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Four or Six Types of Pitch Accent in Japonic Varieties: A General Linguistic Perspective*

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1 Introduction

Most modern Japonic varieties are tonal in that their pitch patterns are lexically contrastive. While the organization of tone/accent systems varies across varieties, a broad majority, including Tokyo Japanese, exhibit a privative lexical contrast: words are divided into accented vs. unaccented classes (Miyata 1927; Poser 1984; Uwano 1989; Kawahara 2015). Following Gussenhoven (2004: 36), the present paper adopts *accent* to mean “a place marker for the insertion of a tone or word melody.” Under this definition, accented words are underlyingly specified for the position to which a tone associates, whereas unaccented words lack such specification.

Beyond this privative contrast, many Japonic varieties also show positional contrasts in accent placement. In Tokyo Japanese, for example, *ka'buto* ‘helmet’, *koko'ro* ‘heart’, and *kagami'* ‘mirror’ are accented, while *sakana* ‘fish’ is unaccented (the apostrophe marks the accent location). In these accented words, the accent falls on the first, second, and third syllables, respectively. The presence vs. absence of accent and the location of the accent are unpredictable and thus underlyingly specified; the minimal triplet *hasi* ‘edge’, *ha'si* ‘chopsticks’, *hasi'* ‘bridge’ makes this point explicit.

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This study develops a typology of what will be called *pitch accents*, that is, the tones associated with accents. Across many Japonic varieties, including Tokyo Japanese, pitch accent is a HL sequence. Its cross-varietal prevalence has at times encouraged the mistaken generalization that, in all Japonic varieties, a H tone is aligned with the accent. For example, Ramsey (1979) notes that, in systems similar to the Tokyo system, “a fall in pitch marks the location of the accent” (p. 158), adding: “Except in the dialect spoken in Narada, where late innovations have produced a system characterized by a distinctive rise in pitch” (fn. 2). However, even at the time of Ramsey’s writing, several other LH-type systems had already been reported in Japanese literature (Sibata 1953; Hattori 1973; Uwano 1975). Decades later, de Boer (2024)—with access to a much-expanded descriptive record—does not even acknowledge the Narada case; instead, de Boer (2024) proposes a framework in which the tone associated with the accent—although the term *accent* is avoided for theory-internal reasons—is consistently treated as a H tone, thereby rendering the alignment between accent and H effectively exceptionless.

These tendencies, which may have constrained phonological research informed by the full range of Japonic tone systems, likely stem from idiosyncratic analytical conventions and terminologies that have developed within Japanese linguistics, particularly in works written in Japanese since the 1980s, and have thereby obscured a broader cross-linguistic perspective. Therefore, the goal of the present study is to characterize the repertoire and organization of pitch accents across Japonic varieties within a widely adopted theoretical architecture, the Autosegmental-Metrical (AM) framework (Pierrehumbert and Beckman 1988), thereby providing a comparably framed baseline for future more comprehensive phonological inquiry.

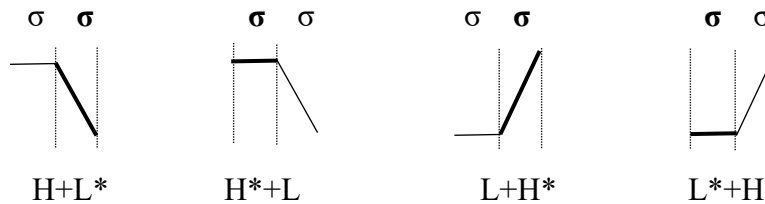
Section 2 reviews core AM assumptions regarding pitch accents. Sections 3 and 4 present Japonic analyses relative to AM, highlighting parallel developments in the 1970s and divergence since the 1980s. Sections 5 and 6 develop the typology on Japonic evidence: Section 5 covers the four alignment-defined bitonal pitch accents, and Section 6 treats monotonal pitch accents. Section 7 suggests that the inventory of named types is epiphenomenal to a small set of parameters, and that the same empirical facts are more informatively captured as a typology of tone-assignment rules. Section 8 concludes.

2 Pitch accents in the Autosegmental-Metrical Framework

The AM framework is a theoretical model originating in Pierrehumbert (1980) on English intonation and later extended to Japanese tone and intonation (Pierrehumbert and Beckman 1988). Within this framework, a *pitch accent* is a tonal specification (a tone or tone sequence) associated with a designated prosodic unit, typically the stressed syllable in stress languages and the accented mora/syllable in Japanese. This term is adopted in this study.

Research in the AM tradition distinguishes between monotonal and bitonal pitch accents. The former consists of a single tone, whereas the latter comprises two. A key property of the framework is that bitonal pitch accents are further classified according to which tone is synchronized, or aligned, with their associated prosodic unit (the *starred* tone). The remaining non-starred tone may occur to the left (a *leading* tone) or right (a *trailing* tone) at a stipulated temporal distance before or after the starred tone (Grice 1995). As shown in (1), falling (HL) pitch accents are analyzed as either H+L* (L aligned, H leading) or H*+L (H aligned, L trailing); rising (LH) pitch accents are analyzed as either L+H* (H aligned, L leading) or L*+H (L aligned, H trailing).

