

I would like to thank Shodō Canada for providing me with this opportunity to talk about my appreciation of Shodō and the spirit of Japan that is behind the images created by brush and ink on the paper. I start with a haiku and its translation:

雪とけて (Yuki tokete)
村いっぱい (Mura ippai no)
子供かな (Kodomo kana)

Snow melts, [and] village is filled with children.

Many years ago, when I was teaching the concept of “entropy” to chemistry and biology students, I ran into this haiku by Kobayashi Issa (小林一茶). I was captured by the subtle simplicity and depth of this poem: snow and whiteness (simplicity of form), frozen ground and absence of visible activity, melting of snow as a sign of arrival of spring, hope, colour and life (multiplicity of form), children playing, and chaos already hidden in a simple form of order.

Entropy, a Greek word meaning “Transformation Within”, is a concept in physics that is difficult to explain. According to certain physical principles the entropy of the universe is increasing with the passage of time. A typical classroom explanation for entropy is a constant increase in disorder or a decrease in order. On the other hand, entropy can be interpreted as the hidden urge of nature to transform matter and energy to new combinations and depends on temperature. Another interpretation of entropy is the transformation of simplicity to multiplicity (simple to complex).

Based on Issa’s haiku, I explained entropy to students in this way: Winter is cold and icy. Children [their body (or matter) and spirit (or energy)] are forced to stay in damp dark houses. They are separated from each other, cannot play together, and are depressed despite their hidden energy and playful imagination (*in physics, this is the initial state of low energy and absolute confinement*). With the arrival of spring and increase of temperature, snow and ice melt, and children can no more be confined to their dark houses. They jump out of the houses, with joy and cheerful voices (loud and confident) and in colourful outfits (in contrast to the white, black, grey, and brown of the winter) (*in physics, this is a group of high energy states and relative freedom of movement of the matter*). The village seems to be in disorder (as compared to the previously established order based on confinement of the matter and energy) but is much livelier and transformed from “simple” to “complex”. Winter hides the tendency (potential) to transform but the urge is there and appears at the right moment, spring. Once groups of children appear in different parts of the village, cheering and playing, freedom (movement, joy, hope, and colour) replaces confinement (gravity and depression); the entropy of the system (village and its inhabitants) increases.

This story brings me to the topic of the calligraphy piece I submitted to Shodō Canada this year, Yūgen (幽玄). To my knowledge there is no accurate translation for Yūgen in English. I translated it inaccurately as “Invisible Mysterious World”. Yū(幽) has different meanings: confining to a room; quiet and secluded; dark, deep, and hidden; land of dead; mysterious land. Gen(玄) can mean: dark; mysterious and profound; or unpolished. As an adjective, Yūgen has been translated

as mysterious depth, quiet beauty, subtle and profound. I do not have a simple explanation for Yūgen, as I did not have one for entropy. Unlike entropy, Yūgen is not a scientific concept and is more about the hidden meaning of events and objects that can not (or need not to) be explained with the common language. Like entropy it might be explained by images in poetry or other expressive forms but remains in a quiet and hidden space below surface.

The imagery in Issa's poem may also help to visualize Yūgen. Considering the use of the word *kana* (かな、哉) at the end of the poem, a different reading of the haiku implies that the melting of snow and what follows may or may not happen:

Melting of snow, [and] filling of village with children [isn't that so?!].

Deep snow covers all, and all is hidden underneath. If you pass by a snow-covered field, you see white with interruptions of some dark shades (whatever is not white is dark). All is quiet in this scenery, there is no sign of life or movement as all is hidden under the surface (appearance). If the snow does not melt, nothing happens, the quiet beauty will remain or the darkness of the land of death will persist. On the other hand, doubtlessly, something exists under the snow that can not be explained before revealing itself. If the snow starts to melt the hidden (children and their joy confined to houses, inactivity) will become visible and transforms into unpredictable activity and a variety of shapes and colours. The empty space (village) will be filled with children. This time it is the serene quiescence that hides under the colourful and variable shapes and forms (cheerful and noisy children running around and playing). What was hidden becomes visible and what was visible becomes hidden.

To conclude, I would like to add a few sentences about the Shodō class I have been participating in the past few years and how this class encouraged me to practice Shodō in my limited capacity and ability. This Shodō class is a different place, a different land from the land we live in. It has its own people, rules, language, customs and habits, and culture. The class has no visible dimensions. The only limit there is determined by brush lines on the paper, and these lines are confined and free at the same time; sometimes they can escape the paper and dissipate in space and time and imagination. In this class we have an invisible spirit connecting us together, encouraging us to delve into the essence hidden behind the appearance of forms created by brush lines. In this class we like each other, we encourage each other, and we learn from each other. Mostly without saying a word. When I am in this class I merge with this connecting hidden spirit and transform without much effort into a traveller in a colourful land, carrying a brush dipped in ink in my hand wandering in the hidden mysteries of the dark meadows of a paper.

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