Special Contribution

Kavli IPMU Arts Society

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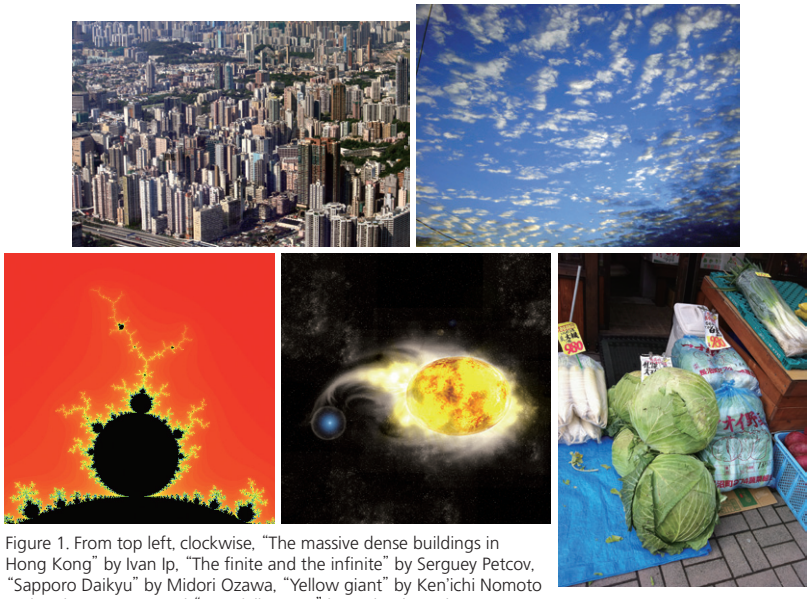

Figure 1. From top left, clockwise, "The massive dense buildings in Hong Kong" by Ivan Ip, "The finite and the infinite" by Serguey Petcov, "Sapporo Daikyu" by Midori Ozawa, "Yellow giant" by Ken'ichi Nomoto and Melina Bersten, and "Mandelbrot set" by Toshitake Kohno.

At Kavli IPMU, the "Kavli IPMU Arts Society" organizes art exhibitions a few times per year as a social activity involving researchers and administrative staff. I am one of its promoters, and I'd like to introduce its activities so far as well as some recent interesting Art and Science programs in Japan and overseas.

From January 21 to 28, 2013, "Science and Everyday Life Series 2 Masses and Sizes" was held in the Kavli IPMU building. The program consisted of a wall exhibition of 58 images contributed by 17 researchers and staff members, a wine and cheese party, and an installation piece produced from the contributed images. First, let's have a look at some of the contributed images (Fig. 1). You can find images from our everyday life, and images from research activities are shown together. Once you take a look at all of them, you can find some relationship between them unexpectedly. This is the main point of the exhibition.

Actually this program was planned with two ambitions. Basically, researchers tend to make a group of people from the same country, or in the same research field. One ambition was to provide these researchers with opportunities to get together. The other ambition was to bridge the deep valley that separates extremely specialized Science from our everyday life. For each exhibition in this series, therefore, we ask people at Kavli IPMU to contribute theme-based images. "Pattern" was the theme for the first exhibition and "Masses and Sizes" is the theme this time. There are two focuses in these exhibitions. One is that we deal with images from both research work and everyday life. The other is that we choose neither linguistic medium nor mathematical formula, but rather image, as the method of expression. Although you might see that this trial is acrobatic, let

Figure 2. A view showing the wall exhibition. There were 58 contributions from 17 people, including special contributions from Professor Toshio Kuroki, the WPI Program Director.