(1) Starred notation in the AM theory



Monotonal pitch accents are annotated as H* or L* in AM notation; by definition, a single tone is starred and aligned with the designated unit.

The AM framework has also been applied to Tokyo Japanese, where the tone sequence inserted at the lexically specified accent position is HL, which is analyzed as a bitonal pitch accent (Pierrehumbert and Beckman 1988). In the J_ToBI (Japanese Tone and Break Indices) annotation system, the Tokyo pitch accent is conventionally labeled H*+L, indicating that H is aligned with the accented mora/syllable and is followed by L (Venditti 2005).

3 Convergence between AM Theory and Japanese Linguistics in the 1970s

As Igarashi (2026a) noted, although the AM framework and typological study of pitch accents in Japonic have developed largely independently, an intriguing parallel emerges in how each subclassifies pitch accents. In Japanese descriptive linguistics, too, pitch accents have been subdivided according to the temporal alignment of tones relative to the accented syllables or moras.

Sibata (1953) observed that a pitch rise is realized at the accent position in some Japanese varieties, for example, in Hasuda Japanese (Saitama Prefecture) and Miyako Japanese (Iwate Prefecture). Hattori (1973) further proposed that rising pitch accents subdivide according to the temporal alignment of the pitch movement relative to the accent, distinguishing the (L)H kernel, where H aligns with the accented syllable/mora, from the L(H) kernel, where L aligns with the accented syllable/mora. Conceptually, these correspond to L+H* and L*+H in AM terms. For falling pitch accents, Hattori (1973) explicitly defined only the H(L) kernel, in which H aligns with the accented syllable/mora—corresponding to H*+L in AM terms.

Since Hattori's framework predates Autosegmental Phonology (cf. Goldsmith 1976), it does not posit separate tiers for tones and prosodic units, and thus lacks explicit association lines. Nevertheless, Hattori (1973) articulates an insight equivalent in substance to that later codified in the AM theory. In discussing (L)H vs. L(H), Hattori (1973: 25) writes that L(H) "requires that the syllable/mora itself be low and the following syllable/mora be high." Here, "itself" is naturally understood as the accent-bearing unit, i.e. the syllable/mora to which the tone is linked; by contrast, a unit that is not "itself" is an adjacent, non-accented syllable/mora. In this reading, Hattori's definitions amount to an alignment contrast: his wording for L(H) paraphrases as L aligned with the accented unit with the following H (L*+H in AM terms); accordingly, (L)H is interpreted as H aligned with the accented unit with a preceding L (L+H* in AM terms). Thus, although Hattori does not formally separate tone and prosodic tiers, his use of "itself" implicitly distinguishes the position of the accent from the contour over the accent and its immediate surroundings. In substance, this anticipates the AM notion of starred-tone association vs. leading/trailing tones; that is, a subclassification by temporal alignment rather than by gross contours. In effect, his framework assumes that a rise within a word need not entail that the H-bearing syllable/mora is the accented

one; a pitch accent can be identified only once both the accent location and the association mechanism governing the contour's temporal alignment are specified.

Kawakami (1981/1995) more explicitly articulated the separation between the pitch contour and the accented syllable/mora, and the differences in alignment between them. He states: “When a pitch movement—for example, a fall—occurs between two successive syllables/morae *P* and *Q*, if the force that produced the movement resides in *P*, then the H(L) kernel is in *P*; if that force resides in *Q*, then the (H)L kernel is in *Q*. ... It falls to the analyst to establish whether *P* or *Q* is responsible for the pitch movement” (Kawakami 1981/1995: 227). Here, both “the syllable/mora where the force that produces the pitch movement resides” and “the syllable/mora responsible for the pitch movement” can be understood as the accent-bearing unit that licenses tone association.

Uwano (1975) extends Hattori's proposal by subdividing falling pitch accents into H(L) and (H)L kernels; the former corresponds to a Tokyo-type pitch accent. In AM terms, these map to H*+L and H+L*, respectively. Uwano (1989) subsequently assigned the now widely used names—ascending, raising, lowering, and descending kernels—to the four alignment-defined types described by Hattori (1973) and Uwano (1975). Thus, as Igarashi (2026a) shows, the four kernels in Japanese linguistics have one-to-one correspondence with the four AM bitonal pitch-accent types, as in (2).

- | | | | | |
|--------|-------------------|------|----|------|
| (2) a. | Ascending kernel | (L)H | :: | L+H* |
| b. | Raising kernel | L(H) | :: | L*+H |
| c. | Lowering kernel | H(L) | :: | H*+L |
| d. | Descending kernel | (H)L | :: | H+L* |

This parallelism is noteworthy. In AM studies, the alignment-based subclassification of bitonal pitch accents is often traced to Bruce (1977) on Stockholm Swedish Accent I vs. Accent II, where the contrast lies not in the global contour but in the temporal alignment of a fall; later AM work renders these as H*+L vs. H+L* (Bruce 2005). Although Japanese linguistics and Western phonology proceeded independently in the 1970s, they appear to have converged on essentially the same insight; indeed, Hattori's (1973) proposal predates Bruce's (1977) by four years. Thus, in parallel to, if not slightly prior to, Bruce's study, a comparable alignment-based pitch-accent classification had already been articulated within Japanese linguistics, reaching strikingly similar conclusions.

