tamura (2017) below.

(i) Epistemic Modality:

-daroo (and its polite form *-deshoo*), *-hazu*, *-nichigainai*, *-kamoshirenai*

(29) (ケン は 試験 に 受かる だろう。)

Ken-wa shiken-ni ukar-u daroo.
Ken-TOP exam-DAT pass-(R)U DAROO
'I guess Ken will pass the exam.' (Kaufmann and Tamura, 2017, p. 3)

(30) (ビールは今ごろ冷えているはずだ。)

Biiru-wa imagoro hie-tei-ru hazu-da.
 Beer-TOP by now get cold-TEI-(R)U HAZU-COP.NPST
 ‘The beer ought to be cold by now.’ (ibid.)

(31) (明日は雨が降るに違いない／かもしれない。)

Ashita-wa ame-ga fur-u nichigaina-i/kamoshirena-i.
 Tomorrow-TOP rain-NOM fall-(R)U must-NPST/may-NPST
 ‘It must/may rain tomorrow.’ (ibid.)

-daroo (or *-deshoo*) is regarded as a modal verb or a particle expressing the outcome of an inferential process (Hara, 2006). The other epistemic modal forms given above also can have an inferential interpretation, which is a notion of evidentiality. We agree with some treatments (e.g. Palmer, 1986; Frawley, 1992; Narrog, 2009) in the point that evidentiality is a sub-category of modality. Even though epistemic modality and evidentiality are related notions, it is uncontroversial to state that there may exist exceptions of some details, as evidentiality is generally reserved for markers that indicate the source of information by a thus qualified sentence rather than the degree to which it is plausible given an agent’s belief (Kaufmann and Tamura, 2017, p. 3). This is morphologically clear in Japanese; epistemic modal forms are different from evidential forms (Evidentiality of Japanese will be discussed in section 2.4).

(ii) Deontic Modality:

-Temo ii, -Tewa ikenai, -nakerebanaranai, -tahooga ii, -beki, -Tara ii, -tai, -Te hoshii, -tsumori, -e, -nasai, -Te kudasai, -(y)oo (or its polite form *-mashoo*)

(32) (飲んでもいい。)

Non-de-mo ii.
 Drink-GER-MO good
 ‘You may drink.’ (Lit. ‘It is good even if you drink.’)

(33) (高校生はタバコを吸ってはいけない。)

Kookoosei-wa tabako-wo su-tte-wa ik-ena-i.
 High school student-TOP cigarette-ACC smoke-GER-TOP go-NEG-NPST
 ‘High school students must not smoke.’ (Lit. ‘If/when high school students smoke, it can’t go.’)

(34) (栄養のある食べ物を食べなければならない。)

Eiyoo-no ar-u tabemono-wo tabe-nakerebanarana-i.
 Nutrition-GEN exist-(R)U food-ACC eat-must-NPST

‘I have to have nutritious food.’ (Lit. ‘If I don’t have nutritious food, it doesn’t become.’)

(Kaufmann and Tamura, 2017, p. 3)

As is understood from the literal meanings above, conditional constructions are used to express something permitted or required in Japanese.(35) (この薬を飲んだほうがいい。)

Kono kusuri-wo non-da hooga ii.
This medicine-ACC drink-should
‘You should take this medicine.’

-tahooga ii is a comparative construction, which refers to statements that can be recommendable but not definitely necessary.

(36) (約束は守るべきだ。)

Yakusoku-wa mamor-u-beki-da.
Promise-TOP keep-(R)U-BEKI-COP.NPST
‘Promise should be kept.’

-beki is generally used with the copula *-da* (or its polite form *-desu*), and it mainly conveys a notion of moral or social propriety.

(37) (ここで休んだらいいよ。)

Koko-de yasun-dara ii-yo.
Here-LOC rest-TARA good-PRTC
‘You should rest here.’ (Kaufmann and Tamura, 2017, p. 4)

-Tara ii is also a conditional expression, which denotes advice and literally means ‘if ..., it will be good’.

(38) (寿司が食べたい (です) 。)

Sushi-ga tabe-tai (desu).
Sushi-NOM eat-TAI (COP.POL.NPST)
‘I’d like to eat sushi.’

(39) (それを飲んでほしい (です) 。)

Sore-wo non-de hoshii (desu).
That-ACC drink-GER want (COP.POL.NPST)
‘I want you to drink that.’

(40) (日本では言語学を勉強するつもりだ。)

Nihon-de-wa gengogaku-wo benkyoo suru-tsumori da.
Japan-LOC-TOP linguistics-ACC study-TSUMORI COP.NPST
‘I intend/plan to study linguistics in Japan.’

