

Alliteration and the Holistic Typology of Japanese

Hisao Tokizaki

Abstract: The standard theory of Japanese phonology since McCawley (1968) has argued that Japanese has a pitch accent on the antepenultimate mora in nouns and on the penultimate mora in verbs and adjectives. The standard theory of Japanese accent (cf. Kubozono 2011) argues for the accent on the (ante)penultimate mora, but in opposition to that argument, in this paper I contend that Japanese has word-initial stress as well as an optional pitch-fall accent (cf. Duanmu 2008). I point out that traditional Japanese uses alliteration rather than rhyme in verse such as *waka* (Japanese short poetry), and that the fixed pitch pattern LHH.. is used in a *waka* (Japanese short poem) in *karuta* (playing cards) tournaments, irrespective of the natural pitch patterns. I argue that the fixed pitch pattern emphasizes the word-initial/phrasal-initial strength. The fact that Japanese poetry uses alliteration is in keeping with the word order in Japanese, which has a consistent head-final order (e.g. object-verb, noun-postposition). Then, Japanese is not a counterexample to the typological generalization that languages with alliteration have initial stress in words, compounds and phrases, and a head-final order (e.g. object-verb), as Donegan and Stampe (1983) argue.*

Keywords: stress, word order, rhythm, poetry, rhyme, accent.

Languages: Japanese, English.

1. Introduction

The languages of the world vary in quite a number of respects in phonology, morphology, syntax and so on. One of the challenges for linguistic research is to find correlations between these properties and to restrict the possible variations to a limited number of parameters (cf. Baker 2001, Newmeyer 2005). This idea of reducing the number of parameters to a minimum goes well with the minimalist approach to language, which tries to restrict variation to the output conditions in phonology or semantics (cf. Chomsky 2012). In this paper, I will focus on alliteration in verse and its correlation to other properties of languages, including word stress location and word order. In section 2, I illustrate alliteration in the holistic typology of languages. In section 3, I argue that Japanese verse and wordplay use alliteration rather than rhyme. In section 4, I explain why alliteration is used in head-final languages such as Japanese.

* This article is based on my presentations at LACUS 2018 (Linguistic Association of Canada and the United States) at Boston college on July 24, 2018 and the third meeting of the project Rinsetsu-shokagaku nori-ire-gata-no shuhoo-ni yoru on-in-riron-no kensho [External and internal verification of phonological theory by means of adjacent science-based methods] in Kobe on March 18, 2019. I would like to thank all the participants who gave me invaluable comments and suggestions. This work was supported by Kakenhi (15H03213, 16H03427, 20H01269).

Section 5 concludes the discussion.

2. Alliteration in Holistic Typology

The correlation between alliteration and other phenomena has been discussed in holistic typology, which tries to find some basic principle common to the components of grammar in the world's languages (cf. Plank 1998 for a detailed review of holistic typology). For example, discussing Indo-Germanic metrics, Kuryłowicz (1970:12-16; 1975: 152-158) proposes an implicational universal for the relation between alliteration and reduplication (cf. Plank 1998: 219).

- (1) If verse is alliterative, then there is productive reduplication, but not vice versa.

Meid (1971: 105-106) further proposes a correlation between alliteration, reduplication and word-initial stress as shown in (2) (cf. Plank 1998: 219).¹

- (2) If verse is alliterative, then there is productive reduplication and word stress is initial.

Meid argues that fixed initial accent is a necessary condition for the effectiveness of alliteration: early Latin and Old Irish have fixed initial accent and alliteration while Greek and Old Indic languages do not.