Although the emphasis here is on parallels, it is worth noting a small divergence in whether multiple pitch-accent types coexist within a single grammar. In Swedish, H*+L and H+L* coexist and are lexically contrastive; in Intonational Phonology (e.g., Ladd 1996; Gussenhoven 2004), multiple pitch accents typically coexist within a language and contribute to pragmatic distinctions. The earliest alignment-based work on Japonic adopted a similar stance: Hattori (1973) analyzed Narada Japanese as class-dependent in alignment—some classes with the H(L) kernel (H*+L), others with the L(H) kernel (L*+H), thus treating alignment differences as lexically contrastive within one system, much like Swedish. However, Uwano (1975) shifted this trajectory, reanalyzing Narada as having only the L(H) kernel (L*+H); that is, a single pitch-accent type per system. In subsequent studies, this single-type assumption became the default for modern Japonic varieties (Uwano 2012). Although some historical stages of Japanese are still analyzed as allowing coexisting pitch-accent types (e.g., Uwano 2006; Kibe 2008), the dominant view of contemporary

systems is that alignment differences do not encode lexical contrast within a variety but rather classify cross-variety diversity. This perspective motivates Section 7, in which the alignment-based repertoire is reconsidered as a typology of tone-assignment rules.

4 Divergence between AM Theory and Japanese Linguistics since the 1980s

Despite the convergence noted in the 1970s, insights from Japonic pitch-accent typology did not readily inform international research thereafter. This likely reflects the distinctive trajectory of Japanese descriptive linguistics since the 1980s. In particular, leading descriptive works such as Uwano (1989) and Kawakami (1981/1995) categorically rejected analyses that modeled linguistic pitch contours as sequences of level tones (H, L), a core assumption of the AM approach.

This stance can be viewed as a Japanese manifestation of the levels vs. configuration debate (Bolinger 1951) in Western intonation studies, a longstanding discussion between approaches that analyze contours as sequences of primitive level tones (e.g., H, L) and those that treat contours as primitive pitch movements/configurations (e.g., rises, falls). From the 1980s onward, the level view gained prominence in the West with the rise of AM theory (e.g., Pierrehumbert 1980; Ladd 1996), whereas in Japan, the configuration view became dominant. For example, proponents of the configuration view in Japan object to formulations like Hattori's (1973) description of the lowering kernel—i.e., H*+L in AM terms—as “the accented syllable is high and the following syllable is low.” Among their reasons—the one relevant here—is that in Tokyo Japanese, when the preceding word bears an accent, the accented syllable of the following word need not be higher than the preceding syllable; the invariant property, they argue, is the fall from the accented syllable to the following syllable, and an analysis in terms of H plus L does not adequately capture this fact (e.g., Uwano 1989).

However, this is precisely the type of case that downstep (or *catathesis*) addresses (e.g., Poser 1984; Pierrehumbert and Beckman 1988): a phonological mechanism that compresses pitch range, such that in a HL–HL sequence, the intervening rise from L to H often shows no appreciable increase because the following H is produced under a lowered H ceiling. As Ladd (1996) emphasizes, such phenomena are not a flaw in level-tone analysis, but a cue to separate phonological specification (association/alignment) from phonetic scaling—that is, the numerical implementation of tone heights (how high a H tone, how low a L tone), independent of which tone links where.

Because the post-1980s Japanese tradition developed largely orthogonally to the outcomes of the Western levels vs. configuration debate, the configuration view has remained influential. In turn, the methodological gap has widened. Consequently, while Western phonology has emphasized the explicit alignment and scaling of level tones, studies of Japonic tone systems have tended to treat rise and fall as primitive categories. As a result, crucial notions, where the onsets and offsets of rises/falls align with prosodic units, are often left implicit, and categories such as lowering and ascending kernels lack transparent definitions that map onto AM representations. This opacity is exemplified by Uwano's (1989) paraphrase of the lowering kernel as “the kernel that attempts to lower the next”: descriptively evocative but difficult to translate across frameworks, a difficulty that complicates replication and impedes cross-linguistic generalization.

By revisiting the alignment-based analyses of the 1970s, when Japanese work was still compatible with frameworks such as the AM, the following sections integrate recent advances and propose a cross-linguistically comparable typology for pitch accent in Japonic varieties.

5 Four Types of Bitonal Pitch Accents in Japonic

5.1 Ascending Kernel, or L+H* Pitch Accent: The Case of Hirosaki Japanese

Hirosaki Japanese spoken in Aomori Prefecture is analyzed as having an ascending kernel (Uwano 1977), that is, a L+H* pitch accent. (3) illustrates the pitch contours of trisyllabic nouns produced in isolation (Uwano 1977). In what follows, acute (´), grave (`), and circumflex (ˆ) diacritics mark high, low, and falling pitch, respectively; a macron (¯) marks mid pitch. The apostrophe (') continues to mark the accent location.

