To visualize the movement of writing brush in the air

— Through Calligraphy —

Tomoko KAWAO

[Outline]

When we write the letter with the brush, we start with the first line and follow the stroke order. However, when we focus on the stroke order, we can only see the work in two dimension form. It is difficult to visualize the movement of the brush in the air. In the work of Shodo, the art of Calligraphy, there is a certain time when the brush is not touching the paper and those movements in the air are difficult to be seen.

In fact, to imagine this movement of the brush vein in the air is an important fact when you want to study and copy the old calligraphy from thousands of years ago.

Since 2009 I have been working on the series "Ko-ou(Correlation)" (a Japanese word for respond to each other), and from 2017 I have been trying to visualize the

movement of brush through the work "traces". In this report I would like to show some examples of my calligraphy and some other works.

1 Tracing the brush vein in the air

1-1 王羲之 Wang Xizhi(十七帖 Jyu-nana-jyo) 上野本

UENOBON (from Kyoto National Museum)



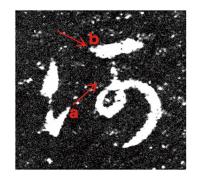
The calligraphy from "Jyu-nana Jyo" from Wang Xizhi is a cursive style, and most of them is individually written. There are less continuous letters and most of the words are in four letters.

Many breaking points are seen in one sentence, so we have to be careful to see where it connects to the next. And we need to be careful because the direction of the brush does not always follow to the next stroke order. In addition, those directions are not always the same. Especially in "Jyu-nana Jyo" I had to use my imagination to learn the movement of the left to the right side of the KANJI(Chinese character), I will use this as the example.

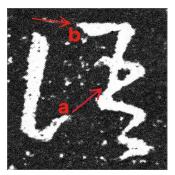
1-1-1 Chinese character [端](HASHI)



1-1-2 Chinese Character [何] (NANI)



1-1-3 Chinese Character [語](GO)



Let's see how the brush movement goes from the left(a) to the right(b) side of the Kanji. It does not look like a is writing toward b. We have to imagine how the brush moves in the air. Now let's focus on the pathway of the brush from the Chinese character 1-1-3.

1-1-4

After writing from point a, the brush goes up high in the air and writes a circle and then lands at b.



1-1-5

After fishining writing on point a, the brush once leaves the paper and after lifting up, the brush ends at b



1-1-6

When fish writing on a, the brush movement ends once, take away the brush from the paper, move the brush upside and do not hold up the brush high in the air, move the brush on the horizontally and lands at b.



1-1-7

After finishing the brush at a, bring the brush to as shown in the picture to the upside, move the brush as low in the air, and do not make a detour and ends at b.



In his famous book "Gei-shu-so-shu", 包世臣 Bao Shichen (A Chinese calligrapher)" 李斯 Li Si says `when move down the brush, you have to move fast enoug like the Eagles and cranes catches the birds.' Wan Xizhi said "each time you write the dots

and stokes of a Kanji character you need to use the strength and try to open the tip go the brush, the Calligraphy will be beautiful." (Translated by Tsunenobu Takahata 1982 P.66) In this calligraphy of "Jyu-nana-jyo" I think it is necessary to move the brush like in 1-1-5 and movement with the rhythm and some speed.

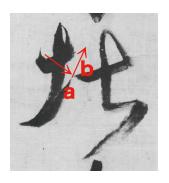
1-2

倪元璐 Ni Yuanlu [Cursive Five -Character Rhythm Poem Axis] Size: 165.0×47.3cm



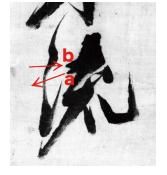
It is not easy to describe Ni Yuanlu's handwriting. Here I would like to focus on his short brush work where he writes the upward brushstroke or sweeping down towards the left.

1-2-1 Chinese Character [堪] (KAN)



1-2-2 Chinese Character [藜](AKAZA)





When we see the movement of the brush from point a to b, the brush stroke is strong, it once passes through b, but it seems to be recognizing b. These two points are very close, but it is surprising that the directions are very different. Now I would like to consider the route from 1-2-3 「流」 (RYU).

1-2-4
Keeping the force of the brush at a, quickly changes the direction and moves towards b in the low altitude.



1-2-3 Chinese Character [流] (RYU)

1-2-5

Keeping the force of point a, move the whole arm with the brush towards b.



1-2-6 Bring the brush force towards a, aim toward b.



1-2-7 Bring the brush force using the arm from a, and when moving toward b, breath deeply.



