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ACCENT SYSTEMS IN JAPANESE DIALECTS

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1 Overview of regional differences in accent

- Mainland Japanese dialects exhibit an astonishing range of variation in their accent systems, but they can be classified into the following 4 major typological categories:
 - (1) Systems based on lexical kernel (lowering, ascending or raising) < e.g. Tōkyō, Hirosaki, Narada >
 - (2) Systems based on word tones (N-pattern accent system) < e.g. Kagoshima, Nagasaki >
 - (3) Systems combining word tones with a lowering kernel < e.g. Kyōto >
 - (4) Systems without any lexical accentual distinctions < e.g. Fukushima, Kumamoto >

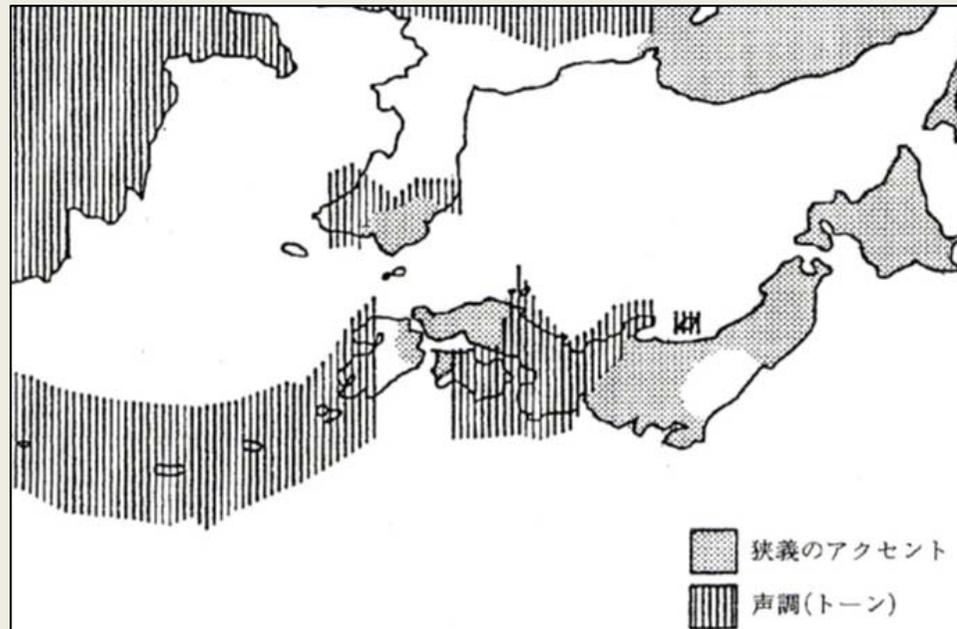


Figure 1 Distribution map of accent systems in Japan (Hayata 1999)

Figure 1 is a distribution map of accent systems of Japanese dialects created by Teruhiro Hayata;

- (1) the dotted areas have the systems based on lexical kernel,
- (2) the areas with stripes have the systems based on word tones (N-pattern accent system),
- (3) the areas with stripes and dots have the systems combining word tones with a lowering kernel, and
- (4) the plain areas have the systems with no lexical accentual distinctions.