- (3) a. *sàgàná* 'fish'
 b. *kí'dzínè* 'fox' c. *ùsá'ηì* 'rabbit' d. *òdògô'* 'man'

In the unaccented word (3a), only the word-final syllable exhibits high pitch. In the word accented on the first syllable (3b), the syllables from the first through the penultimate are high. In the word accented on the second syllable (3c), the second syllable is high. In the word accented on the third (i.e., final) syllable (3d), the final syllable shows a local high target, followed by a fall. In all accented tokens produced in isolation, the word-final syllable ends low, which is a predictable consequence of accentedness in this context and is thus not underlyingly specified. The accent location corresponds to the first occurrence of high pitch.

(4) presents the same nouns followed by the monosyllabic particle *-mo* 'also' (Uwano 1977).

- (4) a. *sàgàná-mó* 'fish'
 b. *kí'dzíné-mò* 'fox' c. *ùsá'ηì-mò* 'rabbit' d. *òdògó'-mò* 'man'

In the unaccented word (4a), the word-final syllable is no longer high; instead, high pitch appears on the particle. This indicates that the domain of high pitch in unaccented words is not the lexical word but a larger prosodic unit consisting of the lexical word plus following particles. In what follows, this unit will be referred to as the minimal prosodic phrase, traditionally called *bunsetsu* in Japanese linguistics.

In the word accented on the first syllable (4b), the syllables from the first through the word-final are high. In the word accented on the second syllable (4c), syllables from the second through the word-final are high. In the word accented on the third (i.e., word-final) syllable (4d), only that final syllable is high. When a monosyllabic particle is attached to accented words, the particle is low. This shows that the domain of the final low in accented words, similar to the domain of the final high in unaccented words, is the minimal prosodic phrase, rather than the lexical word. When a minimal prosodic phrase consists only of a lexical word, its final syllable coincides with the word-final syllable; consequently, the final low (in accented words) and the final high (in unaccented words) both appear on the lexical word-final syllable, as in (3).

In all cases, the accent location coincides with the first occurrence of a high pitch. The syllable immediately preceding the accented one, if any, is low. Since the accented syllable is high and the preceding syllable is low, the LH sequence is interpreted as being associated with the accented syllable, with H aligned with the accent and L serving as the leading tone. Accordingly, Hirosaki Japanese exhibits a L+H* pitch accent. The L is not realized in words accented on the initial syllable, where it is interpreted as truncated.

The ascending kernel, interpreted as L+H* in the present study, is widely attested across Northern Tohoku (Uwano 2012). Several Ryukyuan varieties are also described as having L+H*. Based on Uwano (2016), Onotsu (Amami Ryukyuan) is analyzed here as having L+H*; Iheya (Okinawan Ryukyuan; Carlino 2026) likewise exhibits L+H*.

5.2 Raising Kernel, or L*+H Pitch Accent: The Case of Narada Japanese

Narada Japanese, spoken in Yamanashi Prefecture, was analyzed by Uwano (1975) as having a raising kernel, thus providing an instance of L*+H. (5) illustrates the pitch contours of trimoraic nouns produced in isolation (Uwano 1975; Konishi 2026).

- (5) a. *áràrè* ‘hail’
 b. *kà'bútò* ‘helmet’ c. *kókò'ró* ‘heart’ d. *kàḡàmì* ‘mirror’

In the unaccented word (5a), only the initial mora is high. In the word accented on the first mora (5b), the second mora is high. In the word accented on the second mora (5c), the first and third morae are high. In the word accented on the third (i.e., final) mora (5d), the initial mora is high. Consequently, (5a) and (5d) are indistinguishable in isolation. In this context, the interaction between a postlexical tone assigned to a larger prosodic unit and tonal neutralization obscures the accented position. To determine how the accent location is inferred, realizations in other environments must be examined.

(6) presents the same nouns followed by the monosyllabic nominative particle *-ḡa* (Uwano 1975; Konishi 2026).

- (6) a. *áràrè-ḡà* ‘hail’
 b. *kà'bútò-ḡà* ‘helmet’ c. *kókò'ró-ḡà* ‘heart’ d. *kàḡàmì'-ḡà* ‘mirror’

In the unaccented word (6a), the initial mora is high. In the word accented on the first mora (6b), the second mora is high. In the word accented on the second mora (6c), the first and third morae are high. In the word accented on the third (i.e., final) mora (6d), the initial mora and the particle are high. The key difference between (5) and (6) emerges for words accented on the word-final mora: in (5d), only the first mora is high, neutralizing the pattern with the unaccented case (5a); in (6d), by contrast, both the initial mora and the particle are high, clearly distinguishing it from (6a).

