

DRAMATURGY & TECHNOLOGY WORKSHOP 2
By Su Wen-Chi
24 May 2019, 6.00PM – 10.00PM
Practice Space (The Theatre Practice), 54 Waterloo Street

Rapporteur's Report prepared by Chan Sze-Wei

ABOUT SU WEN-CHI

Su Wen-Chi is a dancer, choreographer and new media artist working in Taiwan, currently the Artist-in-Residence of the National Performing Arts Center - National Theater & Concert Hall, Taiwan R.O.C. In 2005, Su founded YiLab. in Taiwan, an experimental group of new media and performance artists working on integrating new technology with the performing arts, and seeking to present new performing formats. YiLab.'s philosophy is: in a work, there is not just one dominant medium, only concepts that appear similar but collide with one another; every artist involved is an independent entity who can freely put forward their viewpoint and undertake in-depth exploration of the core significance of the theme. Find our more at suwenchi.com.

WORKSHOP PARTICIPANTS

1. Bernice Lee
2. Chiew Peishan
3. Germaine Cheng
4. Henrik Cheng
5. Jocelyn Chng
6. Liu Wen-Chun
7. Pat Toh
8. Rachel Nip
9. Victoria Chen

Workshop facilitated by **Lim How Ngean**.





Su Wen-Chi: "I wanted to know what scientists eat."

This was an unexpected start to a presentation on Dance and Technology. Introducing her 6-week long visit to the European Organisation for Nuclear Research (CERN) on an artistic residency programme designed to facilitate connections between art and science, Su Wen-Chi began by clarifying that like many dancers she's never been someone good at science and that she doesn't have a science background. She admits that she initially felt overwhelmed at the complexity of what various scientists shared with her about their research.

So where does one begin approaching quantum and particle physics as an outsider? She flashes a picture of the canteen. "I wanted to know what scientists eat." Wen-Chi resolved her conundrum by deciding that even if she only understood a little bit, it was ok. She decided that all she needed to do was keep her mind open, and seek to understand the principle even if she did not understand the details.



Photo by Su Wen-Chi

In her presentation, she takes us through a photo album of the CERN research facilities and meetings with scientists and their work, but also the everyday environment of CERN. Her light-hearted and approachable tone make it easy for our group, primarily dancers and actors, to place ourselves in her shoes as an artist arriving at CERN, in an unfamiliar landscape of cutting-edge research, and a community of scientists who seem to think and behave like a different species. She claims that she was determined to go on this residency programme because of her obsession with seeing the first computer created to support the World Wide Web, that can be found at the CERN museum. The bulk of her time, however, would be spent speaking with theoretical and experimental physicists studying quantum physics - a study of matter on the smallest scale of subatomic particles.

Inflicting science on dance

Why do we want to mix dance with science in the first place? I initially approach the Dance and Technology workshops at this conference with trepidation because this seems to be a too-popular theme. Do we make these marriages because no two fields could seem further apart than science and dance? The rigour of scientific logic and formulas versus the aesthetic abstraction, non-verbal nature, and difficulties of documentation and theorisation usually associated with dance? Apart from maybe sports science and kinesiology that deal directly with the moving body.

Quantum and particle physics have been taken on by so many choreographers to date, including leading names such as Wayne McGregor (*Atomos*) and Liz Lerman (*The Matter of Origins* - also created after a visit to CERN), and what seem to be countless more recent commissions for collaborations of dancers with physicists and mathematicians, usually producing pieces heavy with multimedia and patterns in imitation of particle pathways. My experience as a viewer is that most of these pieces leave me cold. From the other end of the spectrum, there is the popular science approach of the Dance Your PhD contest of Science Magazine. It has spawned many creative videos that use movement and spatial formations to mimic and explain phenomena discovered by science. (Incidentally, the 2019 winner is a physics video on superconductivity.) Embodiment of concepts can be amusing and educational; the videos generally don't aspire to be anything more than that and tend not to be very choreographically interesting.

