Where Does the Sound TOKU-TOKU Come from?

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The Japanese language has a lot of onomatopoeias, some of which imitate sounds of animals or objects: dogs bark WAN-WAN, Japanese bush warblers sing HOH-HOKE-KYO, big rocks hit the ground DO-SUN, mechanical clocks tick KACHI-KACHI, busy people rush DOTA-BATA and so on. Onomatopoeias are also used to describe atmospheres, conditions or feelings: silver plates look PIKA-PIKA, you feel SUX-KIRI (see note below) after taking a nap, young ladies feel LUN-LUN expecting a pleasant party and so on. If we describe PIKA-PIKA using ordinary words, we may have to use more words like "shine and glisten sharply" which may sound rather formal or uptight in Japanese. These onomatopoeias are very useful and effective words to express such feelings simply.

This essay discusses some Japanese onomatopoeias about flowing water along with technical explanations of them. I hope you enjoy learning about the diversity and subtleties Japanese expressions.

Note: The letter "X" is tentatively used here to express a Japanese geminate consonant "no sound, just narrowing the throat."

TOKU-TOKU for pouring drinks

When we pour some liquid from a bottle to a glass, e.g. whisky or Japanese sake, a very charming TOKU-TOKU sound can be heard. Let me show you where this sound comes from. When we pour a liquid out of a bottle, the same volume of air has to flow into the bottle. That is, the liquid and the air pass each other at the neck of the bottle. When the air cannot enter smoothly, it is broken into a series of air pockets by the liquid being poured. This causes the rhymic TOKU-TOKU sound. Larger bottles make a lower-pitched DOKUN-DOKUN sound. A book about onomatopoeias notes that voiceless sounds create the image of something light, clear or small, while voiced sounds create the image of something heavy, cloudy or large. Don't you think the sound TOKU-TOKU best suits the imagery of pouring whisky?

CHA-PON for hitting water surfaces

One of the most famous haiku poets Basho Matsuo wrote "The ancient pond, A frog leaps in, The sound of the water" (translated by Dr. Donald Lawrence Keene) which expressed the silence of the pond. If we could have been there when Basho Matsuo wrote this, we may have heard a small CHA-PON sound. There are many variations of CHA-PON: PO-CHA, BO-CHAX, BOX-CHAN, DO-BON and so on. The list is almost endless. The difference between PO-CHA and BO-CHA can be explained by the difference between clear and cloudy sounds as mentioned in the previous paragraph. Thus, you can imagine that a sound like DO-BON would be used to describe a considerably large object hitting the water since the cloudy sound is doubly employed. The nuances of onomatopoeias can be controlled by the way they end. Endings include "X," "N," "LI" and "H." I have never heard them all used together before as in, "The rock went BO-CHA-LIHNX," but who knows, it may work. How big of

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TOKU-TOKU

CHA-PON

a rock do you imagine hit the water surface? By the way, a detailed observation has been reported by a scientist that the sound CHA-PON is actually formed by two sounds: CHA is the sound of the initial impact and PON is the sound of the impact of the liquid column that forms as the result of the object entering the water. What good ears the first person who used the onomatopoeia CHA-PON had!!

NOTARI-NOTARI for wavy water surfaces

Sometimes onomatopoeias are effectively used in the Japanese very short poem haiku, which must be written within just seventeen characters. Onomatopoeias are very useful to express delicate nuances in few words.

Water surfaces have different appearances depending on the season and weather. Another famous haiku poet Buson Yosa wrote "Spring ocean, swaying gently, all day long" (translated by Diane and Seiichirou Miura). Buson used the onomatopoeia NOTARI-NOTARI to express the calm, warm, peaceful and comfortable atmosphere. No other words can take the place of this onomatopoeia. Water surface changes its appearance depending on the depth of the water and the speed of the wind as well. When a breeze starts blowing, ripples appear. When the wind speed increases, the tops of the waves become sharper. I have heard that skilled surfers can tell the wind speed only by looking at the condition of the sea.

When big waves break against rocky shores we hear a loud ZABUHN, but small ripples make CHA-PON sounds. It reminds me of sea birds pedaling along on the water surface. This difference can be explained again by the clear and cloudy sounds CHA and ZABU. The sound ZABUHN may be divided in two parts; ZA which expresses the wave breaking up into many water droplets and BUHN which expresses the hit itself and lingering of the sound. On a side note, DON-BURAKO, which appears in the old tale "Momotaro" (Peach Boy) (see note below) does not express the waves themselves. It comes from two sounds: DON for the peach being hit by a wave and BURAKO for the pitch and rolling of the peach.

Note: In this story Momotaro was a boy born from a big peach floating down a river.

DOHX for waterfalls

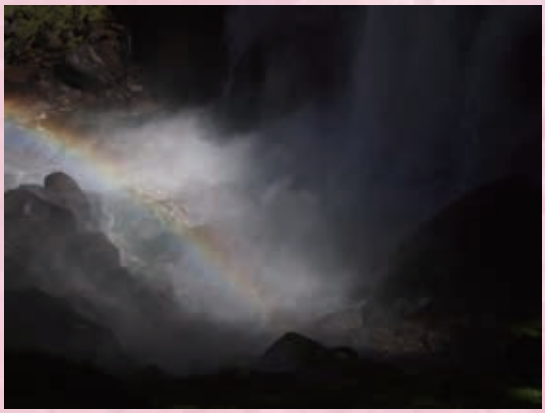
The sound of big waterfalls may be heard as DOHX though DAHX is similar. This difference can be explained by the

NOTARI-NOTARI

nuances of the vowels "O" and "A." The vowel "A" has an open image while "O" has a closed, round and dull image. The DAHX sound should remind us of unusually powerful splashes while DOHX reminds of a continuous heavy echo in a space surrounded by rock walls. DAHX may better suit rapid streams in valleys. By the way, the vowel "I" has an image of tension, "U" has an image of oppression, and "E" has an image of dirtiness. Indeed, if the sound of a waterfall were DEHX, I would feel rather uneasy.

Now that you know some Japanese onomatopoeias for flowing water, let me talk about the future of onomatopoeia in engineering. Typically, pressure and flow rate are employed to evaluate fluid flow in the industrial process, but onomatopoeias might play more important roles in the future. Conversations such as this may actually take place: "The sound from this pipe sounds like ZABOX-ZABOX today even though it is usually ZAH-ZAH" or "The liquid surface of this tank looks YUSSA-YUSSA today though it is usually YURA-YURA."

Japanese has a number of onomatopoeias for rain also: POTSU-POTSU, SHITO-SHITO, PARA-PARA, ZAH-ZAH, DOSHA-DOSHA and so on. Let us have a YUKKURI talk (long talk) about them sometime.



DOHX