From (6), it follows that a rise in pitch from low to high characterizes words interpreted as accented. In other words, the LH sequence is construed as linked to the accented mora; the accented mora itself is low (L*), with a trailing H realized on the following mora (in (6d) on the particle). This supports the hypothesis that Narada Japanese has a L*+H pitch accent. When words accented on the word-final mora are produced in isolation, the trailing H of L*+H is truncated.

Except for (5b) and (6b), which are accented on the initial mora, the word-initial mora in (5–6) consistently exhibits a high pitch. Consequently, (5c), (6c), and (6d) exhibit a double-peak pattern, with two high-pitched morae separated by a low-pitched interval. Although Haraguchi (1977) treated this initial high as lexical (together with an accent-linked tone), Uwano (1975) demonstrated that it was not lexical. As Uwano (1984) explicitly formulated, the initial high pitch is a postlexical tone whose domain is a prosodic unit larger than the minimal prosodic phrase. Hereafter, this higher-level unit, comprising one or more minimal prosodic phrases, is referred to as the maximal prosodic phrase.

To make this clear, (7) presents utterances in which the same nouns in (6) are preceded by the unaccented word *kono* ‘this’ (Uwano 1975; Konishi 2026).

- (7) a. *kónò àràrè-ŋà* ‘hail’
 b. *kónò kà'bútò-ŋà* ‘helmet’ c. *kónò kòkò'ró-ŋà* ‘heart’ d. *kónò kàŋàmi'-ŋà* ‘mirror’

In each utterance, the initial high appears on the first mora of *kono*. Within the minimal prosodic phrase, the unaccented word (7a) shows no rise, whereas the accented words (7b–d) exhibit a rise in which the accented mora is low, followed by a high pitch on the next mora. This rise is the realization of L^*+H . These patterns show that the initial high is the phonetic realization of a postlexical tone whose domain extends beyond the minimal prosodic phrase, namely, the maximal prosodic phrase. The assignment can be stated as a rule: Insert H into the first mora of the maximal prosodic phrase when two or more consecutive low-pitched morae occur at the left edge (Igarashi 2026a).

Thus, in Narada Japanese, tones with different domains are interleaved and, under the right conditions, the two pitch peaks may surface within what appears to be a single lexical word. The fact that this double-peak pattern separates into tones with distinct domains—one lexical and the other post-lexical (Uwano 1975)—again mirrors Bruce’s (1977) finding for Swedish: Type II words show a double peak in citation form, where the first peak reflects the lexical tone and the second, a post-lexical tone, may appear outside the word in a sentential context. As Igarashi (2026a) noted, this also illustrates a striking 1970s-era parallel between Japanese descriptive linguistics and Western phonological theories.

A potential source of confusion in analyzing Narada Japanese is that the accented mora has low pitch rather than high pitch. One might instead expect the high-pitched mora to bear the accent, yielding patterns such as *kabu'to-ŋa*, *kokoro'-ŋa*, *kaŋami-ŋa'*, instead of *ka'buto-ŋa*, *koko'ro-ŋa*, *kaŋami'-ŋa*. However, this alternative creates an unbalanced system in which words accented on the first mora are conspicuously absent; moreover, it sometimes places the accent outside the lexical word (e.g., *kaŋami-ŋa'*). Indeed, Haraguchi (1977) considers several interpretations of the Narada system, and his primary analysis closely resembles this alternative. He assumes underlying accents (*ka'buto*, *koko'ro*, *kaŋami'*) and posits a Star Shift Rule moving the accent rightward so that the accented mora coincides with the H. Although this resolves the distributional imbalance, it lacks independent motivation; the rule serves only to force the alignment of the accent with a high tone.

The raising kernel, interpreted here as L^*+H , is attested not only in Narada but also in Kuki–Shobu and Hasuda (Saitama Prefecture), as well as in Kozushima (Izu Archipelago) (Uwano 2012). Okinoerabu (Amami Ryukyuan) has been reported to have L^*+H (Uwano 2012; Yokoyama 2026), although an alternative analysis suggests that it may be $L+H^*$ (Igarashi 2026a). These facts indicate that L^*+H -type systems are not isolated innovations, but recurrent prosodic configurations within Japonic.

5.3 Lowering Kernel, or H^*+L Pitch Accent: The Case of Tokyo Japanese

Tokyo Japanese has a lowering kernel (Uwano 1989); within the AM framework, it is described as having a H^*+L pitch accent (Venditti 2005).

Example (8) illustrates the pitch contours of the trimoraic nouns produced in isolation.

- (8) a. *sàkáná* ‘fish’
 b. *ká'bùtò* ‘helmet’ c. *kòkó'rò* ‘heart’ d. *òtókó'* ‘man’

The unaccented word (8a) exhibits no sharp pitch fall. In the word accented on the first mora (8b), the first mora has a high pitch, followed by a low pitch on the subsequent morae, producing a sharp pitch fall from the first to the second mora. In the word accented on the second mora (8c), the second mora exhibits a high pitch, followed by a low pitch on the following mora, again showing a sharp pitch fall from the second to the third mora. In the word accented on the third (i.e., final) mora (8d), the second and third morae show a high pitch. Thus, because neither shows a sharp fall in isolation, the final accented pattern (8d) is neutralized with the unaccented pattern (8a).