The verbal suffix *-tai* is used to express the desires or wishes of the speaker. The complex form *-te hoshii*, which consists of gerund *-te* and the verb *hoshii* ‘want’ indicates the speaker’s desires or wishes for other people, meaning ‘I want sb to do sth’. The other form *-tsumori* includes plans or intentions.

(41) (それを食べる／食べなさい／食べてください。)

Sore-wo tabe-ro/ tabe-nasai/ tabe-te kudasai.
That-ACC eat-E/ eat-NASAI/ eat-TE KUDASAI
‘Eat that!/ Please eat that.’

(42) (食べよう／食べましょう。)

Tabe-yoo/ tabe-mash-oo.
Eat-(Y)OO/ eat-POL-(Y)OO
‘Let’s eat.’

The modal forms *-e* (verbal ending *-e*, *-yo* or *-ro*), *-nasai*, *-Te kudasai* in (41) are imperatives of Japanese. They have slightly different uses, as *-e* is a direct imperative and impolite form, while *-te kudasai* marks polite requests. *-nasai* is usually used to give instructions (e.g. to children).

(iii) Dynamic modality:

-(rar)e/koto ga dekiru/koto ga dekita

(43) (のりこはトルコ語を話せる／話すことができる。)

Noriko-wa torukogo-wo hanas-e-ru/ hanas-u koto ga deki-ru.
Noriko-TOP Turkish-ACC speak-E-(R)U/ speak-(R)U can-(R)U
‘Noriko can speak Turkish.’

Unlike epistemic and deontic modality, dynamic modality refers to statements that express abilities and skills. Japanese has two forms of dynamic modality: the allomorphic verbal suffixes *-eru* (NPST)/*-eta* (PST) and *-rareru* (NPST)/*-rareta* (PST), and the analytical expression *koto ga dekiru* (NPST)/*koto ga dekita* (PST). These forms can also convey capacities and opportunities as indicated below.

(44) (金持ちなので、ビルを丸ごと買える／買うことができる。)

Kanemochi nanode, biru-wo marugoto ka-e-ru/ ka-u
Rich because building-ACC whole buy-E-(R)U/buy-(R)U
koto ga deki-ru.
can-(R)U
‘Because she is rich, she can buy a whole building.’

(Kaufmann and Tamura, 2017, p. 5)

(45) (今日は晴れているから綺麗な写真を撮れた／撮ることができた。)

Kyoo-wa hare-tei-ru kara kirei-na shashin-wo
 Today-TOP clear up-TEI-(R)U because beautiful-PRTC picture-ACC
 tor-e-ta/tor-u koto ga deki-ta.
 take-E-TA/take-(R)U can-TA

‘Since the sky is clear today, we can take beautiful pictures.’ (ibid.)

(44) is the example of dynamic modality that expresses the capacity of the agent, and (45) denotes opportunity of clear sky.

2.4. Evidentiality and Mirativity

As mentioned in the previous section 2.3, evidentiality is a sub-category of modality, which is “grammatical marking of the nature of the information source” (Aikhenvald, 2012, p. 436). The exception of some details may be evidence to distinguish evidentiality and modality (i.e. epistemic modality). The former deals with the source of information while the latter refers to the degree of an agent’s belief. Thus, Japanese distinguishes these two categories by encoding different markers for each. Evidential markers of Japanese are classified by their semantics as follows (Narrog and Yang, 2018, p. 2).

(i) Hearsay markers: *-soo* (=p), *-rashii* (=a)

(ii) Inferential evidentials: *-soo* (-na), *-rashii* (=a), *-ppoi* (=a), *-yoo* (NA/=na), *-mitai* (=na)

* =p: particles, =a: particle adjectives, NA/=na: nominal adjective or particle nominal adjective, -na: suffix nominal adjective

We begin with the hearsay markers *-soo* and *-rashii*. *-soo* is “used to indicate the reporting or relaying of hearsay information without any additional speaker judgment” (Matsubara, 2017, p. 40).

Hearsay

(46) Ame-ga fut-tei-ru-soo-da. (雨が降っているそうだ。)

Rain-NOM fall-TEI-(R)U-SOO-COP

‘It is raining, I hear.’

(Context: Speaker is told that it is raining.) (Matsubara, 2017, p. 40)

The other evidential marker *-rashii* can be used as both hearsay (Makino and Tsutsui, 1989; McCready and Ogata, 2007) and as an inferential marker (Aoki, 1986).