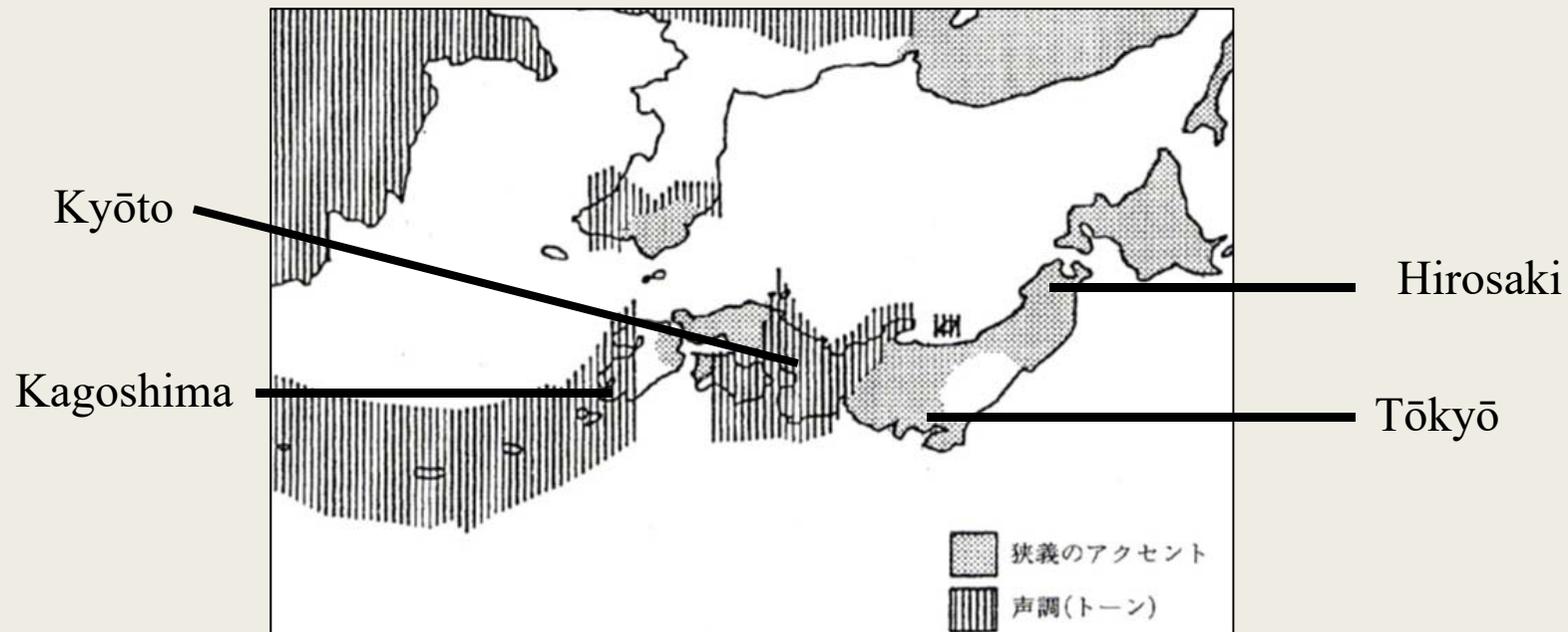


Figure 1 Distribution map of accent systems in Japan (Hayata 1999)

In this talk, I will discuss accent systems of 4 regions;

- Tōkyō dialect (a lowering kernel),
- Kagoshima dialect (2-pattern accent system),
- Kyōto dialect (word tones with a lowering kernel),
- Hirosaki dialect (an ascending kernel).

2 Accent system of Tōkyō dialect

- Tōkyō dialect has a system based on lowering kernel.
- In the dialect, each word normally has one lowering kernel, and the position of the lowering kernel is lexically determined. .

Table 1 Pitch patterns of Tōkyō dialect

pattern	1mora	2mora	3mora	4mora
1	<i>ha</i> ↓ 'tooth'	<i>ha</i> ↓ <i>si</i> 'chopsticks'	<i>ka</i> ↓ <i>buto</i> 'helmet'	<i>ka</i> ↓ <i>makiri</i> 'praying mantis'
2		<i>hasi</i> ↓ 'bridge'	<i>koko</i> ↓ <i>ro</i> 'mind'	<i>iro</i> ↓ <i>gami</i> 'colored paper'
3			<i>otoko</i> ↓ 'man'	<i>kamina</i> ↓ <i>ri</i> 'thunder'
4				<i>imooto</i> ↓ 'sister'

Table 2 Pitch patterns of noun phrases in Tōkyō dialect

pattern	1mora	2mora	3mora	4mora
1	ha ¹ 'tooth'	ha ¹ si 'chopsticks'	ka ¹ buto 'helmet'	ka ¹ makiri 'praying mantis'
Noun =ga (NOM)	ha ¹ =ga	ha ¹ si=ga	ka ¹ buto=ga	ka ¹ makiri=ga
noun =o (ACC)	ha ¹ =o	ha ¹ si=o	ka ¹ buto=o	ka ¹ makiri=o
2		hasi ¹ 'bridge'	koko ¹ ro 'mind'	iro ¹ gami 'colored paper'
Noun =ga (NOM)		hasi ¹ =ga	koko ¹ ro=ga	iro ¹ gami=ga
noun =o (ACC)		hasi ¹ =o	koko ¹ ro=o	iro ¹ gami=o
3			otoko ¹ 'man'	kamina ¹ ri 'thunder'
Noun =ga (NOM)			otoko ¹ =ga	kamina ¹ ri=ga
noun =o (ACC)			otoko ¹ =o	kamina ¹ ri=o
4				imooto ¹ 'sister'
Noun =ga (NOM)				imooto ¹ =ga
noun =o (ACC)				imooto ¹ =o

- In addition to these four patterns, Tōkyō dialect has another pitch pattern where any morae of a word do not have a lowering kernel, which is called *heiban-kata*.