(9) presents the same nouns, followed by the monosyllabic nominative particle *-ga*.

- (9) a. *sàkáná-gà* ‘fish’
 b. *ká'bùtò-gà* ‘helmet’ c. *kòkó'rò-gà* ‘heart’ d. *òtókó'-gà* ‘man’

The unaccented word (9a) again shows no sharp fall. In the word accented on the first mora (9b), the first mora is high and subsequent morae low, producing a sharp fall from the first to the second mora. In the word accented on the second mora (9c), the second mora is high and later morae low, producing a sharp fall from the second to the third mora. In the word accented on the third (i.e., word-final) mora (9d), the second and third morae are high, followed by a sharp fall onto the particle. The crucial contrast between (8) and (9) appears in final-accented words: (8d) shows no sharp fall (hence neutralizing with (8a)), whereas (9d) shows a clear fall from the final mora to *-ga*, distinguishing it from the unaccented pattern (9a).

As (9) shows, a defining property of accented words is a sharp fall—a HL tonal sequence functioning as a single pitch-accent unit. Within this unit, H is aligned with the accented mora, and L is realized afterward as its trailing component. Accordingly, Tokyo Japanese is analyzed as having a H*+L pitch accent. When the accent is word-final and the word is produced in isolation, the trailing L of H*+L is truncated.

In (8–9), except for nouns accented on the first mora, a rise from the first to the second mora is also observed. This rise reflects postlexical L and H assigned at the left edge of maximal prosodic phrases, as first demonstrated by Kawakami (1957)—a seminal study introducing a framework for distinguishing tones of different domains in Tokyo Japanese. Bruce’s (1977) analysis of Swedish (see §5.2) likewise distinguishes tonal domains; in this sense, the domain separation later articulated for Swedish had, in effect, already been anticipated by Kawakami (1957) for Japanese.

As noted in the Introduction, the lowering kernel, interpreted here as H*+L, is the most widespread pitch-accent type across Japonic, with such systems attested throughout Honshu, Shikoku, and northeastern Kyushu (Uwano 2012).

5.4 Descending Kernel, or H+L* Pitch Accent: The Case of Nakano Japanese

Modern Japonic has long been thought to lack a clear instance of a descending kernel (Uwano 1975, 1989); accordingly, Uwano (2012) omitted this category from his typology. However, recent studies have reported its presence in Nakano Japanese (Iwate Prefecture) (Kodama 2018; Uwano 2024). Therefore, the present study analyzes Nakano Japanese as having H+L*.

Given the overall complexity of the system described by Uwano (2024), the discussion here is restricted to nouns produced as independent utterances with the particle *-mo* ‘also,’ shown in (10).

- (10) a. *sàgàná-mō* ‘fish’
 b. *nè'dzùmì-mô* ‘mouse’ c. *ínò'dzì-mô* ‘life’ d. *òdógò'-mô* ‘man’

In the unaccented word (10a), the penultimate syllable of the minimal prosodic phrase is high, and the phrase-final syllable is mid. In accented words (10b–d), the phrase-final syllable shows a rise–fall. This final rise–fall occurs only when accented words are placed utterance-finally, and is predictable from the combination of accentedness and prosodic position. Setting this predictable rise–fall aside, the core generalization is that in accented words, the accented syllable is consistently low and the immediately preceding syllable, if any, is consistently high.

When the accent is initial, as in (10b), the preceding high is truncated, so the accented status of the initial syllable is not immediately evident. However, when such a noun is preceded by an accented minimal prosodic phrase, H appears on the final syllable of that phrase (Uwano 2024), revealing the presence of the leading H and supporting the analysis that the tone sequence associated with the accent is HL.

Because the L of the HL sequence aligns with the accented syllable and the H precedes, Nakano Japanese has a H+L* pitch accent. In addition to Nakano, Kuroshima (Yaeyama Ryukyuan) has likewise been analyzed as exhibiting H+L* (Igarashi et al. 2025).

6 Monotonal Pitch Accents in Japonic

In addition to the bitonal pitch accents discussed thus far, the AM framework also recognizes monotonal pitch accents, specifically H* and L*. Evidence from Tarama (Miyako Ryukyuan) supports the existence of a monotonal L* in Japonic.

Tarama has three tonal classes—Type A, Type B, and Type C—which reflect the three classes reconstructed for Proto-Ryukyuan (Matsumori 2010; Igarashi 2015). Subsequent innovations have yielded additional classes via tonogenesis (Celik and Aoi 2026), which are not pursued here.

Type A can be analyzed as unaccented, whereas Types B and C are accented. In utterance-initial position, Types B and C differ in where the pitch fall occurs. (11) illustrates utterances with a bimoraic noun followed by the bimoraic particle *-mai* ‘also,’ and the Type C predicate *neen* ‘does not exist’ (Celik and Aoi 2026).

