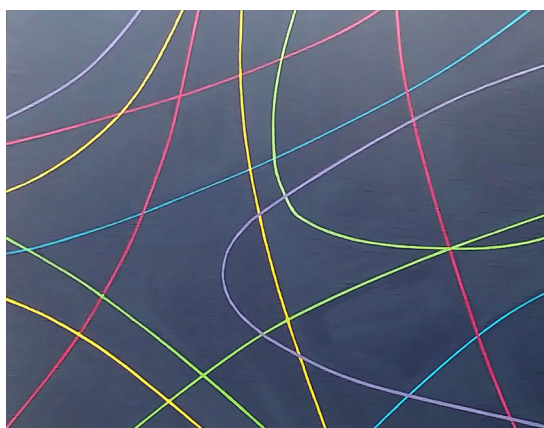


## Studio Now



This month, I am planning to finish the Forgetting series and continue with the research on lineal work of the Cognition series.

## The explanation of my works



<Cognition – 10 Cause and Effect, 2021>

This piece is 'Cognition – 10 Cause and Effect'. My idea starts with a premise - 'humans can not know the cause of all phenomenon'. Even the ones that we think we know, we only know within the 'given fact'.

In this piece, the canvas is the world that humans can cognize. The lines drawn could be the paths of the planets in the universe, or they could be the movements of the atoms. However the beginning and the end point does not exist within the canvas – simply because they can not be known. They have existed before humans have and we humans have no way going about to find out how they first started moving.

But can we only predict the cause and effect with the things that we can spot in the present world. So despite the fact that the effort to find out about the cause and effect without knowing the beginning could be meaningless, we continue trying in hopes of finding the reason behind our existence. I am meaning to try more research on these lineal work.

*For detailed image, go to webpage on the bottom of next page.*

## Kim's Essay

### Thoughts on Relative Time

Physicist Carlo Rovelli – in his autobiography ‘The Order of Time’ - presented the general theory of relativity by A. Einstein as a reason to support why the time does not flow. He goes on further by arguing that the ‘past, present, and future does not exist,’ and the reason being that all men exist in different time and space. Just within the solar system, the sunlight shining on us on Earth is approximately sunlight if 8 minutes and 19 seconds ago. Thus even if the Sun run out, we would not be able to find out right away, but 8 minutes and 19 seconds after. Within Earth, there is also time difference. While it is 2PM of January 1st in Korea, it would be midnight of the first of January in New York.

Then what about in micro world? In micro world, the time value goes from micrometresecond ( $10^{-6}/s$ ), nanosecond ( $10^{-9}/s$ ), picosecond ( $10^{-12}/s$ ), femtosecond ( $10^{-15}/s$ ), attosecond ( $10^{-18}/s$ ), to zeptosecond ( $10^{-21}/s$ ) - which humans can not even identify, What about, in contrary, macro world? The size of the universe measurable to humans is 93 billion light years and the basic measure of distance is 1 light year. It is hard to image using light as a measure of 1 year, but one out of 93 billion is relatively even smaller than 1 second – which is one out of 86,400 seconds of one day and it is unimaginable how short of a moment that would be in macro world. So out of curiosity, I tried calculating the minimum measure value of the micro and macro world compared to the humans’ one second.

Micro: Zeptosecond( $10^{-21}/s$ ): 1,000,000,000,000,000,000,000/s

Assuming a second of zepto is equivalent of that of a human second, it would take approximately 2.7 trillion years to reach a second.

Macro: A distance of 1 light year is approximately 9,470,000,000,000km. Assuming humans can move 5km per hour, they would need 225 million years.

For humans, one second is just an instant. It is shorter than the time needed to breath in and out. For the universe, 1 light year is also just an instant. So humans on Earth, from the universe’s perspective, is probably not even noticeable – being such split moment. Just like us not being able to notice the time of micro world. But relatively speaking, for those living in the micro world, one second of a human being could mean forever. Just like humans not being able to relate to the idea of light year while looking at the universe.

So how do we describe the existence of human beings that live in between the micro and macro world?  
From what can we find the value of human existence?