Comparing Munda languages and Mon-Khmer languages in the Austroasiatic family, Donegan and Stampe (1983) point out the correlation between rhythm in verse and other linguistic features such as stress location and word order. Munda languages, which use alliteration, have initial stress in words, compounds and phrases and a head-final order (e.g. object-verb), while Mon-Khmer languages, which use rhyme, have final stress in words, compounds and phrases and a head-initial order (e.g. verb-object).²

In Tokizaki (2019: 205) I pointed out that alliteration can be seen in (Balto-) Finnic, Icelandic, Germanic, and some other languages, most of which have word-initial stress (for a detailed study of alliteration in the history of English, see Minkova 2003). I have argued that Altaic languages (Turkic, Mongolic and Tungusic), which have head-final word order (e.g. object-verb, noun-postposition), also use alliteration. Although some researchers have argued that Altaic languages have (near)

¹ Meid (1971: 105-106) claims as in (i) and (ii).

- (i) Sollte die angenommene Beziehung zwischen beiden Phänomenen zutreffen, so wäre auch für das reduplizierte Praeteritum in dieser Periode Anfangsbetonung erwiesen, denn auch die alliterative Technik setzt Anfangsbetonung voraus (Signalisierung des Wortanfangs). (p. 105)
- (ii) Reduplizierende Sprachen mit Initialakzent wie das frühe Latein oder das Altirische haben dagegen ebenfalls alliterative Techniken entwickelt. (p. 106)

² Other studies of holistic typology including Bally (1944), Lehmann (1973) and Gil (1986) discuss the relation between rhythm and word order, but they do not refer to alliteration vs. rhyme in poetry.

final word accent, I contend that Altaic languages have word-initial stress as well as a pitch accent on the following syllable or mora. For supporting evidence, I pointed out that vowel reduction, the variety of vowels, vowel harmony, alliteration in verse and wordplay, emphatic stress, lengthening, reduplication and gemination.

One question to be addressed is whether Japanese uses alliteration or rhyme. The origin and family relations of Japanese have been a mystery. Its status as an Altaic language has been highly controversial. Below, I point out that Japanese uses alliteration in traditional verse, and argue that alliteration can support the idea that Japanese has initial strength as well as pitch fall accent in a mora the same as the other Altaic languages.

3. Alliteration in Japanese verse

In this section, I argue that traditional Japanese uses alliteration rather than rhyme in verse. Although alliteration is not obligatory in Japanese traditional verse (cf. Okazaki 2018), it is well known that alliteration is found in some examples of *waka* (Japanese short poetry) (cf. Kobayashi 2001: 332-343 for more examples of alliteration in *waka*).

- (3) *taki-no oto-wa / tuete hisashiku / narinuredo /*
 waterfall-of sound-Top stop long ago became-but
na-koso nagarete / nao kikoekere
 name-Emph flew still heard (Emp = emphatic particle)
 ‘This waterfall’s melodious voice was famed both far and near; although it
 long has ceased to flow, yet still with memory’s ear its gentle splash I hear.’³
 (by Dainagon Kinto (966-1041), no. 55 in *Hyakunin Isshu*)
- (4) *hisakata-no / hikari nodokeki / harunohi-ni /*
 high sky-of light peaceful spring day-on
shizugokoro naku / hana-no chiruramu
 calm-mind without flower-Nom scatter
 ‘In the peaceful light of the ever-shining sun in the days of spring, why do the
 cherry’s new-blown blooms scatter like restless thoughts?’⁴
 (by Kino Tomonori (845?-907), no. 33 in *Hyakunin Isshu*)
- (5) *yoki-hito-no / yoshi-to yoku-mite / yoshi-to ihishi /*
 good-man-of good-C well see good-C said
yoshino yokumiyo / yokihito yokumi
 Yoshino look well good man look well
 ‘The good ones of the past found Yoshino good, and often had a good look,

³ Translated by William N. Porter (*A Hundred Verses from Old Japan: Being a translation of the Hyaku-nin-issuu*, Tuttle publishing, Tokyo. 1979. p. 55).