Inferential

(47) Fune-ga ki-ta-rashii. (船が来たらしい。)

Ship-NOM come-TA-RASHII

‘It seems that a ship has come.’ (based on the sound of a horn) (Ogata, 2005)⁴

Hearsay

- (48) Rinjin-no hanashi-ni yoru-to, koko-wa daremo
 Neighbor-GEN speech-DAT according-COMP here-TOP anyone
 i-na-i-rashii. (隣人の話によると、ここは誰もいないらしい。)
 be-NEG-NPST-RASHII
 ‘According to the neighbor, no one lives here.’ (ibid.)⁵

It is appropriate to say that *-rashii* should be paraphrased with *-soo* in the sense that both purely include hearsay evidence (McCready and Ogata, 2007).

Hearsay

- (48’) Rinjin-no hanashi-ni yoru-to, koko-wa daremo
 Neighbor-GEN speech-DAT according-COMP here-TOP anyone
 i-na-i-soo-da. (隣人の話によると、ここは誰もいないそうだ。)
 be-NEG-NPST-SOO-COP.NPST
 ‘According to the neighbor, no one lives here.’

Secondly, as seen above, Narrog and Yang (2018) presents five inferential evidential markers of Japanese. Unlike the hearsay marker *-soo*, which bears a full-tensed sentence, the inferential marker *-soo* bears the infinitive form of verbs.

- (49) (ジョンは今夜のパーティーに来そうだ。)

Jon-wa konya-no paatii-ni ki-soo-da.
 John-TOP tonight-GEN party-DAT come-SOO-COP.NPST
 ‘It seems that John will come to the party tonight.’
 (McCready and Ogata, 2007, p. 153, with some modifications)

According to Narrog and Yang (2018), ‘*-soo* is fundamentally distinct from the other [inferential] markers in that it is basically future-oriented, or bi-phasic. That is, *-soo* implies two phases, one at a point in time 1, at which the state of affairs is not yet realized, and another one at point in time 2, at which the event is going to be realized. The other inferential evidentials present the state of affairs as a whole and are therefore monophasic. Thus, *-soo*’s basic meaning can be labelled as ‘apparent imminence’ (p. 5)’.

⁴ The example is by Ogata (2005), but we adopt it from McCready and Ogata (2007:154) with slight modifications.

⁵ The example is by Ogata (2005), but we adopt it from McCready and Ogata (2007:155) with slight modifications.

On the contrary, *-rashii*, *-ppoi*, *-yoo*, and *-mitai* are not future-oriented unlike *-soo* (Narrog and Yang, 2018).

(50) (あの人はいないようだ／いないらしい。)

Ano hito-wa i-na-i-yoo-da/i-na-i-rashii.

That person-TOP be-NEG-NPST-YOO-COP.NPST/ be-NEG-NPST-RASHII
‘She’s apparently not here.’

(Narrog and Yang, 2018, p. 7, with some modifications)

To differentiate between *-yoo* and *-rashii*, it is pointed out that *-yoo* can express the speaker’s own judgement or a judgement based on evidence immediately available to the speaker, while *-rashii* implies a distance between the speaker and the judgement; that is, the judgement is secondhand or based on evidence not immediately available to the speaker (Narrog and Yang, 2018).

-mitai is an inferential evidential used generally in spoken language, and it is semantically equivalent to *-yoo*.

(51) (ジョンは今夜のパーティーに来るみたいだ。)

Jon-wa konya-no paatii-ni ku-ru-mitai-da.

John-TOP tonight-GEN party-DAT come-(R)U-MITAI-COP.NPST
‘It seems that John will come to the party tonight.’

(McCready and Ogata, 2007, p. 153, with some modifications)

Finally, *-ppoi* is a very recently developed evidential that expresses certain connotations which can be used to indicate a higher degree of uncertainty of judgement or doubtfulness (Narrog and Yang, 2018).

(52) Nanka ki ni shi-tei-ru-ppoi. (なんか気にしているっぽい。)

Something mind-TEI-(R)U-PPOI

‘Seems like he’s nervous about something.’

(Narrog and Yang, 2018, p. 8)

The other grammatical category called mirativity encodes different markers from evidentiality in Japanese unlike Turkish. In the view of the grammatical relation of markers, as is the case in Turkish, mirative meanings are conveyed through a grammatical form *-ta* in Japanese. *-ta* has mainly five modal meanings: (i) sudden discovery, (ii) sudden realization, (iii) confirmation, (iv) determination in advance, and (v) pressure/encouragement to the listener (Muramatsu, 1991; Chung, 1993).