Like the movement in 1-2-5, move the brush widely with speed, I imagine the brush moves toward the next start point using the lateral of the brush. Ryosetsu Imai(a Japanese calligrapher) says in his book " It is a movement of the brush to go from one line to another. In other words, the brush is not touching the paper, but it shows what route the brush moves toward the start of the next line." From "Shodo (Kanji) Shoho yori Sosaku made 1971 p.27) As he writes in his book, it is very important to imagine the possibility of the movement of the brush as mush as possible in calligraphy. However it is difficult to consider which is the correct movement. Moreover, it could not be in one of the examples in here, it is always important to imagine the movement of the calligraphy in the air. The writer, decided to produce the calligraphy which aims the movement go th brush in the air.

2 Productions and exhibition of Ko-ou (correlation) series

2-1 The product at the Ko-ou exhibition



Solo exhibition "ko-ou" Tomoko KGallery H2O(Kyoto) 2009

The title "ko-ou" meaning correspondent in English, has been focusing in the movement of the brush between the two dots. One dot is "calling" and another dot is "answering" which means correlation, "ko-ou". The reason I named this production.

The two dots in this piece would be easier to imagine when you write the letter "\van " (" i " in Japanese). The first line in "\van " is "calling" and the second line "answers". I used the black ink

so that the white dot can be seen as floating. I wrote all the walls in black, so the white dot looks like a light in the dark which makes easier to trace the movement.

As way we appreciate the calligraphy is usually by facing each other, I made space between the two pieces, so that people can walk through between the movement of the brush and feel how the brush moved in the air.

This is my hope for the people to imagine and notice that one is "calling" and the other is "answering".

2-2 Open house production for "ko-ou"



Life with will sh369 (Fukuoka) Tomoko Kawao Takuya Shimazu Keigo Three person Joint exhibition 2009

I exhibited an open presentation on "ko-ou" in the three-person exhibition. I wrote two dots of "ko-ou" in the end of two of the four sliding screen (Fusuma).

First I began from the left, then right, left, and right and made 5 round trips. I wrote 10 dots, and completed my Fusuma(screen) work. After I have completed my work, I opened two Fusumas (screens) and let the visitors walk through the dots. I was told from the visitors that, by walking through the dots right after watching me drawing the dots, made them feel the Ko-ou(correlation).

2-3 "Ko-ou" and the Shakkei (making use of the surrounding landscape)



Tourism Entsu Temple (Kyoto) group exhibition 2010

In the exhibition at Entsu Temple I displayed my Ko-ou work, borrowing the landscape scenery of Mt Hiei as the background. Displaying the four dots of "ko-ou" from the left side, I used the four pillars to make it easier to imagine the movement of the brush in the air. I wanted the visitors to find by themselves where is the best position to feel the connection of the dots, I did not specify where to view the work.

2-4 "ko-ou" Change the surface



"Musai" (No color) Gesshiin Temple Kodaiji Temple Tower Head Tomoko Kawao Tetsuo Abiko Joint Exhibition

In the exhibition at Gesshiin Temple, I changed the the dot "calling" and "answering" to a surface. By doing this, I entrusted the viewer to see the route of the brush. In this work I paid attention on the movement of the bruh by using the ink drop.

2-5 "ko-ou" Where does it come from and where does it go



Satoshi Koyama Gallery (Tokyo) group exhibition 2010

In this work, I visualized the movement of the brush in the air by using the ink drop. To make easier to imagine, I adjusted many times, the amount of the ink. I placed the two sheets of papers apart and made the movement of the brush visible to write the first "calling" and then tried to make it visible the movement of the brush after the "answering" to expand the imagination.

2-6 "ko-ou" where they overlap and the "calling" dot



Exhibition "KOKOOUOU" SATOSHI KOYAMA GALLERY (Tokyo) 2011

In this solo exhibition, I was thinking what I should express to the world after the Great East Japan Earthquake. I tried to express the situation of loneliness, surrounded, and also full of anxiety. This was also a work which I made lots of try and errors. Here is the introduction from Mr. Satoshi Koyama who held the exhibition.

Introduction of the exhibition

The movement of the brush in the air shows the inexhaustible spread into the gallery space. The dot of the "calling" which is there. Where does it do and and what kind of trace does it shows. The gallery is filled with the work of "ko-ou" which Ms Tomoko Kawao creates. It has no limit and keeps developing further. In this exhibition, you can see six works which includes 2 masterpieces with the width more than 3 meters. To hold this exhibition I have a very strong belief. Let me explain my belief using the two key words.