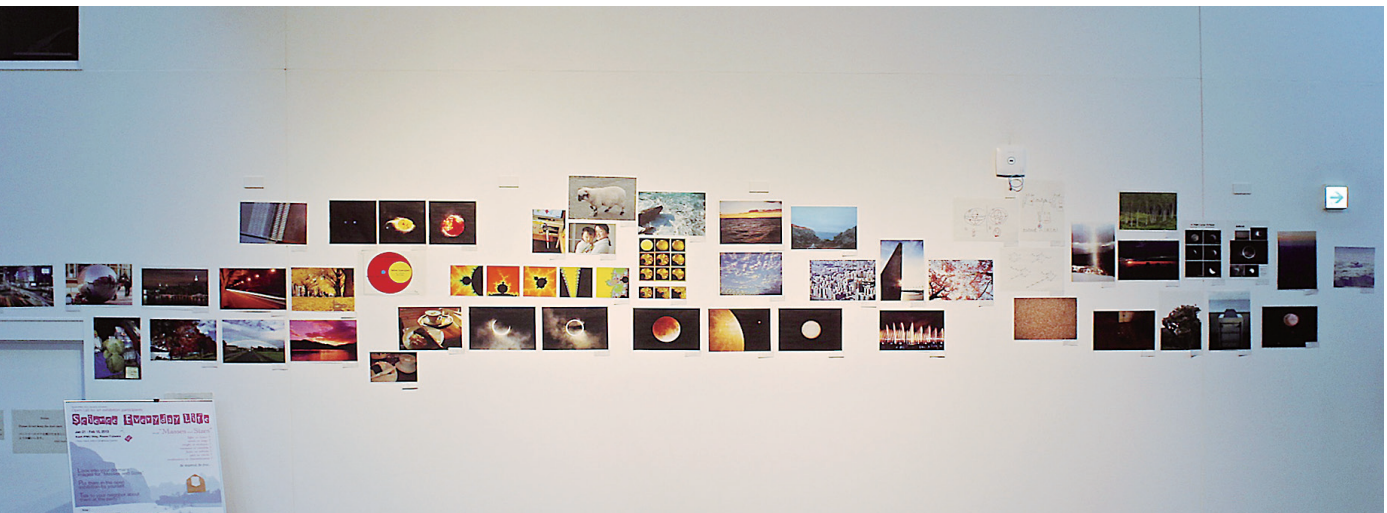

Figure 3. A view showing the installation piece. With 14 iMacs, 9 kinds of slideshows and 2 kinds of index movies were looped continuously.

me remind you that *Morphologie*, developed by Johann Wolfgang von Goethe in the 19th century, for instance, focuses on the form of objects.

For the wall exhibition, contributors themselves printed out their images, and posted them on the specified wall with captions prepared in a prescribed format. In the first exhibition, it was Arts Society members that printed out and posted all the images. For this time, however, a different procedure was adopted in anticipation of encouraging more people to join this program. During the first couple of days after the announcement, the wall was empty except for my contributions, but the posted images increased day by day, and at last, they filled the wall (Fig. 2). At the middle of the exhibition period, we invited researchers and staff of Kavli IPMU to a wine and cheese party. Many people attended and enjoyed chatting as they appreciated the exhibition. It may well be that they were interested in the day-by-day change of the display on the wall. In addition, Arts Society displayed an installation piece on the floor of the entrance hall of the Kavli IPMU building, consisting of 14 outdated iMacs showing slideshows of the contributed images (Fig. 3). Actually, we sorted these images into nine categories[*1] characterized by "sphere," "light," "fractal," and so on, and made nine slideshows corresponding to these categories. Each slideshow was looped continuously with an iMac, carefully pairing iMacs together for two related categories (Fig. 4).[*2] Whereas it was fun for you to have a look at all the images on the wall and think about the relationship among them, here was another kind of fun for you to see images inspired by the suggested gentle relationship. Fortunately, through the courtesy of the organizer of an international workshop that was held simultaneously with our program, we had a chance to explain about the exhibition to the workshop participants. It seemed that they also enjoyed the exhibition.

Now, let me tell you how to enjoy this exhibition. First of all, you

Figure 4. A closer view of the installation. "Fractal" (left) and "Discrete" (right).

can enjoy attractive photographs by hidden photo lovers at Kavli IPMU. Then you can guess the relationship between the images, which intimate the concept, "Masses and Sizes."[*3] You can also join the party and share thoughts with others. You can think about the difference between the wall exhibition and the installation piece...and so on. Naturally, contributing images to the exhibition would double your fun.[*4]

It seems that the exhibition was completed satisfactorily with our aim achieved. The party stimulated lots of conversations (Fig. 5). I also

Figure 5. A view of the wine and cheese party. Cheese seemed to have disappeared "in the blink of an eye."