But I trust Wen-Chi's reputation for artistic rigour. So I listen for a deeper logic to the apparently innocent travelogue.

Frames of reference



Photo by Su Wen-Chi

As the presentation continues, I get the sense of a vaguely anthropological approach to the strange creatures known as physicists. She describes scientists' office decor, coffee consumption, strange signage, hand gestures and blackboard-scrawling tendencies, atheism and their dislike of office cleaners. She shows us photos of massive particle accelerator machines, archives, street signs, the recreational dance studio and the famous computer that first hosted the WWW (a disappointing small grey boxy monitor and keyboard on a table).

She provides us with analogies. Smashing atoms apart in the Large Hadron Collider to discover their components is "like smashing an iPhone". She compares the particle density of the floor to that of a sheet of paper, and compares the World Wide Web to how the transmission of electricity spreads in many directions. She gets a physicist to describe that if a human could survive inside the extreme gravity of a black hole, "your body will feel time as so slow that it's as if you are floating".



Photo by Su Wen-Chi

She admits that the turning point that allowed her to begin connecting to the concepts of quantum physics came from an exhibit designed for school children, at the CERN visitors' centre. In a miniature cloud chamber, an otherwise imperceptible subatomic particle could be seen cutting its pathway through vapour. The concrete manifestation via the cloud chamber finally allowed her to imagine that particles are everywhere, penetrating our bodies and temporarily breaking our DNA chains before they reconstitute themselves.

Embedded in Wen-Chi's narrative are reflections on her own frames of reference. It's a powerful reminder to the encounter with a new environment presents new knowledge about the unfamiliar - but by contrast and comparison, also new knowledge about the familiar. These simple but profound observations resonated strongly with me and other participants of the workshop.

The dancer's starting point. I appreciate the simplicity with which she articulates that her main tools for understanding the new information she encountered at CERN were her own tools as a dancer: her understanding of the corporeal body (which was central in her realisation with the cloud chamber), and the concepts of space, time, and gravity that are so central in choreography - and also central in physics but understood in a very different way. She was also fascinated by scientists' body language and gestures (including the need to write while talking), which showed a certain kinaesthetic expression of their ideas.

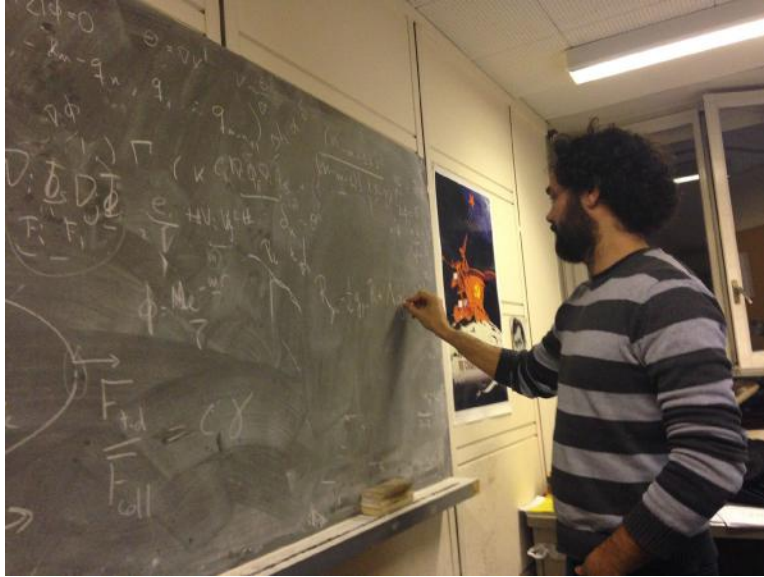


Photo by Su Wen-Chi

Not technology, but questions. Wen-Chi relates that prior to her visit to CERN, she was preoccupied with how to make “hi-tech” work. It struck her that scientists working with some of the most advanced machinery in the world were instead most interested in *questions*, and whether one was asking the “right” question. In quantum physics, theoretical research on a given topic typically precedes the experimental research by many years and the machines and apparatus are designed and built only after many years of human reflection and analysis.



