

A PANPHONIC VERSION OF THE TEXT OF 'THE NORTH WIND AND THE SUN' FOR THE ILLUSTRATION OF THE IPA OF JAPANESE (TOKYO DIALECT) CONSONANTS

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ABSTRACT

The text of 'The North Wind and the Sun' used to illustrate Japanese in the *Handbook of the International Phonetic Association 1999* has been modified to create a 'panphonic' version of the text. The new text is 30% longer than the original text, but embraces, compactly and efficiently, all 16 consonant phonemes, their 11 major positional allophones and 5 free variants that can replace positional allophones, for the illustration of the IPA of Japanese (Tokyo dialect). Because the text is simple, concise and comprehensive, it can be used conveniently for a wide range of purposes, from listening test and pronunciation practice to clinical recording and acoustic analysis.

Keywords: Japanese, Tokyo dialect, consonant, IPA Handbook, panphonic version

1. INTRODUCTION

The passage 'The North Wind and the Sun' was first used in *The Principles of the International Phonetic Association*, published by the International Phonetic Association in 1949, to illustrate the International Phonetic Alphabet in world's languages [2]. The text has proved useful in illustrating the characteristics of basic speech sounds in different languages, but it has sometimes been pointed out that the text is not quite sufficient for the description of a larger inventory of speech

sounds. For example, Deterding has shown that the English text lacks some important sounds, and has suggested an alternative text, 'The Boy who Cried Wolf', which is capable of illustrating a wider variety of English sounds [1].

The Japanese text has similar shortcomings in that a number of basic sounds, such as consonants [p], [dz] and [dʒ] as well as CjV type syllables such as [gja], are not represented in the text.

In the present study, the passage 'The North Wind and the Sun' used to illustrate Japanese in the *Handbook of the International Phonetic Association 1999* [4] has been modified to create a new 'panphonic' version, which embraces, compactly and efficiently, all the consonant phonemes and their major allophones in Japanese (Tokyo dialect).

2. CONSONANT CHART

Table 1 shows the set of Japanese consonant phonemes and their allophones (Tokyo dialect) that are selected for the illustration of the IPA. In addition to the 16 consonant phonemes in the original chart [4], 11 positional allophones and 5 free variants were newly included. These consonants can be found in the most fundamental set of Japanese vocabulary [3], while the allophones are those that occur naturally in everyday speech.

Table 1: Phonetic symbols for Japanese (Tokyo dialect) consonants and allophones coordinated on the IPA consonant chart. Slashes are added to those symbols that simultaneously represent a phoneme. A phoneme and the group of related allophones are joined together by broken lines. The allophones in round brackets are free variants.

Manner \ Place	Bilabial	Labio-dental	Dental	Alveolar	Post alveolar	Alveolo-palatal	Palatal	Velar	Uvular	Glottal
Plosive	/p/ [b]		/t/ [d]					/k/ [g]		
Nasal	/m/		/n/					/ŋ/		̃
Flap					[ɾ]					
Affricate				[ts] [dz]	[tʃ]	[tɕ] [dʒ]				
Fricative	[ɸ] [β] (v)			[s] [z]		[ç] [ʝ]		[χ]		[h]
Approximant					(ɻ)		/j/	/w/		
Lateral approximant					(l)					

The chart uses the framework proposed in the *Handbook*, but some modifications have been made to enable a more explicit presentation of the relation between relevant sounds. Specifically, a ‘retroflex’ column has been replaced by an ‘alveolo-palatal’ column for a clearer contrast with the postalveolar column, and a new row for ‘affricates’ has been inserted above the ‘fricative’ row to show the relation between the two manner groups for alveolar and alveolo-palatal sounds.

3. EDITING OF THE TEXT

In creating the panphonic version of the text, the original English text given in the *Principle of the International Phonetic Association 1949* was first translated as literally as possible into Japanese. Then, the expressions in the translated Japanese were replaced by synonymous words or phrases that included the consonant phonemes, their allophones and free variants necessary for the illustration. Care was taken to make the text natural enough to adults and plain enough to children, yet as close as possible to the original English text in wording and syntax. In editing this panphonic version, onomatopoeic, mimetic, and conversational expressions as well as loan words were avoided.

Phonetic transcription of the panphonic version and its Japanese orthography are presented in Table 2 and Table 3, respectively. A nearly literal English translation of the panphonic text is given in Table 4, which aimed at maximum lexical fidelity at the cost of style within the bounds of English grammar. The original English text is given too, in Table 5, for comparison.

Table 2: Phonetic transcription of the Japanese panphonic text of ‘The North Wind and the Sun’. The mark ⁺ indicates the downstep of voice pitch after an accented syllable in a word. || and | correspond to ‘.’ and ‘,’ in the orthographic version shown in Table 3, respectively. Bold symbols indicate consonant phonemes and their allophones used for the illustration in Table 6.