Figure 6. A view of the wall exhibition at "Science and Everyday Life, Series 1, Pattern." 16 people contributed.

Figure 7. (Left) A view of an installation piece at "Science and Everyday Life, Series 1, Pattern." Approximately 200 m^2. Wood, paint, inkjet print on paper, 3 iMacs, projector, DVD player, illumination, 2 stand lights.
(Right) A wood piece represented the XYZ axes. It was a kind of frame in which a photo was mounted with its caption. The "frames" were installed in such a way that neighboring images had some "relation."
iMacs and a projector looped continuously a slideshow of the contributed images. The illumination represented the flow of time and its direction.

heard that a group of researchers admired the installation piece as they chatted casually, which then led to discussion on their research.

So far, the Arts Society has organized several exhibitions.

・"Science and Everyday Life, Series 1, Pattern", March to April, 2011 (Figs. 6, 7)

・"Searching for the other physics -an art exhibition at a science lab- vol. 02", June 29 to July 11, 2010 (Fig. 8)

・"Searching for the other physics -an art exhibition at a science lab- vol. 01", February 3 to 27, 2010

What is the role of this trial of the Arts Society at the Kavli IPMU? In these years, it seems that a new tide has been appearing to bring Science and Art closer together. It may be that our attempt also contributes a bit to this tide. Let me introduce some examples. In September 2012, some administrative staff members of the Kavli IPMU visited research institutions in the US. They reported that they were impressed by the excellent support services and, in addition, the implementation of art programs. In particular, the Simons Center for Geometry and Physics in New York has its own Advisory Board for the art program and organizes exhibitions in its building, Artists in Residence program,[*5] and the like. CERN, a high-energy physics research center in Switzerland, started the Artists in Residence program in 2011, in partnership with Ars Electronica, which organizes one of the most famous international media art festivals annually in Austria.

How about scientists themselves? How do they think about Art? There was a bit unusual program on the Riken public open day in 2013. It was a sort of performance piece: real, serious scientific discussion by physicists was "displayed" in front of the audience. This program was coordinated based on the idea of a physicist, "Science is a kind of creative activity. Just as with Art, people can feel and gain something from Science, even if they can't understand its entirety."[*6] An event called "Cocktail and Science" is another example. This event has been held at a cinema in the city center of Copenhagen since 2010. At this event, scientists give talks, bartenders serve a fantastic menu of craft cocktails and experimental musicians play. The event is organized by a physicist, in cooperation with the Niels Bohr Institute, who says that, "A new definition of art: a person's individual science. A new definition of science: an art with concrete boundaries. Common to both is the method: an endless attempt to describe concepts/ideas/ phenomena either subjectively or

objectively with increasing accuracy which can either be vouched for individually or collectively."[*7]

There is a notable new approach from the Art side, too. Central Saint Martins in London, one of the hottest colleges in the art world, newly opened up an MA Art and Science as a postgraduate course in 2011. Although Art and Technology or Design Science is popular, Art and Science in a fine arts course is totally new.

I'd like to point out that it is common to each of these attempts that the scientists and artists concerned have worked for themselves. Although many art exhibitions have traditionally been held at art museums and the like, with the theme of "Science," it was generally a third party that worked for the exhibition,[*8] for instance, in evaluating and arranging the exhibits. In contrast, it can be said that the attempt by the scientists and artists concerned who try to re-identify their activities by placing themselves in the respective framework is a new trend that has not been observed in modern times, as Science and Art goes their own ways, and the split between them has grown wider and wider.[*9]

Science or Art had been a sort of attempts with which we were eager to touch something called "Truth" or "Knowledge" in some way. Science, however, has achieved a great success in modern times, and because of this, the responsibility of the scientific community has become too heavy a burden for the community alone.