- (11) a. *jùdá-mái néén'* ‘branch’
 b. *jàdú-mái' nèèn'* ‘door’ c. *mádù'-mài nèèn'* ‘leisure’

In Type B (11b), the fall is from the penultimate to the final mora of the particle, whereas in Type C (11c), the fall is from the penultimate to the final mora of the noun. Put differently, pitch is high up to just before the accented mora, and low on the accented mora and onward.

As first reported by Matsumori (2016), when these nouns are preceded by an accented word, a pitch rise surfaces where a fall would otherwise be expected. (12) illustrates utterances in which the phrases in (11) are preceded by the Type C adverb *mme* ‘already’ (Celik and Aoi 2026).

- (12) a. *ímme' jùdà-mài nèèn'* ‘branch’

b. *mmè' jàdù-mài' néén'* 'door'c. *mmè' màdù'-mái' néén'* 'leisure'

In (12b–c), after the falls within the adverb, the pitch remains low up to the accented mora, is low on the accented mora itself, and becomes high immediately afterward. Thus, whether an accent surfaces as a fall or a rise depends on the prosodic environment. What is invariant is the pitch level of the accented mora, which is consistently low (Aoi 2019; Nitta 2023; Celik and Aoi 2026). Therefore, the pitch accent in Tarama is analyzed as a monotonal L* (Celik and Aoi 2026).

The surface contour—fall vs. rise—follows from context-dependent phonological rules. For illustration, consider postlexical rules that insert H immediately before each odd-numbered L* in an utterance and immediately after each even-numbered L*. In this scheme, H adjacent to an odd-numbered L* behaves like a leading tone in terms of timing, whereas H adjacent to an even-numbered L* behaves like a trailing tone. A low-pitched stretch is realized between an odd-numbered L* and the subsequent even-numbered L*, and a high-pitched stretch is realized between an even-numbered L* and the subsequent odd-numbered L*. Consequently, a fall occurs at the first accent (... H L* ...) and a rise at the second accent (... L* H ...), with alternation propagating (fall–rise–fall ...) as additional accents occur. In short, the surface pitch movement depends on the context, but the tone linked to the accented mora, L*, remains constant.

Beyond Tarama, monotonal H* accents have been reported for Kohama (Yaeyama Ryukyuan) (Celik and Aso 2026) and Ikema (Miyako Ryukyuan) (Igarashi 2026b); detailed discussion is omitted for reasons of space.

7 Reframing Japonic pitch accents: Epiphenomenal Types, Fundamental Rules

Section 3 noted that, for modern Japonic varieties, the prevailing view does not posit coexisting pitch-accent types within a single grammar. This paper considers this not merely as a descriptive preference but as a fundamental property of Japonic tone systems: there is no paradigmatic contrast among tones inserted at the accent position. Here, *paradigmatic* denotes an inventory-level (selectional) contrast; differences in accent positions are *syntagmatic* (positional) contrasts.

As noted in Section 1, many Japonic varieties show a privative lexical contrast between accented and unaccented words. In numerous systems, this is the only paradigmatic contrast. Some varieties display additional paradigmatic contrasts; for example, in Osaka and Kyoto Japanese, there is a contrast between high-beginning and low-beginning words alongside the privative and positional contrasts of the accent. Earlier work sometimes construed this high- vs. low-beginning contrast as realized by a pitch accent (a “kernel” in Japanese linguistics). For instance, in Kyoto, low-beginning words were analyzed as bearing an initial (H)L kernel (H+L* in AM terms), and a separate H(L) kernel (H*+L in AM terms) was additionally linked to the lexically specified accent, thus yielding two pitch accents within a single word (Uwano 1975). However, this analysis is no longer mainstream. The high- vs. low-beginning contrast is now treated as “register,” a lexical specification independent of accent (Uwano 1989). In the AM framework, Pierrehumbert and Beckman (1988: ch. 8) analyze this contrast as a word-initial boundary tone, H vs. L.

Taken together, the literature suggests that each variety permits at most one accent per word and a single pitch-accent type per system. If so, once the presence/absence and position of the accent—the properties that are underlyingly specified—are known, the tonal material linked to that position (the pitch accent) is derived by rule. Under this reconceptualization, the inventory of pitch-accent types reduces to a typology of tone-assignment rules. Consequently, that typology is

naturally parameterized by (i) starred-tone identity and (ii) default leading/trailing tones. A minimal AM-compatible decomposition is given in (13).

- (13) a. Parameter $[\pm H^*]$: Which tone (H or L) is associated with the accented position?
 $[+H^*]$: $L+H^*$, H^*+L , H^*
 $[-H^*]$: L^*+H , $H+L^*$, L^*
 b. Parameter $[\pm \text{Lead}, \pm \text{Trail}]$: Are leading/trailing tones (opposite in value to the starred tone) provided as context-free defaults?
 $[+\text{Lead}, -\text{Trail}]$: $L+H^*$, $H+L^*$
 $[-\text{Lead}, +\text{Trail}]$: L^*+H , H^*+L
 $[-\text{Lead}, -\text{Trail}]$: H^* , L^*

On this view, the “bitonal–monotonal” distinction is derivative. A pitch accent is bitonal only if the grammar supplies a default leading and/or trailing tone around the starred tone; it is monotonal if no such default is supplied, and the flanking tones arise from context-dependent rules, as in Tarama.

