

Being and Time¹

May 18, 2089, 6:47am

The morning air is blowing on my skin through the wind. It is still a little bit chilly. My 5-month-old dog, who was adopted two years ago, actively runs around the bowl of rice and looks at me. After feeding my dog, I went out to the backyard to water the roses that were about to bloom, and the basil and mint that I used to make dinner last night. I feel like roses lost the day before yesterday, but it's already about to bloom again. Similarly, my 74-year-long journey through life feels like it was just yesterday. Time has a way of swiftly moving forward. Coming back inside, I head to the bedroom. On the edge of the bedroom, there is another door with a small screen on which I can scan my bacteria to open the memory room where my past moments are living. Thankfully, today I didn't forget to scan it before washing my hands. First, I checked the temperature of the room as a whole. Then the temperature of each

¹ Dear, reader.

Thank you for being here and I would like to let you know that some of these footnotes are the voice directly from me to you. So, here you are. What does 'being' mean to you? And what does 'Time' mean to you? I hope my fiction can give you to some texture and dimension on this question, not the flat answer. Please come back here again after you read!

bacterial cloud. Afterwards, I organized the cartridge of the artificial nose for today's use and fed the bacteria storing my past moments with a liquid mixed with agar powder.

I remember when I was about to graduate from college, this room began to be installed in private homes in earnest. Since the mid-1990s, microorganisms have been studied as potential media for data storage,² scientists succeeded in encrypting books with synthesized DNA in 2012,³ and in 2017, they successfully stored video files in living microorganisms.⁴ Later in 2023 -*probably I was around 8 years old-*, scientists developed a "biological camera" method that could be retrieved again in DNA by adding a specific barcode recognition function to the data.⁵ When I entered high school, data storage technology using bacterial DNA, a microorganism, began to be commercialized in earnest and developed into a new storage technology that can store pictures and videos containing memories with portable VR devices. -*I am pretty sure it was called smartphones before.* Since then, with the release of artificial organs, linkage functions have been added. Currently, the most popular linked artificial organ is the artificial nose which captures olfactory function, which was released in 2035 maybe, because the olfactory memory is the most powerful when we recall it.

"We are pleased to share our new organ tool, which is an artificial nose. We believe that our artificial nose, which you can capture olfactory memory, will bring you to that moment really powerful. Unlike other senses, odors indirectly pass through specific thalamic nuclei before reaching the

² Emily waltz. "Scientists Store Video Data in the DNA of Living Organisms."

³ Emily waltz. "Reading and Writing a Book With DNA."

⁴ Emily waltz. "Scientists Store Video Data in the DNA of Living Organisms."

⁵ Michael Irving. "Biological Camera' Stores Data in DNA of Living Bacteria."

emotional and memory-processing regions in the brain. This targeted neural connection gives odor-evoked memories a unique potency, making them more emotionally charged than memories triggered by other cues. Therefore, this olfactory memory through our artificial nose is a really unique artificial organ tool because it elicits highly emotional and vivid recollections of past experiences.”⁶

-Excerpted from 2036 articles

The new bacterial cloud has evolved to be stored in a private location rather than portable. Portable VR devices have the advantage of being able to accurately store memories of the moment and are convenient, but the bacterial cloud can be modified depending on my bacterial characteristics. The smell of the moment stored in her granddaughter's first elementary school entrance eight years ago transformed over time as bacteria grew and replicated in many forms. My granddaughter will grow up like this in time. - *Also, depending on the type of bacteria, there is also a cloud that can store odor memories that I want to preserve completely, so sometimes I use them.*- It feels like it has a different meaning than charging a portable VR device, even though it's a little annoying to feed my bacteria and care about the room environment every day. Maybe it is because I manage what's alive itself. Like the roses, basil, and mint I watered this morning. **The fact that my past moments are living together in the space I live in gives me a feeling that I was alive and alive.**

However, the storage of individual living bacteria has derived new types of crime. Just when this bacterial cloud was born, the news reported daily DNA robberies and prevention. In the past, when the possibility of human cloning was

⁶ Rachel Herz, "The Role of Odor-Evoked Memory in Psychological and Physiological Health"

tested using stem cells, they traded stolen individual DNA on the black market, which sharply increased the likelihood of biometric crimes and illegal cloning of life.

Because this new crime became serious, using the bacteria cloud, it should have its own security room - *which became called the memory room*. This machine is only half the size of my 5' 3" height, it doesn't take the space too much. So most people install extra walls in their existing room. When this law became really strict, my parents made the memory room in the living room because it was the biggest space in our home. However, whenever we invited the guests, we felt it was not secure. So we moved to the kitchen, but because of the environment of the kitchen, such as the warmth from fire or other bacteria that could be mixed, it was really hard to maintain. Finally, we decided to make our memory room in the parent's bedroom and my bedroom by installing the wall. Our bedroom was not that big, we had to make it separate. Since then, I've been installing it in the bedroom whenever I move somewhere. I remember after I moved out, my parents used my bedroom as a whole memory room. Until now, the most common method used by people is to convert rooms that they don't use very much into memory rooms, and if there is no separate room, it is mainly to install a new wall in the bedroom. A security system that can be opened only if I have bacteria and fingerprints that match me at the same time is essential.