⁴ Translation by Japanese Text Initiative, Electronic Text Center, University of Virginia Library
<http://jti.lib.virginia.edu/japanese/hyakunin/noJIS/hyaku33.html>.

and spoke good of it. Have a good look, my good one, have a good look.⁵

(by Emperor Temmu, *Manyōshū* (late 7th to late 8th century) vol. 1, no. 27)

Note that these examples use vowel alliteration as well as consonant alliteration (*ta* and *na* in (3), *i* and *a* in (4), and *yo* in (5)), which shows that Japanese is a mora language. Note also that every alliterative phrase in (5) starts with High-Low pitch as shown in (6), where the pitch fall between an H and L is represented with an apostrophe.

- (6) *yo'ki-hito-no /yo'shi-to yo'ku-mite /yo'shi-to ihi(')shi /*
HLLLL HLL HLLL HLL LH(orL)L
yo'shino yo'kumiyo /yo'kihito yo'kumi
HLL HLLL HLLL HLL

Interestingly, in *Karuta* tournaments, which use *Hyakunin Isshu* (one hundred people, one poem) for playing cards, the reader reads all the phrases in all the verses with the same 'unaccented' pitch pattern – LHHHH for a five-mora phrase and LHHHHHH for a seven-mora phrase– irrespective of their original pitch patterns. For example, the verse in (3) is read as in (7a) in the original pitch (in modern Tokyo Japanese) and as in (7b) in a *Karuta* tournament.

- (7) *taki-no oto-wa / taete hisashiku / narinuredo / nakoso nagarete /*
nao kikoekere
a. LHH LHL HLL LHH LHHLL LHL LHL HL LHHHL
b. LHH HHH LHH HHH LHHHH LHH HHH LH HHHHH

Figure 1 below shows the result of analyzing a sound file of a reading of this verse, which shows the phrase-initial L pitch.⁶ Another example of *Hyakunin Isshu* is shown in (8).⁷

- (8) *chihayaburu / kamiyomo kikazu / tatsuta-gawa / karakurenaini /*
mizu kukuru-towa
a. LHHHL HLLL LHH LHHLL LHHHLLL LH LHHLL
b. LHHHH LHHH HHH LHHHH LHHHHHH LH HHHHH
'All red with leaves Tatsuta's stream so softly purls along, the everlasting
Gods themselves, who judge 'twixt right and wrong, ne'er heard so sweet a
song.'

(by Ariwara-no Narihira, no. 17 in *Hyakunin Isshu*
(first half of the 13th century))

As shown in (7) and (8), every phrase in all the verses is read with the initial low pitch followed by a series of high pitches as in (7b) and (8b), which are different from the original pitch patterns in (7a) and (8a). Although the reason for this fixed pitch in a

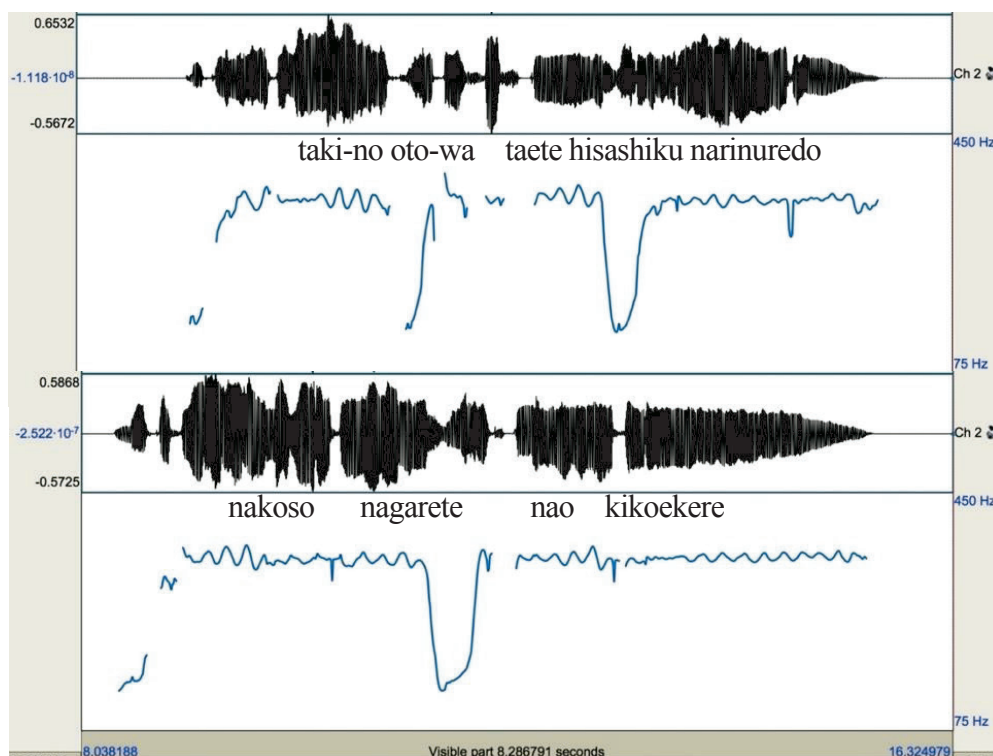
⁵ Translated by Ian Hideo Levy (*Hitomaro and the birth of Japanese lyricism*, Princeton University Press, Princeton, NJ. 1084, p. 68).