[kʲitakazeto ta'ijo: ŋa | do⁺ tɕiɾaŋa tsujo'ikade i: aɾas o⁺ te iɾu tokoɾo'e | gu: zeŋŋi tambo'miɕio | tabibitoŋ a atakaso⁺: na uwaŋiŋi kuɾuma⁺ tte jattekima'ɕiɾa || sokode | sono tabibitono uwaŋio nuŋa'seta ho⁺: ŋa ts ujo'itoju: koto'ŋi ɕijo⁺: | to kimema'ɕiɾa || ma⁺zu ha zimeŋi | kʲitakazeŋa tabibitoŋi mukatte se: i'ppai ɸʊki tsʊkema'ɕiɾa || ɕika'ɕi | dʌmbo:ŋi ɸʊke⁺ba ɸʊku⁺hod o | gʲakʊŋi tabibitowa uwaŋio ɕikka'ɾito kaɾadaŋi ma kʲitsʊke⁺ɾunode | nuŋase⁺ɾu kotoŋa dekimase⁺N || kʲitak azewa kuɾabi'ɾete | to⁺: to: akiɾamema'ɕiɾa || ko⁺ndow a ta'ijo: no ba⁺ŋŋi naɾima'ɕiɾa || ta'ijo: ŋa tabibitono

uekaɾa atataka'i ɕikaɾio jaŋwa'ɾi soso'ŋuto | jaŋate ta bibitowa | dzibuŋkaɾa uwaŋio nu'ide ɕimaima'ɕiɾa || soɾede kʲitakazewa | dzannenna'ŋaɾa ta'ijo: no ho⁺: ŋa tsujo'ito mitomena⁺keɾeba naɾimase⁺ndeɕiɾa ||]

Table 3: Orthographic version of the Japanese panphonic text.

北風と太陽が、どちらが強いかで言い争っているところへ、偶然に田んぼ道を、旅人が暖かそうな上着にくるまってやってきました。そこで、その旅人の上着を脱がせた方が強い、ということにしようときめました。まず始めに、北風が旅人に向かってせいっぱい吹きつけました。しかし、乱暴に吹けば吹くほど、逆に旅人は上着をしっかりと体に巻き付けるので、脱がせることができません。北風はくたびれて、とうとうあきらめました。今度は太陽の番になりました。太陽が旅人の上から暖かい光をやりわり注ぐと、やがて旅人は、自分から上着を脱いでしまいました。それで北風は残念ながら、太陽の方が強いと認めなければなりませんでした。

Table 4: Nearly literal English translation of the Japanese panphonic text.

The North Wind and the Sun were disputing over which was the stronger, when a traveller happened to come along a country road wrapped in a warm-looking cloak. Then they agreed that the side which made the traveller take his cloak off should be considered the stronger. First, the North Wind blew at the traveler with all his might. But the more violently he blew, the more firmly, on the contrary, did the traveler fold his cloak around his body. The North Wind could not make the traveler take off his cloak. The North Wind became tired, and gave up at last. Next, it was the Sun's turn. The Sun poured warm light gently on the traveller, and soon the traveller took off his cloak for himself. And so, the North Wind reluctantly had to admit that the Sun was the stronger.

Table 5: The original English text in *The Principles of the International Phonetic Association, 1949*.

The North Wind and the Sun were disputing which was the stronger, when a traveller came along wrapped in a warm cloak. They agreed that the one who first succeeded in making the traveller take his cloak off should be considered stronger than the other. Then the North Wind blew as hard as he could, but the more he blew the more closely did the traveller fold his cloak around him, and at last the North Wind gave up the attempt. Then the sun shone out warmly, and immediately the traveller took off his cloak. And so the North wind was obliged to confess that the Sun was the stronger of the two.

The panphonic text consists of 294 syllables, and is about 30% longer than the current Japanese text in the *Handbook*. However, it is compact enough that it takes only one minute when read with an average speech rate.

4. ILLUSTRATION OF THE CONSONANTS

Table 6 provides the illustration of Japanese consonants and allophones (Tokyo dialect) based on the new panphonic text. Conditions for allophonic variations are explained in some detail. The consonants are followed by one of the Japanese five vowels (/i/, /e/, /a/, /o/, /u/) or by one of the combinations of /j/ and a vowel (/ja/, /ju/, /jo/). The approximant /w/ is followed by vowel /a/ only.

Table 6: The illustration of the IPA of Japanese consonant phonemes and their major allophones.