(i) *sudden discovery*

(53) (あ、ありました。ここですよ。)

A, ari-mashi-ta. Koko-desu-yo.
 A exist-(a polite form of) COP-TA Here-(a polite form of) COP-PRTC
 ‘Oh, (surprisingly) it is here!’ (Muramatsu, 1991, p. 39)

(ii) *sudden realization*

(54) (あつ、あすは約束があった。)

A, asu-wa yakusoku-ga at-ta.
 A tomorrow-TOP appointment-NOM exist-TA
 ‘Oh, (I just realized that) I have an appointment tomorrow.’ (ibid.)

(iii) *confirmation*

(55) (あすの午後は会議がありましたね。)

Asu-no gogo-wa kaigi-ga
 Tomorrow-GEN p.m.-TOP meeting-NOM
 ari-mashi-ta ne.
 exist-(a polite form of) COP-TA PRTC
 ‘There is a meeting tomorrow afternoon, isn’t there?’ (ibid.)

(iv) *determination in advance*

(56) (これで間違いなくあいつは死んだ！)

(completion of murder plan) korede machigainaku aitsu-wa shin-da!
 So now certainly that guy-TOP die-TA
 ‘So now, that guy is certainly dead!’ (Chung, 1993, p. 31)

(v) *pressure/encouragement to the listener*

(57) (じゃ、みな、すわった、すわった。)

Ja, mina, suwat-ta, suwat-ta.
 Then everybody sit down-TA sit down-TA
 ‘So, everybody, sit down.’ (ibid.)

In these meanings of *-ta*, sudden discovery (53) and sudden realization (54) are known to refer to mirativity and they have been used to describe mirativity in Japanese by many researchers (for example Teramura, 1984; Takahashi, 1985; Chung, 1993; Kaneko, 1995; Inoue, 2001). We will describe them providing specific examples and compare them with their Turkish counterexamples in the following section.

3. A Comparison of Mirative Meanings in Japanese and Turkish

a. Sudden Discovery, Sudden Revelation or Realization

In most studies, “discovery” is described as a usage of modality concerning a continuous state from the past to the present which is just realized (Kunihiro, 1967; Kinsui, 1998; Inoue, 2001). In respect of this mirative meaning, there is a large number of studies that semantically categorize it. For example, Chung (1993) classifies the meaning of discovery into two interpretations: (i) predictive discovery and (ii) accidental discovery. He exemplifies and distinguishes them as below.

(i) *predictive discovery*

(58) (やっぱり、ここに本があった。)

Yappari, koko-ni hon-ga at-ta.
As expected here-LOC book-NOM exist-TA
‘As expected, the book is here.’

(Chung, 1993, p. 29)

(ii) *accidental discovery*

(59) a. (やっぱり、ここに本があった。)

? Yappari, koko-ni hon-ga at-ta.
As expected here-LOC book-NOM exist-TA
‘As expected, the book is here.’

b. (おや、ここに本があった。)

Oya, koko-ni hon-ga at-ta.
Oh here-LOC book-NOM exist-TA
‘Oh! (Surprisingly) The book is here.’

(ibid.)

According to Chung (1993), predictive discovery refers to a case in which we cannot be certain of the existence of the information, but we can predict that it may exist, search for it and find or discover that thing. On the contrary, accidental discovery refers to a case that something is found or discovered completely by chance. Thus, the former interpretation bears adverbs such as *yahari/yappari* ‘as expected’, *yosoodoori* ‘predictably’, or *omottatoori* ‘as supposed’, while the latter is possible with interjections such as *oya!* / *a!* ‘oh! / my!’.

As is seen above, Chung (1993) mentions that the interpretations of discovery are variable by exclamative expressions. However, it can be observed that different predicative markers have an effect on those interpretations.

(60) (After searching his book for a time and finally finding it in the bag)

a. (あ、ここにあった (入ってた) 。)

A, koko-ni at-ta (hait-tei-ta).
Oh here-LOC exist-TA (go into-ASP-TA)
'Oh! It's here!'

b. (あ、ここにある (入ってる) 。)

A, koko-ni ar-u (hait-tei-ru).
Oh here-LOC exist-PRS (go into-ASP-PRS)
'Oh! It's here!' (Inoue, 2001, p. 99)

Kinsui (1998) claims that the expressions with *-ru* (cf. 60b) only indicate an object existing before one's eyes, while expressions with *-ta* (cf. 60a) articulate a feeling that someone "finally found" something for which he was searching, which is defined as "predictive discovery" by Chung (1993).