[①Simplicity, universality / The work of Tomoko Kawao is very simple]

Write a dot, throws and receive and land again. The dot with has released sometime moves fast, sometime moves slowly toward the next point. The screen is filled with the repetition of these movements. As the result, what is left on the screen are the dots and lines, and the drops falling from the movement of the brush in the air. There, I find the beauty of simplicity of her work. At the first glance, this style of work, looks like study of an abstract expressionism American contemporary art, however it not just an assertion, there is an identity which Tomoko Kawao releases and establishes as a calligraphy artist. The most common way to appreciate the calligraphy writing is by re-experiencing the writing. The speed of writing the line, the rhythm to move up

the brush, the rhythm to go to the next shape, these are all appreciated when standing in front of the art piece. This allows the artist and the viewer to sympathize and enjoy the difference, too. Certainly with oil painting or photo works we can enjoy by imagining the process of the production. Unlike those works, her calligraphy is a single-layered and does not consist any editing to finish up the piece. (Kawao calls it "one time serious match") It makes the density of re-experience much higher. The attraction of Tomoko Kawao's art is that it connects the viewer and the producer and does not chose the viewer. It is universality.

[2] Identity color/ Tomoko Kawao's black is certain]

It is obvious to say that the reason she is attached to monochrome comes from her background that she had always been involved with the beauty of the traditional calligraphy since she was a child. And the fact that she pursuit the beauty of the ink is the releasement of her identity. Like the white of Tsuguharu Fujita, the blue of Yves Klein, Kawao's black is the important factor for her work. Therefore, to pursuit the compound of the ink formula is as important fact as the pursuit of the identity.

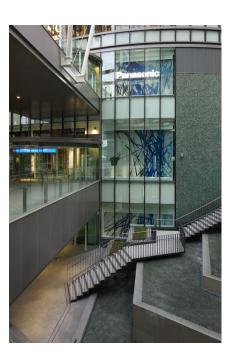
[③ correlation/"ko-ou"]

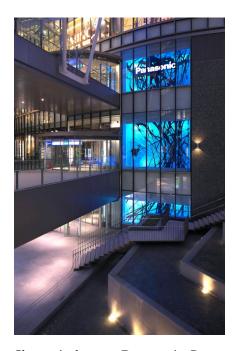
Adding to the work I have mentioned before, another theme Kawao has been working as her life work, is "ko-ou". (calling) At her open exhibition in 2009 in Fukuoka, she used the two screens in the Japanese tatami room, wrote the start dot and the end dot, then opened the screen so that the spectators could walk through the two dots. At her exhibition in her hometown Kyoto, she made a black space, she prepared a panel work with the black dot and hanged from the ceiling in many layers, so that the spectators can walk through those panels. What I can say, is that in her work she writes the dots to share the feeling of the unseen lines connecting the dots, is the important value she shares as a Japanese. Those are the common values I can see in all her works. In other words, the values Japanese people admires the most, "to read between the lines" and to "presume". Those values are at the bottom of her work.

Kawao's theme "ko-ou".(calling) I can see her figure going beyond those works she had already accomplished. I see Kawao's "narrow and deep" Japanese traditional are work spreading the wings to a global communication concept art. My expectation rises more and more.

Satoshi Koyama SATOSHI KOYAMA September 2011

2-7 "ko-ou" Emerges at night with lights and special cloth



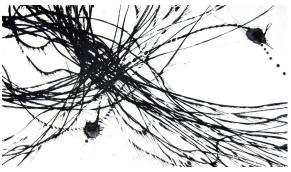


Shop windows at Panasonic Center Osaka 2013

This work is a printed version of "ko-ou" on a 15 meters cloth worth the Basement to the second floor of the shopping center. At the daytime, it is displayed as a work with the gradation blue to black color. At night with light from the behind the cloth, the white parts of the cloth becomes transparent and the other parts looks black and emerges the 'ko-ou" work. This is the

collaboration with the technology by Panasonic to change the lighting by the time and the background lightings.

2-8 "ko-ou" Visualization using video shooting and Computer graphic



NHK Historical Drama "Yae no Sakura"

Opening video (June)

["Ko-ou" 2013#5 Always rising to a new challenge]

2-9 Shooting at the Studio



The work of the photo 2-8 was used at the opening video of the Historical Drama "Yae no Sakura" broadcasted by NHK. It was developed from the work "ko-ou" work number 2-6, the "calling" point which overlaps and goes beyond I wrote the "answer" dot. I made this work with my heart to inherit the spirit of Yae Yamamoto beyond the period of time.