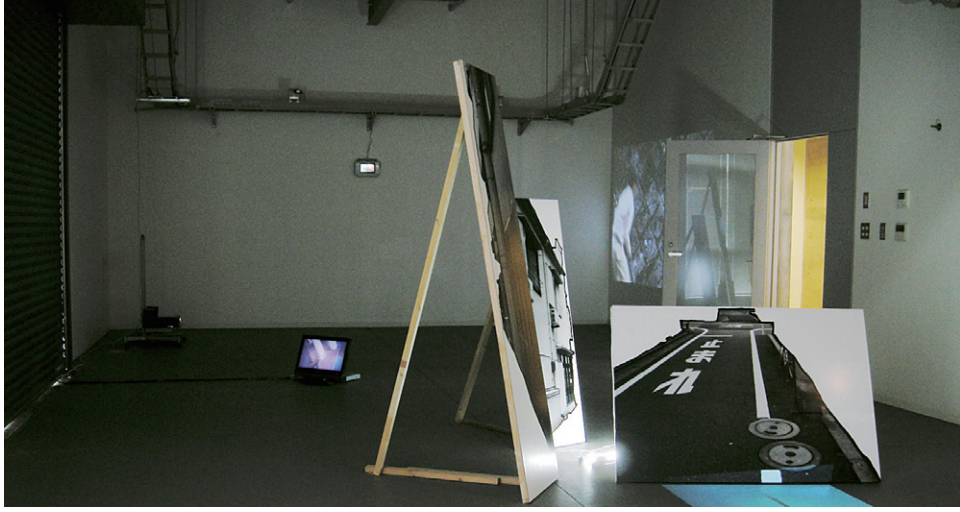

Figure 8. A view of "Searching for the other physics -an art exhibition at a science lab- vol.02" exhibition. It was a group show concentrating on moving images. 4 young artists (including myself) from Japan and the UK showed their works. It was open to the public.

Art, on the other hand, has kept extending its framework, and it led to the present situation in which no one seems to find what Art is any more. Amidst such a conflict, I am excited at the thought of catching a glimpse of the new horizons that may again lead us to the "Knowledge."

At the Kavli IPMU, researchers are challenging the mysteries of the universe by means of Mathematics, Physics, and Astronomy. It may be said that these are attempts to inherit the learning before the modern era, and they have high affinity with Art, Philosophy, and Aesthetics. The Arts Society will continue with various activities bearing in mind possibilities to collaborate with other institutions, hoping that this approach will help activate the research activities at the Kavli IPMU, and furthermore, to contribute to "Knowledge."

Finally, I would like to express my sincere gratitude to Director Murayama and former Administrative Director Nakamura for giving me this opportunity, to the administrative staff for giving me a boost, and Professor Mukohyama, the organizer of the workshop, for his generous permission for me to explain the exhibition to the participants.

*1 The nine categories are "the one," "dual," "multi," "sphere," "light," "plane," "The Sun," "fractal," and "discrete". Some images belong to more than one category.
*2 We used an iMac for "the one," 2 iMacs for "dual," and 3 iMacs for "multi." For "dual" and "multi," the respective slideshow was duplicated and played in synchronization.
*3 "Masses and Sizes" can be broken down into the terms like light/heavy, small/big, single/multiple, constant/variable, finite/infinite, part/whole, continuous/discontinuous.
*4 Unfortunately, images contributed from research work were fewer than expected. I suppose that many of researchers think images from research work would be boring to be shown at exhibitions. One of the most interesting points of this program, however, is to take a look at many kinds of images. We hope more images from research work will be contributed next time.
*5 Host institutes invite artists for a certain period (for instance, a few months), and artists create and exhibit some pieces there.
*6 http://d.hatena.ne.jp/D-brane/20130422
*7 http://www.jacomearmas.com/scicom.html
*8 Nowadays, a lot of art exhibitions, both domestic and overseas, are held at museums, based on the museums' resources.
*9 In ancient Greece, Science and the humanities/social sciences were parts of a study. Up to now, they had gone their own ways and the split between them had grown wider and wider. During the Renaissance, Science and Art were close, but now, where Art also treats the same subjects as the humanities/social sciences, there is also a big split between Science and Art just as there is between Science and the humanities/social sciences. But of course this doesn't mean that there has been no relationship between Science and Art. In modern times, there have also been myriad art pieces that were created by viewing Science as a source of inspiration.