On the other hand, in reference to accidental discovery, Inoue (2001) and Sadanobu (2014) propose that when we find something accidentally, we use *-ru* but not *-ta* because *-ta* mostly needs a prediction or situational awareness.

(61) a. (あれ？こんなところに財布が落ちている。)

Are? Konna tokoro-ni saifu-ga ochi-tei-ru.
Huh? This place-LOC wallet-NOM fall-ASP-PRS
'Huh? (Unexpectedly) A wallet has fallen here.'

b. (あれ？こんなところに財布が落ちていた。)

? Are? Konna tokoro-ni saifu-ga ochi-tei-ta.
Huh? This place-LOC wallet-NOM fall-ASP-TA
'Huh? (Unexpectedly) A wallet had fallen here.'

(Inoue, 2001, p. 145)

In this sense, it is considered that Turkish shows the same behavior with Japanese. For accidental discovery, expressions without *-miş* may be acceptable rather than ones with *-miş* because, for some cases, *-miş* mostly needs a prediction or situational awareness. Compare the expressions with and without *-miş* in (62b).

(62) (Discovering a spot at an unusual place (for spots) on someone's face (e.g. the tear trough) in the train)

a. (あ、あんなところにホクロがある／*あった。)

A, anna tokoro-ni hokuro-ga ar-u/*at-ta.
Oh that place-LOC spot-NOM exist-PRS/exist-TA
'Oh, she has a spot at such a place.' (Sadanobu, 2014, p. 21)

- b. A, ora-sı-nda ben var/?var-mış.
 Oh there-POSS.3SG-LOC spot exist-φ(PRS)/exist-MIŞ
 ‘Oh, she has a spot at such a place.’

Both of the expressions in (62b) “var” and “varmış” can be used for the case that someone discovers that a person sitting opposite him has a spot in an unusual place, such as the tear trough. Yet, the expression without *-miş* “var” can indicate a feeling of surprise after discovering something accidentally, while the one with *-miş* “varmış” cannot be used for accidental discovery. “varmış” here marks that someone sees something black on a person’s tear trough, but he does not realize what it is. He looks carefully and finally realizes that it is a spot. Thus, this sentence would come after the example “varmış”: A, orasında ben varmış, sinek sandım. ‘Oh, she has a spot at such a place, which I thought is a fly’. This shows that *-miş* needs a prediction or situational awareness as is the case of *-ta* in Japanese.

However, in the case of “var”, the interpretation of surprise for accidental discovery cases is considered possible only with the interjection “Aa!”. In other words, when we use “var” without any interjections or exclamatives, it simply states that something exists. On the contrary, “varmış” can manifest the meaning of discovery even if there are no interjections or exclamatives. An example with context would make this explanation clearer, such as:

(63) (Ali realizes he has no cigarettes and wants one from his friend)

- a. Ali: Sigara-n var mı?
 Cigarette-POSS.2SG. exist. Q
 ‘Do you have a cigarette?’
 Sinan: Var, bir tane buyur.
 Exist one here you are
 ‘I have, take one.’
 ??Yok ya.
 There is not regrettably
 (After checking his pockets) Var, bir tane buyur.
 Exist one here you are
 ‘Unfortunately I don’t. (After checking his pockets) I have, take one.’
- b. Ali: Sigara-n var mı?
 Cigarette-POSS.2SG. exist. Q
 ‘Do you have a cigarette?’
 Sinan: Yok ya.
 There is not regrettably
 (After checking his pockets) Var-mış, bir tane buyur.
 Exist-MIŞ one here you are
 ‘Unfortunately I don’t. (After checking his pockets)
 (Surprisingly) I have, take one.’

The next mirative meaning we will discuss in this section is sudden revelation/realization. As described in section 2, in Japanese the mirative marker *-ta* indicates sudden realization, especially when someone forgets about an event that has not happened yet and remembers suddenly. In most Japanese studies, this meaning of *-ta* is called as *omoidashi* or *sooki* ‘recall/remembering’.

(64) (あっ！明日は会議があった！)

A! Ashita-wa kaigi-ga at-ta!
Oh tomorrow-TOP meeting-NOM exist-TA
‘Oh! (I just remembered/realized that) I have a meeting tomorrow!’

(65) (日本語のテストは来週だった！)

Nigongo-no tesuto-wa raishuu-dat-ta!
Japanese-GEN test-TOP next week-COP-TA
‘(I just remembered/realized that) The Japanese test is next week!’