Photo by Su Wen-Chi

Scale. The scale of scientific endeavour has much larger and longer proportions than most artists’ frame of reference of the “outcome” of a performance that is created by individual artists or small teams of artists in a matter of months. Wen-Chi recounted feeling very small next to massive particle accelerator machines. She was also stunned by a physicist told her nonchalantly that the linear particle accelerator project that he had worked on for 16 years had been discontinued

because it had turned out to not be successful – but that it didn't disappoint him because he saw his work as part of a much larger endeavour of a community of scientists looking for different ways to approach a question. She provides a definitive analogy for the conventions of scale in art vs science – the timeframes of art history vs the big bang.

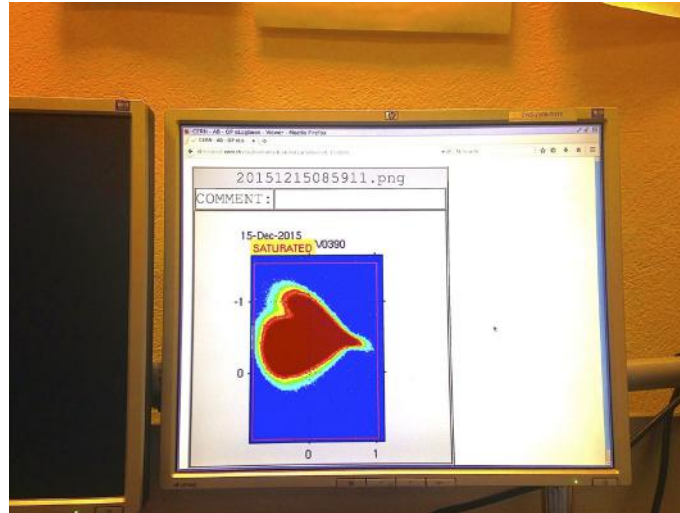


Photo by Su Wen-Chi

“Theory is when you have an idea, ideology is when the idea has you,” and is it art if a scientist draws a heart? She was struck by the scientists’ shared culture that emphasised fact and proof above belief – and certainly above aesthetics. (e.g. a scientist’s graph that happens to return results in a heart shape.) She found herself asking “what is truth?” and questioning how truths are validated.

A vocabulary for collaboration. She observed that “body” was a concept that she shared with scientists. In scientists’ terms, they would use it to describe sound or light with a sense of texture, affect, and concrete physical properties such as frequency, direction, and volume. She succinctly described it as her “job” to collect a set of such terms that could become a vocabulary to facilitate collaboration.

Big questions

She shares three big questions that she left CERN with and which influenced her work thereafter. Because “big questions trigger a big curiosity about the world.”

- 1) What is matter?
- 2) What is particle physics?
- 3) What is visible and what is invisible?

Wen-Chi describes how a central part of her artistic work after the CERN residency was to develop improvisation exercises and vocabulary for dancers/collaborators with which she could translate or communicate her personal findings on the body and technology. This turned out to be challenging as many dancers were resistant to concepts from physics because of their lack of familiarity.

Camera Obscura - Breaking down the perception of movement

The first of two hands-on sections of the workshop begins with an art and craft lesson. Wen-Chi distributes paper and tape and our group fumbles with creating our own pinhole cameras to experience the principles of the *camera obscura*. In the diffused studio lighting, we struggle to perceive and focus images.



Subsequently, WenChi invites us to stand in a line, framing our eyes with our hands to restrict our gaze to what is directly ahead of us. In this arrangement, each of us perceives a snapshot of another participant who dances past the row of us. Wen-Chi then directs us to recreate the shape or the brief action that we saw, becoming a live version of photography pioneer Eadweard Muybridge's motion study photo sequences. As a choreographic device, she then invites the original mover to rearrange the live "frames".



She then talks about her interest in the history of photography and movement, which she encountered during her New Media studies, and shows us images from her 2009 work *Loop Me* inspired by thoughts on how the machinery of the camera was inspired by the form and function of the human eye, and how photographic technology initially provoked superstitious mistrust based on belief that an image could capture a person's soul. She muses that machines can be thought of as just another type of body, with a structure, physical properties and physical experience.