⁶ The sound file is taken from https://youtu.be/ud_QhJpSs0M (accessed on July 15, 2018) and analyzed by Praat (Boersma and David 2018).

⁷ A recorded reading is available at <https://youtu.be/gksTcrFATQc> (accessed on July 15, 2018).

Karuta tournament is unknown, some possible reasons are: (i) LHH..H is a neutral or unmarked pitch pattern in Japanese; (ii) if phrases in a verse were read with their original pitch pattern, the pitch pattern would be an extra cue for *karuta* players to touch the right playing card; (iii) the reading itself is an art and should be done in a formal way; (iv) the phrase-initial low pitch makes the initial mora prominent; (v) the phrase-initial low pitch works as a marker for the start of each phrase (5-7-5-7-7 mora); and (vi) the fixed pitch pattern LHH.. is used for emphasizing the word-initial/phrasal-initial strength.

Figure 1: LHH..H reading for *Karuta* tournaments (6b)



Alliteration is also used in a shorter form of verse *haiku*, which has 5 7 5 mora. Some examples are shown in (9) and (10).

- (9) *negurashi-ya / nebuchiyo nebuchi / nemu-no hana*
 ‘Sleep to spend a day with prayers to Amitabha, seeing flowers of a silk tree’
 (Issa Kobayashi, *Hachiban nikki*)
- (10) *utagauna / ushio-no hana-mo / ura-no haru*
 ‘No doubt that splashing sea water makes flowers in the spring at the seashore’

(Basho Matsuo, 1689)

On the other hand, rhyme has not been common in *haiku* (Kobayashi 2001: 344, Mabesoone 2003: §1.3).

One might argue that traditional Japanese verse uses rhyme in addition to alliteration. For example, the verse in (11) uses the same vowel *i* at the end of each

phrase except for the third phrase.

- (11) *karikurashi / tanabatatsume-ni / yado karamu /
amanokahara-ni / ware-wa kinikeri*

‘I spent a whole day in hunting, so I will rent a room at Tanabata princess
because I came to the riverside of Amanogawa.’

‘Having hunted all day, let us borrow a lodging from the Weaver Maid, for we
have come to the shore of the River Heaven.’⁸

(by Ariwara-no Narihira (9th century), *Kokinwakashu*, no. 418)

However, this verse also uses vowel alliteration (or assonance) *a* in each phrase. It is not clear whether the author intended rhyme or not because the third phrase does not end in *i*. Here I assume that traditional Japanese verse generally uses alliteration rather than rhyme.