Similarly, sudden realization of near future is conveyed through mirative marker *-miş* in Turkish.

(66) Aa, haftaya toplantı var-mış!

Oh next week meeting exist-MIŞ
‘Oh! (I just remembered/realized that) I have a meeting next week!’

(67) Aman, yarın sabah sınav-ım var-mış.

Oops tomorrow morning test-POSS.1SG exist-MIŞ
‘Oops! I have a test tomorrow morning.’

b. Surprise and Unprepared Mind

Mirativity is a linguistic universal and a separate grammatical category, and “miratives in different languages make a choice of one or several mirative values” (Aikhenvald, 2012, p. 473). That is, among five mirative meanings proposed in Aikhenvald (2012), some languages have simply one or more mirative values such as surprise and unprepared mind and acquire different markings for each meaning. For example, “Lisu has four special markers, covering different facets of the mirative range” (Aikhenvald, 2012, p. 473). In a similar fashion, Turkish has the *-miş* particle which is used for meanings of surprise and the unprepared mind as well. To distinguish these meanings, we should consider the context before or after the sentence, as well as the nuance of exclamatives/interjections.

(68) a. (She realizes that her father has come to support her and says:)

Yaşasın! Baba-m burada-ymış. (Surprise)
Hurray father-POSS.1SG here-MIŞ.COP
‘Hurray! My dad is here!’

- b. (She sees her father in the same bar while she is smoking, who does not know she smokes)

‘Eyvah! Baba-m burada-ymiş. (Unprepared mind)
 Oh no father-POSS.1SG here-MIŞ.COP
 ‘Oh no! My dad is here!’

- (69) a. (Her friend’s 2-year-old son calls her name for the first time and she reacts:)

A, benim ad-ım-ı öğren-miş. (Surprise)
 Oh my name-POSS.1SG-ACC learn-MIŞ
 ‘Oh, he knows my name.’

- b. (Although she wrote her name anonymously on the internet, someone she doesn’t like calls her name)

Kahretsin, benim ad-ım-ı öğren-miş. (Unprepared mind)
 Oh no my name-POSS.1SG-ACC learn-MIŞ
 ‘Oh no! He knows my name.’

In Japanese, modal markers *-noda/-nda* and *-teshimau/-chau* appearing with *-ta* have similar functions as *-miş*. *-teshimau/-chau* especially conveys both affirmative and contradictory interpretations. For instance, we compare the following examples including the predicate *neru* ‘to sleep’ (for Japanese) and *uyu-* ‘to sleep’ (for Turkish).

- (70) (Ne-chat-ta) (寝ちゃった)

Situation 1: (Someone believes he has slept well)

(ぐっすり寝ちゃったよ。)

Gussuri ne-chat-ta yo.
 Well sleep-CHAU-TA PRTC
 ‘I had a good night’s sleep.’

Situation 2: (Someone who planned to wake up early wakes up and looks at his watch)

(うわー、こんな時間まで寝ちゃった。)

Uwaa, konna jikan made ne-chat-ta.
 Oops this time until sleep-CHAU-TA
 ‘Oops! I fell asleep until this time.’

Situation 3: (Watching the sleeping baby who was banging about and not fast asleep)

(おー、天使のように寝ちゃったよ。)

Oo, tenshi-no youni ne-chat-ta yo.
 Oh angel-GEN such as sleep-CHAU-TA PRTC
 ‘Oh, she is fast asleep like an angel.’

(71) (Uyu-muş-um)

Situation 1: (Someone believes he has slept well)

Ne güzel uyu-muş-um.
 What well sleep-MIŞ-1SG
 ‘How well I slept.’

Situation 2: (Someone who planned to wake up early wakes up and looks at his watch)

Hayda, bu saat-e kadar uyu-muş-um.
 Oops this time-DAT until sleep-MIŞ-1SG
 ‘Oops! I fell asleep until this time.’

Situation 3: (Watching the sleeping baby who was banging about and not fast asleep)

Yaa, melek-ler gibi uyu-muş.
 Oh angel-PL such as sleep-MIŞ
 ‘Oh, she is fast asleep like angels.’

As is illustrated above, Japanese eliminates the ambiguity of affirmative and contradictory interpretations through a context, as is the same with Turkish. In the case of “uyu-muş-um” given in the example (71), Slobin and Aksu (1982, p. 192) already states that the process, although predicated in the first person, occurred outside of the speaker’s awareness as one of the functions of *-miş* but not within the mirative range.

c. Counter-expectation and New Information

The meaning of counter-expectation refers to the opposition of the fact included in the speaker’s knowledge or expectation (Sadanobu, 2004).