Table 3 Pitch patterns of noun phrases in Tōkyō dialect (heiban-kata)

pattern	1mora	2mora	3mora	4mora
0	<i>ha</i> 'leaf'	<i>hasi</i> 'edge'	<i>sakura</i> 'cherry tree'	<i>tomodaci</i> 'friend'
Noun =ga (NOM)	<i>ha=ga</i>	<i>hasi=ga</i>	<i>sakura=ga</i>	<i>tomodaci=ga</i>
noun =o (ACC)	<i>ha=o</i>	<i>hasi=o</i>	<i>sakura=o</i>	<i>tomodaci=o</i>

- Based on the observation, the accent system of Tōkyō dialect can be summarized as in Table 4.

Table 4 Accent system of Tōkyō dialect

pattern	1-mora	2-mora	3-mora	4-mora
0	○	○○	○○○	○○○○
1	○┘	○┘○	○┘○○	○┘○○○
2		○○┘	○○┘○	○○┘○○
3			○○○┘	○○○┘○
4				○○○○┘

N.B.: ○ = one mora

3 Accent system of Kagoshima dialect

- The accent system of Kagoshima dialect is quite different from that of Tōkyō dialect.
- The most distinctive feature is that Kagoshima dialect has a two-pattern accent system. Type-A is a paroxytone or falling-type tone, and Type-B is an oxytone or rising-type tone.
- In Kagoshima dialect, every word belongs to either Type-A or Type-B, and as shown in Table 5, the rhythmic unit of the dialect is syllabic rather than moraic.

Table 5 Tonal patterns in Kagoshima dialect

type	1-syllable	2-syllable	3-syllable	4-syllable
A	<i>ha</i> ‘leaf’	<i>ha.na</i> ‘nose’	<i>o.na.go</i> ‘woman’	<i>a.ka.tom.bo</i> ‘dragonfly’
	F	H L	L H L	L L H L
B	<i>ha</i> ‘tooth’	<i>ha.na</i> ‘flower’	<i>o.to.ko</i> ‘man’	<i>kan.na re.don</i> ‘thunder’
	H	L H	L L H	L L L H

- Particles do not form an independent tone unit in Kagoshima dialect, and therefore the tone of ‘noun =particle’ such as =*ga* (NOM), =*o* (ACC) and =*kara* (ABL) follows the tone of each word.
- In other words, as given in Table 6, a noun with Type-A tone also has Type-A tone for ‘noun =particle’, and the noun with Type-B tone has Type-B tone for ‘noun =particle’.

Table 6 Pitch patterns of ‘noun =*ga*/*o*/*kara*’ in Kagoshima dialect

type	bare form	noun= <i>ga</i> (NOM)	noun= <i>o</i> (ACC)	noun= <i>kara</i> (ABL)
A	<i>ha</i> ‘leaf’	<i>ha =ga</i>	<i>ha =o</i>	<i>ha =ka.ra</i>
	F	H L	H L	L H L
	<i>ha.na</i> ‘nose’	<i>ha,na =ga</i>	<i>ha.na =o</i>	<i>ha.na =ka.ra</i>
	H L	L H L	L H L	L L H L
B	<i>ha</i> ‘tooth’	<i>ha =ga</i>	<i>ha =o</i>	<i>ha =kara</i>
	H	L H	L H	L L H
	<i>ha.na</i> ‘flower’	<i>ha.na =ga</i>	<i>ha.na =o</i>	<i>ha.na =ka.ra</i>
	L H	L L H	L L H	L L L H

- Table 7 is a summary of the accent system of Kagoshima dialect

Table 7 Accent system of Kagoshima dialect

type	1-syllable	2-syllable	3-syllable	4-syllable
A	○	○○	○○○	○○○○
	F	H L	L H L	L L H L
B	○	○○	○○○	○○○○
	H	L H	L L H	L L L H

N.B.: ○ = one syllable

4 Accent system of Kyōto dialect

- Kyōto dialect has a system based on word tones with a lowering kernel.
- There are two types of word tone: high-beginning and low-beginning tone. In addition, each word has one lowering kernel.
- The dialect also has words without a lowering kernel as the category *heiban-kata*.
- The pitch patterns of the dialect are given in Table 8.