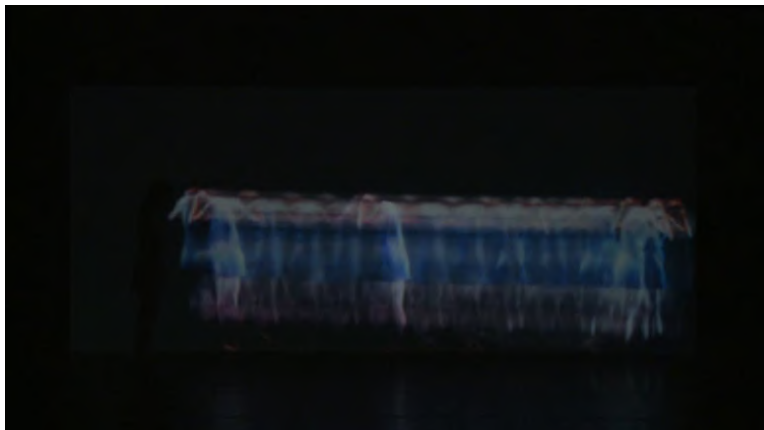
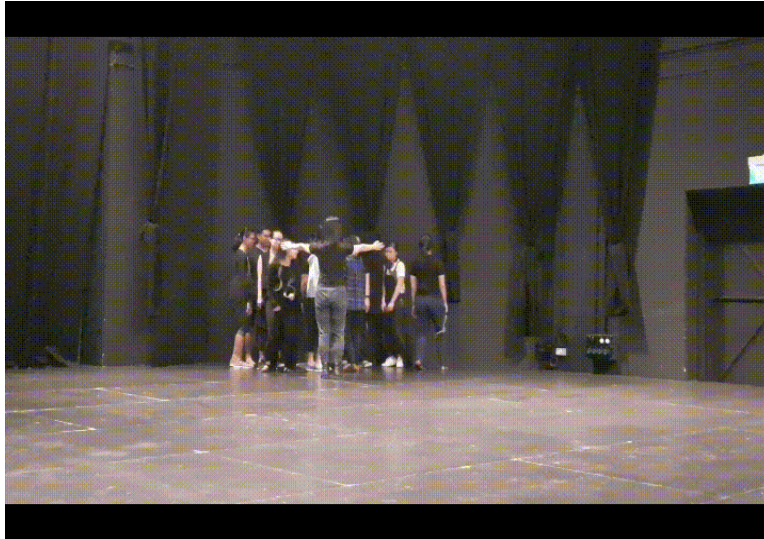


Image from Loop Me by Su Wen-Chi

She describes the two-part structure of *Loop Me*, with the first section inspired by early photography and involving her dancing live together with images of herself, and a second section inspired by the digital age where she was present only as a projection. She recounts how the latter section provoked criticism from viewers who complained that they had not come to the theatre to see a performance without a live performer - raising for her the question: Is it dance if there is no live performer?

Half and half

The next exercise is more enigmatic. Wen-Chi divides the participants into two groups. The first group is asked to walk around the studio continuously in a space that Wen-Chi is constantly reducing or expanding by half, while a second group goes into the studio foyer and calls a partner in the first group on the phone, keeping them talking with existential questions. The net effect is frenetic, especially in moments when 10 walking-talking bodies are weaving around in a space smaller than 2m². The participants look drained afterwards.



Wen-Chi describes this as a choreographic tool that she created to approximate concepts of infinity and space-time; the infinite division of space, the segmentation of our physical space and mental space, in this example represented by the splitting of one's awareness between navigating the room and a phone conversation with another participant situated in a different space. She shows [a video excerpt on the quantum physics concept of slicing the "space-time loaf"](#) and how our sense of "now" is highly individual. The improvisation exercise was an attempt to have each participant create their own time and space, or to sense the structure of time and space.