Table 1 lists the parameter settings that yield each of the six pitch-accent types discussed in this study.

$[\pm H^*]$	$[\pm \text{Lead}]$	$[\pm \text{Trail}]$	AM label	Japanese-ling. label	Example variety
+	+	–	$L+H^*$	Ascending kernel	Hirosaki
–	–	+	L^*+H	Raising kernel	Narada
+	–	+	H^*+L	Lowering kernel	Tokyo
–	+	–	$H+L^*$	Descending kernel	Nakano
+	–	–	H^*	(no standard term)	Kohama
–	–	–	L^*	(no standard term)	Tarama

Table 1. Parameter settings yielding the six pitch-accent types.

Treating $[\pm \text{Lead}]$ and $[\pm \text{Trail}]$ as independent binary parameters also predicts configurations that look tritonal when both defaults are present, as in (14).

- (14) a. $[+H^*, +\text{Lead}, +\text{Trail}]$: $L+H^*+L$
 b. $[-H^*, +\text{Lead}, +\text{Trail}]$: $H+L^*+H$

Indeed, Uwano (1975) entertained a (L)H(L) pattern for varieties such as Tsuruoka (Yamagata), which is characterized as high on the accented syllable and low on both sides. However, because his framework took it as a working assumption that either the rise or the fall must be “distinctive” within a system, tritonal pitch accents were difficult to admit; accordingly, Uwano (1975) treated (L)H(L) as provisional and later removed this type (Uwano 1989). On the present view, that premise is unnecessary. Because no contrast among multiple pitch-accent types exists within a given Japonic system, there is nothing for “distinctiveness” to pick out. Once the accent position is specified, the observed shape follows a rule—here, H^* with both default Lead and Trail—with no need to stipulate whether the rise or fall is a distinctive element. Grice (1995: §6.2), by comparison, notes that admitting tritonal pitch accents incurs potential costs in complexity and

ambiguity, and therefore imposes the constraint that pitch accents be maximally binary—i.e., monotonal or bitonal. Grice also discussed how apparently tritonal pitch-accent patterns could be accommodated within the AM framework. The precise status of these configurations is left for future research.

Framed this way, the Japonic pitch-accent typology becomes a typology of tone-assignment rule sets—not a list of named accent “types.” All six pitch-accent types discussed here—L+H*, L*+H, H*+L, H+L*, L*, H*—fall out from a small parameter set: the choice of the starred tone and the presence or absence of default leading and/or trailing tones.¹

8 Conclusion

Many Japonic varieties exhibit a privative accented–unaccented contrast plus a positional contrast in accent placement, yet the tones that are associated with the accent are diverse—including systems in which a L tone aligns with the accented position. In the 1970s, Japanese descriptive linguistics arrived, independently and in parallel, at an alignment-based classification of HL and LH tones at the accent—substantively convergent with the AM tradition initiated by Bruce (1977). From the 1980s onward, however, Japanese studies largely rejected level-tone analysis, which, in turn, limited cross-framework comparability and obscured the breadth of Japonic patterns for researchers outside Japan.

Recasting those 1970s insights in AM terms, this study situates the tonal diversity of Japonic varieties within a common theoretical architecture. Notably, within any given modern Japonic variety, only one pitch-accent type is licensed, so types do not contrast paradigmatically. Accordingly, the pitch-accent type is not underlyingly specified. On this basis, the study proposed that cross-variety differences are more revealingly captured as a typology of tone-assignment rules—parameterizing the starred tone and the presence or absence of default leading/trailing tones—rather than as a list of named “types.” This reframing recovers the latent common ground between Japanese linguistics and AM theory, and provides a uniform baseline for future comparisons.

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¹ The present model inherits a classical insight of Autosegmental Phonology: once the accent location (star marking) is specified, tone-assignment rules derive the observable patterns (Goldsmith 1976; Haraguchi 1977). In this sense, the proposal is a return to that tradition. However, unlike Haraguchi (1977), who adopted Goldsmith's (1976) Well-Formedness Condition whereby every tone-bearing unit bears a tone, the analysis here follows AM theory (e.g., Pierrehumbert & Beckman 1988) in adopting sparse specification (underspecification): not every mora/syllable must be tone-linked, and phonetic interpolation accounts for the realized contour between specified targets. This underspecification stance accords with the Japanese descriptive tradition, traceable at least to Kawakami (1957), who already argued that substantial portions of the pitch pattern are unspecified even on the surface. Moreover, whereas Haraguchi (1977) did not systematically separate tonal domains when formulating rules, the present approach—following Kawakami (1957) and Uwano (1984)—explicitly distinguishes domain types, such as minimal vs. maximal prosodic phrases. In short, the proposal refines the classical star-marking perspective by integrating AM-style underspecification with domain-sensitive tone assignment.

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