Table 8 Pitch patterns in Kyōto dialect

pattern	1-mora	2-mora	3-mora	4-mora
H0	<i>haa</i> 'leaf'	<i>hana</i> 'nose'	<i>sakura</i> 'cherry tree'	<i>tomodaci</i> 'friend'
	H H	H H	H H H	H H H H
H1	<i>hii</i> 'sun'	<i>hana</i> 'flower'	<i>otoko</i> 'man'	<i>neesan</i> 'sister'
	H L	H L	H L L	H L L L
H2			<i>hutari</i> 'two people'	<i>mizuumi</i> 'lake'
			H H L	H H L L
H3				<i>kaminari</i> 'thunder'
				H H H L
L0	<i>haa</i> 'tooth'	<i>sora</i> 'sky'	<i>usagi</i> 'rabbit'	<i>ninjin</i> 'carrot'
	L H	L H	LL H	LLL H
L2		<i>ame</i> 'rain'	<i>kabuto</i> 'helmet'	<i>murasaki</i> 'purple'
		L F	L H L	L H L L
L3			<i>macci</i> 'match'	<i>irogami</i> 'colored paper'
			L L F	L L H L

- Based on the observation, it can be said that Kyōto dialect is similar to Kagoshima dialect in that it has two types of word tones and is also similar to Tōkyō dialect in that it has a lowering kernel.
- Table 9 is a summary of the accent system of Kyōto dialect.

Table 9 Accent system of Kyōto dialect

pattern	1-mora	2-mora	3-mora	4-mora
H0	ΓO	ΓOO	ΓOOO	ΓOOOO
H1	ΓO┘	ΓO┘O	ΓO┘OO	ΓO┘OOO
H2			ΓOO·O	ΓOO┘OO
H3				ΓOOO┘O
L0	┘O	┘OO	┘OOO	┘OOOO
L2		┘OO┘	┘OO┘O	┘OO┘OO
L3			┘OOO┘	┘OOOO┘

N.B.: Γ = high-beginning register ┘ = low-beginning register
┘ = lowering kernel O = one mora

5 Accent system of Hirosaki dialect

- Hirosaki dialect has a system based on ascending kernel. Table 10 shows pitch patterns of nouns in this dialect, and Table 11 shows pitch patterns when the particle =*mo* (ADD) is attached to a noun.
- Comparing the two patterns in Table 10 and 11, a noun with the particle =*mo* in Table 11 has a high pitch spreading towards the right with the particle =*mo* as low at the end, but the position where a pitch rises stays the same as nouns without the particle in Table 10.
- Therefore, the distinctive features of pitch patterns in Hirosaki dialect is not lowering kernel but ascending kernel.

Table 10 Pitch patterns of Hirosaki dialect

1-mora	2-mora	3-mora	4-mora
<i>ha</i> 'tooth'	<i>saru</i> 'monky'	<i>kitune</i> 'fox'	<i>urukome</i> 'non-glutinous rice'
H	H L	H H L	H H H L
	<i>hana</i> 'flower'	<i>usagi</i> 'rabbit'	<i>tebukuro</i> 'glove'
	L F	L H L	L H H L
		<i>otoko</i> 'man'	<i>kudamono</i> 'fruit'
		L L F	L L H L
			<i>kaminari</i> 'thunder'
			L L L H

Table 11 Pitch patterns of Hirosaki dialect (noun =mo)

1-mora	2-mora	3-mora	4-mora
<i>ha=mo</i>	<i>saru=mo</i>	<i>kitune=mo</i>	<i>urukome=mo</i>
H L	H H L	H H H L	H H H H L
	<i>hana=mo</i>	<i>usagi =mo</i>	<i>tebukuro=mo</i>
	L H L	L H H L	L H H H L
		<i>otoko=mo</i>	<i>kudamono=mo</i>
		L L H L	L L H H L
			<i>kaminari=mo</i>
			L L L H L



- In addition, there is a pattern like Type-B in Kagoshima dialect, where a high pitch shifts to the right when a noun is followed by the particle =*mo*.
- As shown in Table 12, this indicates a pitch pattern that does not have an ascending kernel.