'Wait, did I water the plants today?'

I think I did. These days, I often forget about the moment. Just in case, if I have time, I should go check it out at the hospital. After feeding all the bacteria currently stored and checking the temperature once again, the alarm text popped up on the screen.



'Please renew your **Legacy Of Olfactory Memory (LOOM)** form
by this month.'

It is time to rewrite my 'Legacy of Olfactory Memory' form for deleting my bacteria cloud and decide which bacteria cloud I want to donate to the memory museum after I die. Since the biometric crimes, the government recognized individual bacteria as private property along with individual copyrights and enacted the law to delete them if the owner dies legally, and must select a legal representative in case the owner couldn't delete them by himself. It can be renewed whenever the owner wants, but it must be renewed once a year, and if the renewal record is omitted, it cannot be used that year. The scanning system for opening the memory room will be automatically locked.

When I was thinking about which memory I want to donate after I die, I found my memory from three years ago in the Chain of Bacilli bacteria cloud. Research from the past allowed us to recognize and recover barcodes in data to be stored in DNA has contributed greatly to helping us find accurate odor memories in the bacterial cloud. Moreover, after it becomes interactive with the artificial nose when odor molecules enter the cartridge, the place and time are entered into the molecule, and the input information becomes the bar code of the moment and is stored as bacteria. - *Often modified bacteria have some errors.* The Chain of Bacillus cloud begins to store odor memories from the bottom in the order of storage. This borrows the characteristic that bacteria in deep ocean and riverbed sediments divide every 10 to 10,000 years compared to bacteria that can divide in 20 minutes⁷, so the old smell memories accumulated below gradually reduce

⁷ Linh Anh Cat, "Bacteria Has Metabolism 1 Million Times Slower, Eats Centuries-Old Food."

the rate of division, minimizing the deformation of odor memories and allowing them to be maintained for a long time. I have three Chains of Bacilli Bacteria clouds, and I saved this memory in my hobby clouds, which collect cooking experiences.

Even though my husband, James, passed away in an accident three years ago, the smell that saved the moment we made lunch together on the weekend about two weeks before his accident is still swimming in the clouds. After he passed away, whenever I see my bacteria's movement storing smell memories with him, it makes me feel our perspective can be reversed if the cell is no longer viewed as an autonomic survival machine, but as a being for whom life means something and who experiences this meaning as feeling.⁸ After James's funeral, I deleted his smell memories saved in his bacteria and donated what he wanted to leave his smell memories in the world because he chose me as the person in charge of his bacteria cloud after he died. This bacteria cloud is a machine but they were born and died. **They are living with us and his bacteria was his perspective of his life. Now, his existence lives only in my perspective.**

As a portable VR device in daily life, it has the function of creating a VR hologram character by detecting a human in photos and videos from the device's storage. It created James's VR character so I used it once. It really acted like the person who I know and when I talked with that character I felt it was him. But... I don't know how I can describe that feeling exactly but it felt like merely providing empty vessels to be filled with the thoughts, behaviors, and emotions that Generating AI deems appropriate. This VR character function has been debated because of the ethical issue of it creates the behavior of a dead person about it disenfranchises the dead, simulating their physical likenesses while

⁸ Weber, Andreas. "The Biology of Wonder: Aliveness, Feeling, and the Metamorphosis of Science."

disposing of the identities and minds that previously inhabited them.⁹ A law has been proposed that bans the creation of newly dead people, which is still under discussion by AI-generating companies, arguing that other media records, such as photos and videos, should also be made illegal if they were already made at the time the person exists.

It was clear that the reproduced VR character was more lively. Because I was able to have a direct conversation. But the uncomfortable feeling, like wearing shoes with little stones, made me hover in reality and imagination rather than immerse myself in the moment. However, although recollection through smell is ambiguous, it feels like **using my perception as a window to illuminate the moment.**