2-10 Creating boundaries on the frame



I created a silver ink field on the frame. The concept of this work is that the dot of "calling" jumps into the other world. I used the light ink to make the overlapping parts visible.

The 'ko-ou" series has a concept to imagine the movement of the brush in the air to "make the invisible visible". I had been producing the works continuously. We human being have been hailing to each other. The other me, the job we have been working on, important person, the thoughts of the people from thousands of years ago. The hailing object might be different depending on the person. There might be a discovery when trying to see in between the two dots. I myself am planning to

hail with the "ko-ou" series as my life work.

3 Work and Exhibition on "Traces"

As I have been working on the how to visualize the movement of the brush in the air expressing the dots, I started to think how I could visualize the movement of the brush itself. After so many tries and errors, I have decided to collaborate with programmer Mr Kosei Ikeda from 2017. Since then we had been working on how to visualize the movement of the brush.

Not just showing the movement, but also establish as a beautiful piece of art, we had been experimenting the movement of the brush from many angles.

- -the angle of the brush
- -speed of the brush
- -height of the brush
- -shape of the light
- -how to install the light
- -type of light
- -brightness of the light

- -order a special type of brush with the long tube to fit the light length
- -create a tool to out the light on the brush using the 3D printer
- -to set the background and the environment for the shooting
- -decide on the outfit when writing
- -decide on the size of the paper
- -decide on the type and amount of the ink
- -to decide the size of the picture and the number of pixels
- -to purchase the right camera fo the work
- -how to use motion caprure to record the movement of the body to visualize
- -adjust the schedule during the night (how many works is it possible to create)
- -Chose the Kanji characters

We had worked for about two years for this experiment. We especially spent many hours on the lighting and the selection of the Kanji character. Although selecting kanji character which looks different when using the lighting they sometimes looked like the same character. We recorded many types of letters and finally chose 20 letters for the shooting.

3-1 Making 1



3-2 Making 2



3-3 Traces "風" (wind)



Traces "wind" Photographed 2019 September (before retouch)

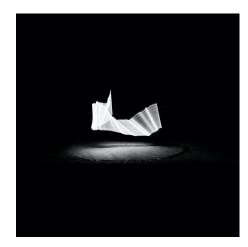
From this onward, we requested NISSHA Corporate and Limited for their help to photograph and print the works to complete our work.

Our Traces project was selected to be exhibited in the official program of the satellite event at the KG+2020 KYOTOGRAPHIE. This KYOTOGRAPHIE is help every year, but in the 2020, it has been postponed due to the COVID-19 pandemic and finally was held in October. So we decided to held our Traces exhibition in October as well.

The following is the Statement for the exhibition "Traces".

Traces was born and created during the conversation between Kawao and the programmer Ikeda. It focuses on the action of writing the calligraphy and to visualize the traces of the brush. One of the training of the calligraphy is to copy the classic calligraphies. It is not to just copy the letter but to experience the movement of the brush and the body movement. (Kawao's "ko-ou" work series to visualize the movement of the brush in the air bu using the ink droppings) In other words, the calligrapher even sees the vector data from few though sands years ago. It is a molding written in one action which once you start writing it will never stop. The movement here means the position, angle, speed, angular velocity and the time-series fluctuation and its rhythm. We want to deliver visually the beautiful "movement" which is the characteristic of Kawao, the expresser of the calligraphy, with Ikeda constructed in the three dimension perspective.

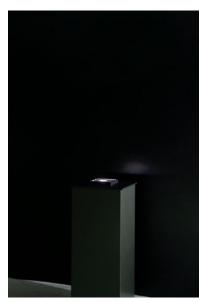
Introducing the work of "Traces" (with the exhibition scenery)



□─』 "one"Digital printing (ink jet) NDP(Nissha Digital Printing) ® PaperH150mm×W150mm

3-4 Traces "One" scenery of the exhibition1

3-4 Traces "One"



3-5 Traces "One" scenery of the exhhibition2



Scenery of the exhibition photo by Yuna Yagi

The first letter to learn, and the ultimate letter for the calligraphy performer. The simple and abyss difficulty of this one letter could be the unending pursuit for the calligrapher. Used the LED light under the work to make it stand out the trace of the brush.