Table 12 Pitch patterns of Hirosaki dialect (no ascending kernel pattern)

1-mora	2-mora	3-mora	4-mora
<i>ha</i> 'leaf'	<i>hana</i> 'nose'	<i>sakura</i> 'cherry tree'	<i>tomodaci</i> 'friend'
H	L H	L L H	L L L H
<i>ha=mo</i>	<i>hana=mo</i>	<i>sakura=mo</i>	<i>tomodaci=mo</i>
L H	L L H	L L L H	L L L L H
<i>ha</i> 'leaf'	<i>hana</i> 'nose'	<i>sakura</i> 'cherry tree'	<i>tomodaci</i> 'friend'

- Based on the observation, the accent system of Hirosaki dialect can be summarized as Table 13.

Table 13 Accent system of Hirosaki dialect

pattern	1-mora	2-mora	3-mora	4-mora
0	○	○○	○○○	○○○○
1	Γ○	Γ○	Γ○○○	Γ○○○○
2		○Γ○	○Γ○○	○Γ○○○
3			○○Γ○	○○Γ○○
4				○○○Γ○

N.B.: Γ = ascending kernel ○ = one mora

6 Development of regional difference in accent

- I have shown the accent systems in the four regions:
 - Tōkyō dialect (lowering kernel)
 - Kagoshima dialect (2-patten accent system)
 - Kyōto dialect (word tones with a lowering kernel)
 - Hirosaki dialect (ascending kernel)
- Now, I'd like to discuss how this variation in accent has developed.
- For this purpose, let's compare the pitch patterns in the regions with the ones of Kyōto dialect in the *Heian* period, which is given in Table 14.

Table 14 Pitch patterns of nouns with two morae

2-mora word		Kagoshima	Hirosaki	Heian Kyōto	Kyōto	Tōkyō
		2-pattern	ascending kernel	tone, lowering and ascending kernel	tone, lowering kernel	lowering kernel
1	edge, nose...	Type-A (HL)	0 (LH)	H-LK0 (HH)	HO (HH)	0 (LH)
2	bridge, sound...			H-LK1 (HL)		
3	flower, mountain...	Type-B (LH)	2 (LH)	L-AK0 (LL)	H1 (HL)	2 (LH ¹)
4	chopsticks, sky...		2 (LH) 1 (HL)*	L-AK1 (LH)	LO (LH)	1 (HL)
5	rain, monkey...			L-LK2 (LF)	L2 (LF)	