A big secret

To close the workshop, the group sits down for a debrief.

Wen-Chi returns to a reflection on how her approach to technology changed fundamentally after the CERN residency. Emerging from a period of disillusionment with the delays and resource-draining complications of “hi-tech” work, she switches instead to focus on using choreography to recognise nature’s patterns of time and space, mathematics as the language of nature, and the body as a frame of reference for the immensity of space.

Producer Mok Cui Yin asks how much Wen-Chi needs her audience to understand of the concepts behind her pieces. Wen-Chi describes her process as constructing “a big secret” with many layers - a game that she plays with the audience, where she is curious to see how much different audience members can take from the many layers of ideas that she weaves into each work. The audience cannot understand everything, but neither can they understand wrongly. She notes tangentially that recent mass media coverage of the anthropocene has increased the accessibility of scientific ideas to the general public.

Describing Wen-Chi’s work *Infinity Minus One*, dramaturg and ADN organiser Lim How Ngean comments that after this workshop, he now sees that Wen-Chi has developed a scientific dramaturgy. She explains that for this work, she worked with the dramaturgy of how we see the position of the body in relation to infinity, within a space that she attempted to create with laser light and sound. She adds that her use of technology is never about stimulating the senses. Instead she uses technology always with relevance to the concept of the work.



Image from Infinity Minus One by Su Wen-Chi

The mysteries of art and science

Wen-Chi’s workshop gives us a lot to wrap our heads around. The experience inspires me to have several separate post-workshop conversations with a few other participants, some of whom found it immensely stimulating, others quite impenetrable.

I am struck by the artifice of her innocent travelogue as a very apt illustration of her work to develop vocabularies and exercises for verbal and embodied communication, where proposing scientific concepts to collaborators and audiences who might not be as familiar

or interested. And that the most important information that we might glean from a conversation about by science might not be the science or the facts themselves, but other rich realisations or aesthetic inspiration.

Personally, it occupies me that Wen-Chi is clearly working with science in a very different way than any other choreographer I have seen. It's definitely a universe away from *Dance Your PhD*. But how does she define the role of science in this new direction in her work? I ask her this afterwards by email. Her reply:

Good question, in fact, along the way, I have been thinking about this question, especially today while I received the email from the copywriter of the festival where I'm going to present my new piece, that she tries to specify a new category for my work, which is "theater of popular science", I have a weird feeling reading it, although this is not alien for me. This happened once when I start to work on contemporary dance together with "new media art", if you are within a new media art community, you would know it's it is not easy to define this term, still until today while technology evolve so quickly. The question down to the fact, might due to the market or audience has fear not understanding it. I'm for sure not explaining science, rather I'm inspired by it. (so for sure not for the sake of popular science), I work with scientist to understand the scientific facts, but not trying to be "faithful" to the fact while making the theater performance, because I believe performing arts has its particular language and approach, science and art morph into a new way of communication. It's the same logic than I work with new media art.

Share with you one paragraph from a scientist I work with,

"藝術與科學的作用, 都在於揭露事務底層的本質, 科學設計了一套精確的符號描述真實, 藝術則訴諸直覺, 雖然有時會過度簡化或神祕化, 但這只是策略而已, 終究透過藝術與科學不斷的display truth, 大眾會打開心窗, 更深刻的反省現狀, 找出存活之道。

The role of art and science is to expose the essence of the underlying affairs. Science has designed a set of precise symbols to describe reality, while art has resorted to intuition. Although it is sometimes oversimplified or mystified, this is only a strategy, after all, through art and Science continues to display truth, the public will open the heart of the window, profoundly reflect on the status quo, find out the way to survive."

While we work together, we are not trying to pull the other into anyone's center, not on the position testing if faithful or not, but rather offer/share enough information/discussion for the team to be creative while facing unknown, his statement might be too simplified for what art is, but I appreciate that he respects art as well as science, and also he pins down a fact that science and art have similar purpose in displaying truth and finding ways to survive. For me, the performing arts are full of mystery, so does science, and I'm finding my own way to be with them.