3-6 Traces 『風』 "wind"



「風」 wind

Digital Printing (ink jet) Tarpaulin H200mm × W3300mm

3-7 Traces 「風」 Exhibition scenery



Exhibition scenery photo by Yuna Yagi

With the photo work, exhibited the "wind" calligraphy when wrote while shooting. Printed in the maximum photo size to be able to exhibited. Exhibited in the size approximately the real light trace.



「交」 "Mingling" Digital Printing (Ink jet) NDP (Nissha Digital Printing) ® Paper H515mm×W728mm

3-9 Traces 「今」"Now"



「今」 "Now" Digital Printing (Ink jet) NDP (Nissha Digital Printing) ® Paper H515mm×W728mm



「重」 "Weight" Digital Printing (Ink jet) NDP (Nissha Digital Printing) ® Paper H515mm×W728mm

3-11 Traces 「閃」 "Inspiration"



「閃」"Inspiration" Digital Printing (Ink jet) NDP (Nissha Digital Printing)® Paper H515mm×W728mm



「心」 "Mind" Digital Printing (Ink jet) NDP (Nissha Digital Printing) ® Paper H515mm×W728mm

3-13 Traces 「鬱」"Depression"



「鬱」"Depression" Digital Printing (Ink jet) NDP (Nissha Digital Printing) ® Paper H515mm×W728mm



「カ」 "Power" Digital Printing (Ink jet) NDP (Nissha Digital Printing) ® Paper H515mm×W728mm

3-15 Traces 「永」 "Eternity"



「永」"Eternity" Digital Printing (Ink jet) NDP (Nissha Digital Printing) ® Paper H515mm×W728mm

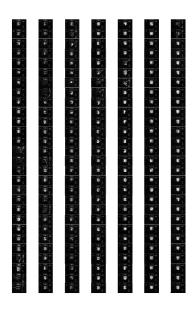


「流」 "Passage" Digital Printing (Ink jet) NDP (Nissha Digital Printing) ® Paper H515mm×W728mm

3-17 Traces Exhibition Photos



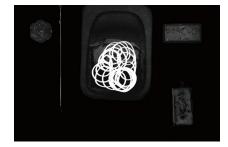
Exhibition scenery photo by Yuna Yagi



Meditation Sublimation Transfer Fabright $^{\circledR}$ H1,030mm \times W728mm



3-20 Traces 「瞑想」"Meditation" One photo



3-21 Traces "Meditation" Exhibition scenery



Exhibition scenery by Yuna Yagi

The first action when starting the creation is to rug the ink stick. It has a very important role of action. It is the begging of the time to get focused and control the breath, and I think these actions themselves are the creation. Pour the water in the ink stone, rub the ink stick, soap the brush with the ink, the action before starting writing, we visualized those actions by wearing the light on the right index finger. In this work, we used 200 photographs to trace the movement for two hours.



Exhibition Scenery photo by Yuna Yagi

3-23 Traces 「瞬」 "Moment" Exhibition scenery



Custom Software, Display system Variable in size

We recorded more than 50 positions of my body and brush movement, using high precision motion capture with 1/120 seconds accuracy.

We tried to visualize the calligraphy as three dimension object. The photos are used to record how to write in the real space, and the computer graphic is used to capture each moment. Those two different ways of recording the movement of the "brush", "foot", and the "body".

(Kousei IKEDA)

3-24 Making 1



3-25 Making 2



The production of Traces was a collaboration work with Mr. Ikeda. I could not have completed by myself.

I truly appreciate the fact that as professionals in the different field, he gave me the new ideas and the taught me new technologies and point of views.

I was moved especially with the motion capture. With this technique we can save the work as data. I am sure that if we could have all the datas of the historical Chinese and Japanese calligraphers, the way of the reproduction of old calligraphies had been changed. For my personal record, I wish to save the data of the movement of my whole body as I get older.

[Prospects for the future]

I have been working on calligraphy through "ko-ou" series and Traces trying to visualize each movement of the brush in the air as some thing we can imagine.

From now on, to develop these works, it is indispensable to learn more about calligraphy in the future.

It should lead me to see the movement of the brush in the air much clearer than now. I should be discovering clue for the next work which could be hidden, acquire new perspective. The movement of the body writing letters changes depending on the size of the letter, so I would like to challenge on the full size calligraphy.

I would like to work on something that I can only create in this current-day, listening to professionals of the different fields and using latest technologies, and at the same time, by focusing on characteristics of calligraphy; an art that we can re-experience the body movement of the people from thousands of years ago. I would also like to keep developing by not ignoring things I doubt, even when things don't happen as expected, I would like to keep going.