(72) (When someone thinks that the drink on the table is water in the banquet and drinks it)

(えっ！これ、焼酎だった！)

E, kore shouchuu-dat-ta!

(Japanese)

Ah this shouchuu (a Japanese spirit)-COP-TA

‘Ah! (Unexpectedly) This is a shochu!’

(73) (When someone joins a dance school and goes there for the first time thinking that the lady he saw in commercial will teach him to dance)

Hayda, dans hoca-m erkek-miş. (Turkish)

Oops dance teacher-POSS.1SG man-MIŞ

‘Oops! (Unexpectedly) My dance teacher is a man.’

As is illustrated in (72) and (73), both Japanese and Turkish use mirative markers for the cases in which the speaker’s knowledge in the past is different from the fact in the present.

With respect to the other mirative meaning “new information”, it is mostly interpreted that there is a similarity between counter-expectation and new information in both languages.

(74) (Someone thinks that (s)he doesn't like fish, but (s)he realizes (s)he actually likes it after tasting)

a. (私は魚が好きだったんだ。)

Watashi-wa sakana-ga suki-dat-ta-nda. (Japanese)
I-TOP fish-NOM like-COP-TA-MOD
'(I just realized that) I like fish.'

b. Ben balık sev-iyor-muş-um. (Turkish)
I fish like-PROG-MIŞ-1SG
'(I just realized that) I like fish.'

On the other hand, there are some examples of new information in Turkish, which are fully independent of old information and counter-expectation.

(75) (Someone visits a city for the first time and says to his/her friend:)

Ne güzel şehir-miş.
What nice city-MIŞ
'How nice the city is!'

CONCLUSIONS

In this study, we presented a fresh look at a number of issues regarding the mirative meanings based on Aikhenvald (2012)'s classification in Turkish and Japanese. Japanese encodes mirativity with *-ta* and modal markers *-noda/-nda*, *-teshimau/-chau* appearing with *-ta*, while Turkish has simply one mirative marker *-miş*. Both Japanese and Turkish use mirative markers for the cases in which the speaker's knowledge in the past is different from the fact in the present. *-ta* and *-miş* also have similar functions in the sense that they mostly need a prediction or situational awareness, thus they are inappropriate for accidental discovery situations. For the discussion, we focused on the control and effects of exclamatives and contexts on the mirative meanings comparatively. It can be concluded that we should take the context before or after the sentence or the nuance of exclamatives/interjections into consideration to distinguish mirative meanings in both languages.

REFERENCES

- Aikhenvald, A., Y. (2012). The essence of mirativity. *Linguistic Typology*, 16, 435-485.
- Aoki, H. (1986). Evidentials in Japanese. In Wallace Chafe & Johanna Nichols (Eds.), *Evidentiality: The linguistic coding of epistemology* (pp. 223-238). New Jersey: Ablex Publishing Corporation.
- Chung, H., J. (1993). Nihongo ni okeru -ru, -ta kei to Modariti: Bunmatsu Keishiki wo chuushin ni (The forms -ru, -ta and modality in Japanese: focusing on the sentence final form). *Kokugogaku kenkyuu to shiryoo* 17. Kokugogaku Kenkyuu to Shiryoo no Kai, 24-34.
- Comrie, B. (1976). *Aspect*. Cambridge University Press, Cambridge.
- DeLancey, S. (1997). Mirativity: The grammatical marking of unexpected information. *Linguistic Typology* 1, 33-52. Berlin: Mouton de Gruyter.
- Frawley, W. (1992). *Linguistic semantics*. Hillsdale, NJ: Lawrence Erlbaum.
- Göksel, A. and Kerslake, C. (2005). *Turkish: A Comprehensive Grammar*. Routledge, New York.
- Hara, Y. (2006). *Japanese discourse items at interfaces* (Doctoral Dissertation). University of Delaware, Newark, DE.
- Inoue, M. (2001). Gendai Nihongo no -ta: Shubunmatsu no "...ta" no Imi ni tsuite (-ta in Modern Japanese: The Meaning of -ta as a Final Form of the Main Sentence). *-ta no Gengogaku*. Hitsuji Shoboo.
- Kaneko, T. (1995). *Gengo no Jikan Hyoogen*. Hitsuji Shoboo.
- Kaufmann, M. and Tamura, S. (2017). Japanese modality- Possibility and necessity: prioritizing, epistemic, and dynamic. In Wesley Jacobsen and Yukinori Takubo (Eds.), *The Handbook of Japanese Semantics and Pragmatics* (pp. 1-33). Moulton de Gruyter.
- Kinsui, S. (1998). Iwayuru 'Muudo no -ta' ni tsuite: Jootaisei to no Kanren kara (So-called modal -ta: In relation to Stativity). *Tokyo Daigaku Kokugo Kenkyuushitsu Sooritsu Hyakunen Kinen Kokugo Kenyuu Ronshuu*. Kyuuko Shoin.
- Kunihiro, T. (1967). *Koozooteiki Imiron*. Sanseidoo.
- Kuno, S. (1973). *The structure of the Japanese Language*. The MIT Press, Cambridge, Massachusetts.
- Makino, S. and Tsutsui, M. (1989). *A dictionary of basic Japanese grammar*. Tokyo: The Japan Times.
- Matsubara, J. (2017). *The Semantics and Pragmatics of the Japanese Evidentials - Rashii, -Sooda, and -Yooda: an Experimental Investigation* (Doctoral Dissertation). Northwestern University, Evanston, Illinois.
- McCready, E. and Ogata, N. (2007). Evidentiality, modality and probability. *Linguistics and Philosophy* 30 (2). 147-206.