It should be noted that there have been some attempts to import rhyme into Japanese poetry (cf. Kobayashi (2001: 674–681) for a historical overview). Most notably, the literary movement ‘matinee poetique’ started in the 1940s, and tried to make rhymed verses (especially sonnets) in Japanese. For example, Takehiko Fukunaga’s ‘Hinoshima’ (1943) starts with the two stanzas shown in (12).⁹

- (12) *Shi-no basha-no yuragi ikuhi-wa meguru
Tabi-no hate inishie-no bi-ni kayoi
Hana-to koryoo-to yoru-to-wa nemuru
Hukashigina tooi huudo-no ikoi
Shikkoku-no mori-wa mukyuu-o tozashi
Yume-o koe kigi-wa midori-o utau
Yakusoku-o someru hohoemi-no hizashi
Kono sei-no nagai wadachi-o arau*

Here, the last mora (plus the preceding vowel) of each line is chosen for the rhyme scheme. However, the ‘matinee poetique’ movement was criticized by the poet Tatsuji Miyoshi and was abandoned in 1950. Miyoshi (1948) argued that rhyme does not work well in Japanese, which has SOV word order with verbs at the end: the number of verbs is smaller than that of nouns, so fewer words are available to rhyme than in SVO languages, for example. Miyoshi also argues that Japanese does not have coda consonants (except for *n*), which limits the variation of rhyme to only five patterns, *a*, *i*, *u*, *e*, *o*.

Some poets have still tried to use rhyme in their work. For example, Shuntaro Tanikawa (1931-) tries to use alliteration and rhyme in his poems. For example, his *Kappa* includes a lot of alliteration and rhyme, as shown in (13), where low pitch is

⁸ *Kokin Wakashū: Kokin wakashū: the first imperial anthology of Japanese poetry : with Tosa nikki and Shinsen waka* by Helen Craig McCullough, Stanford Univ. Press, 1985. p. 100.

⁹ Machine Poetiku Shishuu, ed. by Takehiko Fukunaga et al. p. 18, Suiseisha 2014. originally published by Shin-zen-bi sha 1948.

underscored and pitch fall is marked as H'L.¹⁰

- (13) *kappa kappa ra'tta* kappa stole
kappa rappa kappa ra'tta kappa stole a trumpet
totte chi'tte-ta' 'totte chitteta' (sound of a trumpet)
kappa na'ppa katta kappa bought vegetables
kappa na'ppa i'ppa katta kappa bought a bundle (of vegetables)
katte ki'tte ku'tta bought, cut and ate them

The initial mora in each word should be read with some strength to make the rhythm of this poem. This word-initial strength goes well with alliteration (*ka, ra, na, k*).

One might argue that Japanese rap in recent popular music often uses rhyme rather than alliteration. However, Japanese rap is based on the Western music form from the United States. It is still moot whether the words in Japanese rap music can be considered natural examples of Japanese language. In fact, rap musicians in Japan have had difficulty in using rhyme in their music. For example, Seiko Ito, who is considered to be the first rap musician in Japan, points out that agglutinativity of Japanese makes it difficult to rhyme, and that it is necessary to use inversion to end a line of verse with a noun (Utamaru et al. 2018: 65–67).

The fact that Japanese poetry uses alliteration goes well with the word order in Japanese, which has a consistent head-final order (e.g. object-verb, noun-postposition). However, the standard theory of Japanese phonology since McCawley (1968) argues that Japanese has a pitch accent on the antepenultimate mora in nouns and on the penultimate mora in verbs and adjectives (cf. Kubozono 2011). Against this standard theory, I argue that Japanese has word-initial stress as well as an optional pitch-fall accent (cf. Duanmu 2008, who argues that Japanese has two accents in a word or a compound). In Tokizaki (2018), I presented arguments for word-initial stress in Tokyo Japanese, showing evidence in terms of phonological change in casual speech, emphatic lengthening, emphatic gemination, and the residue of vowel harmony, together with an argument for the obligatoriness of stress in a content word. If this argument is on the right track, Japanese is not a counterexample to the typological generalization that languages with alliteration have initial stress in words, compounds and phrases and a head-final order (e.g. object-verb) as Donegan and Stampe (1983) argue.