Bilabial plosive /p/, /b/ and nasal /m/	
/p/: /se:i ⁺ ppai/ [se:i ⁺ ppai] 'with all one's might'	[p]
In rapid speech, [b] may become [v] or [ɸ].	
/b/: /tabibito/ [tabibito, tabivito, tabiɸito] 'a traveller'	[b, v, ɸ]
/m/: /kuɾuma ⁺ tte/ [kuɾuma ⁺ tte] 'wrapped'	[m]
Dental plosive /t/, /d/ and nasal /n/	
/t/: /ta ⁺ ijo:/ [ta ⁺ ijo:] 'the sun'	[t]
/d/: /sokode/ [sokode] 'then' [d]	
/n/: /no/ [no] 'of'	[n]
/n/ before vowel /i/ is alveolo-palatal [ɲ].	
/n/: /ni/ [ɲi] (particle)	[ɲ]
Velar plosive /k/, /g/	
/k/: /kitakaze/ [kitakaze] 'the North Wind'	[k]
/g/: /gu:zenni/ [gu:zeɲni] 'happen(ed) to ~'	[g]
/g/, when medial, tends to become fricative [ɣ], especially between vowels. Many traditional speakers use nasal [ŋ] in medial positions.	
/nuga ⁺ seta/ [nuɲa ⁺ seta, nuɣa ⁺ seta] 'made ~ take off'	[ŋ, ɣ]
Uvular nasal /N/	
/N/ represents a moraic nasal with very variable pronunciation. Before a vowel or an approximant, or before /h/ or /s/, it becomes a nasalized vowel. Before other consonants, it is homorganic with that following consonant.	
/N/: /dekimas ⁺ eN/ [dekimas ⁺ eN] 'could not ~'	[N]
/ko ⁺ ndo/ [ko ⁺ ndo] 'next'	[n]
/janwa ⁺ ɕi/ [jaŋwa ⁺ ɕi] 'gently'	[ũ]
/tanbomitsi/ [tambo ⁺ miɕio] 'a country road'	[m]
/banni/ [ba ⁺ ɲni] '(one's) turn'	[ɲ]
/zibunkaɾa/ [dzibuŋkaɾa] 'for oneself'	[ŋ]
Alveolar affricate /ts/ and fricative /s/, /z/	
/ts/ becomes alveolo-palatal [tɕ] before vowel /i/.	
/ts/: /tsujo ⁺ i/ [tsujo ⁺ i] 'strong(er)'	[ts]
/do ⁺ tsiɾaga/ [do ⁺ teɾaɲa] 'which'	[tɕ]
/s/ and /z/ become alveolo-palatal [ç] and [ʒ] before vowel /i/.	
/s/: /atatakaso ⁺ : na/ [atatakaso ⁺ : na] 'warm-looking'	[s]

/si ⁺ kasi/ [çika ⁺ çi] 'but'	[ç]
/z/: /ma ⁺ zu/ [ma ⁺ zu] 'first'	[z]
/hazimeni/ [hazimeɲi] 'first'	[ʒ]
/z/ tends to be affricate [dz] initially ([dz] before vowel /i/) and after /N/.	
/z/: /dzannenna ⁺ ɲaɾa/ [dzannenna ⁺ ɲaɾa] 'reluctantly'	[dz]
/zibun/ [dzibun] 'oneself'	[dz]

Glottal fricative /h/

/h/ tends to become palatal [ç] and bilabial [ɸ] before vowel /i/ and /u/, respectively, especially when the vowel is devoiced.

/h/: /ho ⁺ / [ho ⁺] 'side'	[h]
/hikaɾi ⁺ / [çikaɾi ⁺] 'light'	[ç]
/huku ⁺ / [ɸuku ⁺] 'blow'	[ɸ]

Postalveolar flap /ɾ/

/ɾ/ mainly occurs medially. Initially and after /N/, it is typically an affricate with short friction, [ɖ].

Approximant [ɹ] or lateral approximant [l] may occasionally occur in some environment.

/ɾ/: /soɾede/ [soɾede, soɾede] 'and so' [ɹ, ɹ]	
/ɾanbo:ni/ [ɖambo:ɲi, lambo:ɲi] 'violently'	[ɖ, l]

Palatal approximant /j/

Consonants generally are strongly palatalized before /i/. /j/ affects the preceding consonants as vowel /i/ does.

/j/: /jagate/ [jaɲate] 'soon'	[j]
/gjakuni/ [gjaɲuni] 'on the contrary'	

Labial-velar approximant /w/

/w/: /wa/ [wa] (particle)	[w]
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5. CONCLUSION

A new 'panphonic' version of the text of 'The North Wind and the Sun' was created with an aim to provide a more complete set of consonant phonemes and their allophones for the illustration of the IPA of Japanese speech sounds. The new text, with 16 consonant phonemes, 11 major allophones, and 5 free variants that can replace positional allophones, makes it possible to illustrate the Japanese speech sound more efficiently.

The text is both concise and comprehensive, and can be used conveniently in all areas of speech research and its application.

6. REFERENCES

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