

NATURAL SELECTIONS

In cross-cultural situations, remember those emoticons

By ROWAN HOOPER

"My first child was born on December 27th, 1839, and I at once commenced to make notes on the first dawn of the various expressions which he exhibited."

It will come as no surprise to many readers that this is a quote from the ever observant and curious English naturalist Charles Darwin (1809-82), originator of the theory of evolution by natural selection.

He was convinced that all facial expressions were universal in all people, and even in animals, and that they must have a "gradual and natural origin."

Darwin set out his argument in his book, "The Expression of the Emotions in Man and Animals," published in 1872. There he states his belief that, "The young and the old of widely different races, both with man and animals, express the same state of mind by the same movements."

Two things recently made me recall Darwin's work on facial expressions. The first was a remarkable meeting I had with one of his descendents, and the second was the publication of a study of differences in the interpretation of facial expressions between Westerners and East Asians.

I met Randal Keynes, Darwin's great-great grandson, in London, and we spoke about a film he has been involved with, titled "Creation," that is a story of Darwin's family life. Keynes is 61 years old, and talking to him I was almost spooked. Four generations on, I could clearly see the resemblance to his celebrated ancestor. Keynes is clean shaven

and wears spectacles, but *the eyes*: his eyes are exactly the same as Charles Darwin's.

In fact as I was talking with him — and I had to stop myself from referring to Darwin as "your great-great granddad" — he held my gaze as all the while I was thinking: "My god, he looks just like Darwin! It *is* Darwin!"

What a shadow to grow up in — but what a considerate, thoughtful man Keynes was.

Then I came across a paper that challenges one of Darwin's arguments — that facial expressions are universal.

As any Japanese who has lived in the West, or Westerner who has lived in Japan, will readily agree, there are obviously strong cultural differences at work in our societies.

People from Japan and China generally have a tougher time than those from European countries in telling the difference between a face that looks fearful versus one that looks surprised. Similarly, East Asians have more trouble distinguishing a face showing disgust from one that is displaying anger.

Now scientists think they've figured it out: When examining a face, Easterners fixate their attention on the eyes, whereas Westerners scan evenly across the face.

"We show that Easterners and Westerners look at different face features to read facial expressions," said Rachael Jack of the University of Glasgow, in Scotland. "Westerners look at the eyes and the mouth in equal measure, whereas Easterners favor the eyes and neglect the mouth. This means that Easterners have difficulty distinguishing facial expressions that look similar around the eye region."

The discovery shows that human communication of emotion is a lot more complex than we thought — and even than Darwin thought. As a result, facial expressions that had been considered universally recognizable cannot be used to reliably convey

emotion in cross-cultural situations.

Does this strike a chord with any Westerners living in Japan? Or Japanese when interacting with Westerners?

Certainly, I can understand it. There are many occasions when expressions and emotions may be misunderstood, and this research might provide part of an explanation as to why that happens so frequently.

Jack and colleagues investigated cultural differences in the recognition of facial expressions by recording the eye movements of 13 Western Caucasian and 13 East Asian people while they observed pictures of expressive faces. They then put them into categories: happy, sad, surprised, fearful, disgusted, angry, or neutral.

The faces were standardized according to something called the Facial Action Coding System (FACS). This sets each expression as displaying a specific combination of facial muscles typically associated with each feeling of emotion. The researchers then compared how accurately participants read those facial expressions using their particular eye-movement strategies.

It turned out that Easterners focused much greater attention on the eyes, and made significantly more errors than Westerners did. In other words, while Westerners use the whole face to convey emotion, Easterners use the eyes more and the mouth less.

And interestingly, this cultural difference extends to cyberspace.

Emoticons — text marks used to convey facial expressions of the writer's mood — are different in Japan and the West.

In the West, the commonest emoticons for "happy" and "sad" use the mouth to convey the emotion, so we have :) and :(

In Japan, however, the eyes are used to convey the

emotions, so ^.^ is commonly used for happy and ;-
; for sad.

"Emoticons are used to convey different emotions in cyberspace as they are the iconic representation of facial expressions," Jack said. "Interestingly, there are clear cultural differences in the formations of these icons."

In summary, the researchers say, there are real perceptual differences between Western Caucasian and East Asian people. However, I doubt whether that applies to Caucasians who have grown up in Japan, or Japanese who have grown up in America, for example. It's all about the culture you grow up in — your so-called nurture rather than nature.

But, without overgeneralizing, it does help us understand how attempts to communicate emotions sometimes get lost in translation.

The second volume of Natural Selections columns translated into Japanese is published by Shinchosha at ¥1,500. The title is "Hito wa Ima mo Shinka Shiteru (The Evolving Human: How New Biology Explains your Journey through Life)."

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