- Muramatsu, Y. (1991). Iwayuru “Hakken”, “Kakunin”, “Sooki” no -ta koo (The notion of -ta so-called “discovery”, “confirmation”, “recall”). *Nagoya Daigaku Jinbunkagaku Kenkyuu* 20, 39-50.
- Nakau, M. (1976). Tense, aspect and modality. In Shibatani (Ed.), *Syntax and Semantics 5, Japanese Generative Grammar*. New York: Academic Press, 421-482.
- Narrog, H. (2009). *Modality in Japanese: The Layered Structure of the Clause and Hierarchies of Functional Categories*. John Benjamins.
- Narrog, H. and Yang, W. (2018). Evidentiality in Japanese. In Alexandra Y. Aikhenvald (Ed.), *The Oxford Handbook of Evidentiality* (pp. 1-23). Oxford University Press, Oxford, UK.
- Nuyts, J. (2006). Modality: Overview and linguistic issues. In William Frawley, Wolfgang Klein and Stephen Levinson (Eds.), *Expression of Cognitive Categories: The Expression of Modality* (pp. 1-26). Walter de Gruyter&Co. KG Publishers, Berlin.
- Ogata, N. (2005). A dynamic semantics of modal subordination. *Proceedings of the International Workshop of Logic and Engineering of Natural Language Semantics 2005*. The Japanese Society of Artificial Intelligence, Tokyo.
- Ogihara, T. (1996). *Tense, Attitudes and Scope*. Dordrecht: Kluwer.
- Palmer, F., R. (1986). *Mood and Modality*. Cambridge University Press, Cambridge.
- Palmer, F., R. (1990). *Modality and the English Modals*. Second edition. London and New York: Longman.
- Sadanobu, T. (2004). Muudo no -ta no Kakosei (The Pastness of modal -ta). *Kokusai Bunkagaku Kenkyuu: Kobe Daigaku Kokusai Bunkagakubu Kiyoo* 21, 1-68.
- Sadanobu, T. (2014). “Hakken” to “Miratibu” no Aida: Naze tsuugengoteki kenkyuu to majiwarunoka (Interval of “Discovery” and “Mirative”: Why it is associated with cross-linguistic studies). *Nihongogaku to tsuugengoteki kenkyuu to no taiwa: Tensu, aspekte, muudo kenkyuu wo tooshite* (pp. 3-38). Kuroshio Shuppan.
- Slobin, D. and Aksu, A. (1982). Tense, aspect, and modality in the use of Turkish evidential. In P. J. Hopper (Ed.), *Tense-aspect: Between semantics and pragmatics, Typological Studies in Language* (pp. 397-405). Amsterdam: John Benjamins.
- Soga, M. (1983). *Tense and Aspect in Modern Colloquial Japanese*. Vancouver: University of British Columbia Press.
- Takahashi, T. (1985). *Gendai Nihongo Doushi no Asupekuto to Tensu (Aspect and Tense of Modern Japanese Verbs)*. Kokuritsu Kokugo Kenkyuusho, Shuei Shuppan.
- Teramura, H. (1984). *Nihongo no Shintakusu to Imi II (Syntax and Meaning in Japanese II)*. Kuroshio Shuppan.