4. Why is alliteration used in head-final languages?

Now let us consider why alliteration is used in head-final languages while rhyme is used in head-initial languages. It is quite understandable that alliteration is effective in languages with stress or strength on the initial position of words and phrases, while rhyme is effective in languages with stress or strength on the final position of words and phrases. If we assume that stress is assigned to the most deeply embedded element

¹⁰ A reading by Tanikawa of the poem can be found at <https://youtu.be/y0i4fycpSV0>

in a hierarchical structure (Cinque 1993), a complement rather than a head receives stress cross-linguistically (e.g. stress is not on a verb but on its object: *read BOOKS*?*READ books* in a neutral context). In the case of Japanese, the complement keeps its citation prosody when it merges with the head word while the head may lose its citation prosody, as shown in (14).

- (14) a. *sakana-o tabe'ru* (< *tabe'ru*) (cf. eat FISH)
 fish-Acc eat
 b. *mi'ruku-o nomu* (< *no'mu*) (cf. drink MILK)
 milk-Acc drink (the initial high downstepped)

In (14a), the initial low (underscored) of the verb *taberu* ‘eat’ is deleted while that of the object *sakana-o* ‘fish-Acc’ is retained. In (14b) the initial high pitch of the verb *nomu* ‘drink’ is deleted while that of the object *miruku-o* ‘milk-Acc’ is retained. If we assume that the position with phonological strength (i.e. stress) retains its citation prosody, we can conclude that Japanese puts stress on the initial position of words and phrases, which is in keeping with alliteration rather than rhyme. The first position in a line of verse may well be occupied by a complement rather than a head in head-final languages. In head-final languages, the initial syllable of a word has prominence. Thus, head-final languages are likely to have stress on the initial position of a word or phrase, which makes alliteration effective in these languages.

5. Conclusion

I have argued that Japanese poetry uses alliteration rather than rhyme. Alliteration matches word-initial and phrase-initial stress, which in turn gives head-final order in the language. The correlation between alliteration and head-final order supports the idea that a content word in Japanese has stress (or strength) on the initial mora as well as an optional pitch accent.

It is also interesting that traditional Japanese music such as *gagaku* (imperial court music) was basically monophonic and modal like Munda languages (Donegan and Stampe 1983). One might argue that current Japanese songs and music are polyphonic and harmonic. However, this is quite a recent borrowing from western music. I will leave the correlation between linguistic rhythm and music for future research.

References

- Baker, Mark (2001) *The Atoms of Language*. New York: Basic Books.
 Boersma, Paul and David Weenink (2018) Praat: doing phonetics by computer [Computer program]. Version 6.0.40, retrieved May 12, 2018 from <http://www.praat.org/>
 Chomsky, Noam (with James McGilvray) (2012) *The Science of Language*. Cambridge: Cambridge University Press.
 Cinque, Guglielmo (1993) “A Null Theory of Phrase and Compound Stress,”