N.B.: LK = lowering kernel AK = ascending kernel

* 2 for the second mora with a wide vowel, 1 for the one with a narrow vowel

Figure 2 A tentative account of the development of regional difference in accent

Heian Kyōto

high tone bigining HO HOO HOOO
 HO1 HO1O HO1OO
 HOO1 HOO1O
 HOOO1

low tone bigining LO LOO LOOO
 LO ΓO LO ΓOO
 LOO ΓO

Hirosaki dialect

0 O OO OOO OOOO
 1 ΓO ΓOO ΓOOO ΓOOOO
 2 O ΓO O ΓOO O ΓOOO
 3 OO ΓO OO ΓOO
 4 OOO ΓO

Kagoshima dialect



Kyōto dialect

H tone

H0 O OO OOO OOOO
 H1 OΓ OΓO OΓOO OΓOOO
 H2 OOΓ OOΓO OOΓOO
 H3 OOOΓ OOOΓO

L tone

L0 O OO OOO OOOO
 L2 OΓOΓ OΓOΓO OΓOΓOO
 L3 OOOΓO OOOΓOΓO

Tōkyō dialect

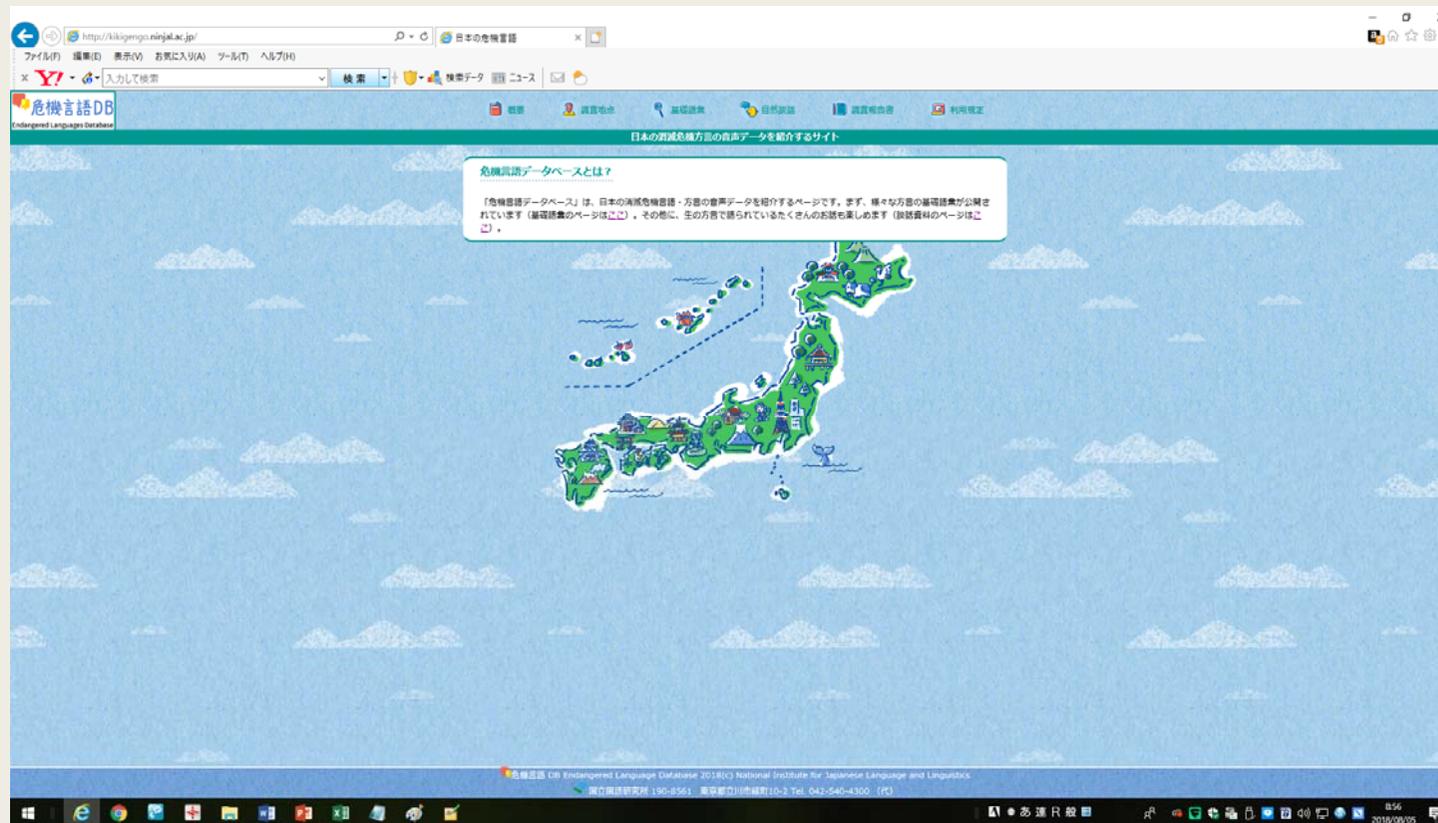
0 O OO OOO OOOO
 1 OΓ OΓO OΓOO OΓOOO
 2 OOΓ OOΓO OOΓOO
 3 OOOΓ OOOΓO
 4 OOOOΓ

- Before concluding this talk, I'd like to mention that studies on Ryukyuan dialects have recently been progressing to a great extent, and it is reported that many regions there have the 2-pattern accent or the 3-pattern accent.
- While investigating the Ryukyuan dialects further, I'm looking forward to having more comparative studies on accents in Ryukyuan dialects and mainland dialects.

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Thank you very much!



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