- Linguistic Inquiry* 24, 239-298.
- Donegan, Patricia J. and David Stampe (1983) "Rhythm and the Holistic Organization of Language Structure," *Papers from the Parasession on the Interplay of Phonology, Morphology and Syntax*, 337- 353, Chicago Linguistic Society.
- Duanmu, San (2008) "A Two-Accent Model of Japanese Word Prosody," *Toronto Working Papers in Linguistics* 28, 29-48.
- Kobayashi, Rui (2001) *Kake-kotoba-no Hikaku-bungakuteki Koosatsu* [A Comparative Study of Paronomasia]. Tokyo: Waseda University Press.
- Kubozono, Haruo (2011) "Japanese Pitch Accent," *The Blackwell Companion to Phonology, Volume V: Phonology across Languages*, ed. by Marc van Oostendorp, Colin J. Ewen, Elizabeth Hume and Keren Rice, 2879-2907, Chichester: Wiley-Blackwell.
- Mabesoone, Laurent (2003) Shi-to shite-no Haikai, Haikai-to shite-no Shi—Issa, Kurooderu, Kokusai haiku [Haikai as poetry and poetry as haikai—Issa, Claudel and International Haiku]. Doctoral dissertaion, Waseda University.
<http://hdl.handle.net/2065/493>
- McCawley, James D. (1968) *The Phonological Component of a Grammar of Japanese*. The Hague: Mouton.
- Minkova, Donka (2003) *Alliteration and Sound Change in Early English*. Cambridge: Cambridge University Press.
- Miyoshi, Tatsuji (1948) "Matinee Poetique-no Shisaku-ni tsuite," *Sekai Bungaku* [World Literature] April. Also in *Gendai Nihon Bungaku Taikei* 82, 412–415, Tokyo: Chikuma Shobo.
- Newmeyer, Frederick J. (2005) *Possible and Probable Languages: A Generative Perspective on Linguistic Typology*. Oxford: Oxford University Press.
- Okazaki, Masao (2018) "Inritsuron-no Rekishi [The History of Prosodic Theory]," *Rekishi Gengogaku* [Historical Linguistics], ed. by Yoshihiro Hattori and Osamu Koma. 71-88. Tokyo: Asakura Shoten.
- Plank, Frans (1998) "The Co-Variation of Phonology with Morphology and Syntax: A Hopeful History," *Linguistic Typology* 2, 195–230.
- Tokizaki, Hisao (2018) "Stress and Pitch Accent in Japanese Word Prosody," ms., Sapporo University.
- Tokizaki, Hisao (2019) "Word Stress, Pitch Accent, and Word Order Typology with Special Reference to Altaic," *The Study of Word Stress and Accent: Theories, Methods and Data*, ed. by Rob Goedemans, Jeff Heinz and Harry van der Hulst, 187–223. Cambridge: Cambridge University Press.
<http://doi.org/10.1017/9781316683101.007>
- Utamaru, Yoshiaki Takahashi, DJ Yanatake and Shiho Watanabe. 2018. *Raimu-sutaa Utamaru-no Rappu-shi Nyuumon* [An Introduction to the History of Rap by Rhyme Star Utamaru]. Tokyo: NHK Shuppan.

科学研究費補助金基盤研究(B) (一般)

隣接諸科学乗り入れ型の手法による音韻理論の外的・内的検証の研究

研究成果報告書

研究代表者：岡崎正男

課題番号：16H03427

研究期間：2016年度～2020年度

2021年3月

研 究 組 織

- 代表者 岡崎正男（茨城大学・人文社会科学部・教授）
全体統括、統語・意味関連チーム リーダー
- 分担者 田中伸一（東京大学・大学院総合文化研究科・教授）
統語関連チーム リーダー
- 西村康平（青山学院大学・国際政治経済学部・准教授）
形態関連チーム リーダー
- 上田 功（名古屋外国語大学・外国語学部・教授）
統語関連チーム
- 太田 聡（山口大学・人文学部・教授）
形態関連チーム
- 時崎久夫（札幌大学・地域共創学群・教授）
統語関連チーム
- 本間 猛（東京都立大学・人文科学研究科・教授）
統語・意味関連チーム

目 次

Isao Ueda and Kaori Idemaru	
Non-rule-governed rhotic acquisition: A case study in Japanese	1
太田 聡	
短縮語の形成に関する一考察	7
岡崎正男	
後期中英語語強勢研究の課題	21
田中伸一	
不透明性と音韻文法の構築 直列調和モデルから濁りの表示モデルへ	37
Hisao Tokizaki	
Alliteration and the Holistic Typology of Japanese	54
西村康平	
音韻バリエーションと音韻形態辞書構造	63
本間 猛	
形式音韻論と英語の音節構造	74