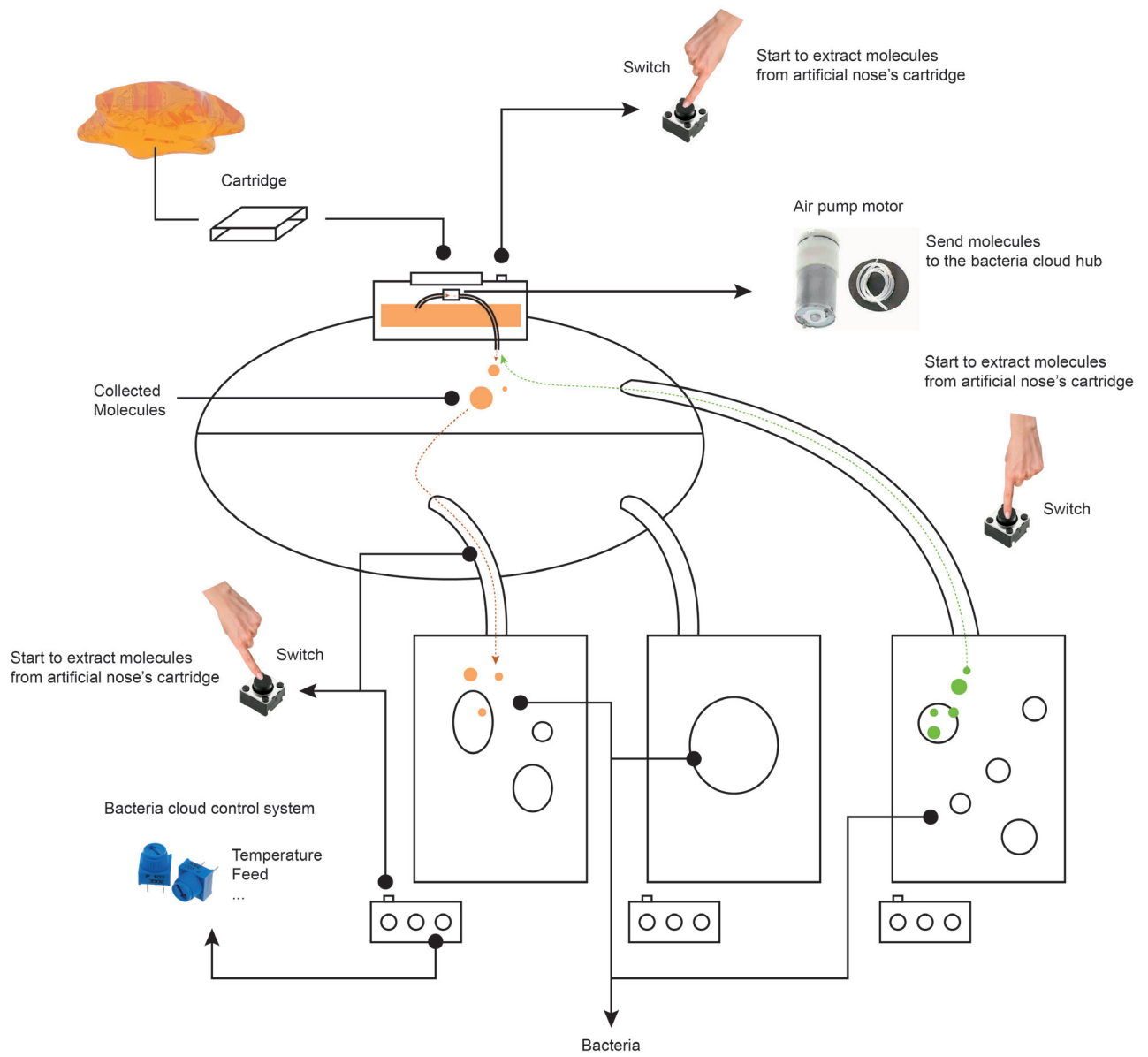
#With James #2086 #Mint spaghetti

When I type with who, when, and what - the mint spaghetti we tried new for lunch menu - on the screen, the exact date of saving and what I took note of at the time are exposed on the screen with the bacteria which saved this smell memory. After confirming that this bacteria was correct, I converted the molecular extractor which was setting 'from cartridge to bacteria' and pressed the start button.

'Start the extract from bacteria to cartridge'

After alarming the process, it extracts again as a smell. Molecule information - which is the smell that I captured that moment - extracts again

⁹ Stein, Jason-Patrick. "Conjuring Up the Departed in Virtual Reality: The Good, the Bad, and the Potentially Ugly."



from the bacteria - which I saved the smell memory that time- and converts as a smell in the bacteria hub and saves it in the cartridge. - *It doesn't have to be a cartridge. I usually use jars so that I can smell it longer. But I wanted only small amounts this time so I extracted it to the cartridge. When we use a cartridge for smelling, it is only a one-time smell experience. Open it and smell it. And it will be gone.-*

It smells like rain. I feel it was raining that day. Oh, yeah, it was raining. I remember that I was a little bit annoyed at James because he didn't clean his shoes well so all the mud on his shoes made the steps on our kitchen floor. I feel I can smell the mud too.

November 10, 2086, 11:23am

"James, can you PLEASE clean your shoes?"

"I did! My shoes are clean!"

"No, I can see the mud on the floor!"

"Where!! Those mud are from the mint which I got from our backyard!"

Wait, the mint smell was modified. We didn't like that much the mint spaghetti we made that time because the mint flavor didn't mix well with the tomato sauce. But now, the mint and tomato sauce smell match well. It is still cool and has a little bit of a bitter smell of mint but I guess when the mint smell and the tomato's smell combined and through multiple cloning processes, this smell became a sweet and sour smell. When we tried this spaghetti, his face was entertaining, haha. I remember we gave up on finishing that noodle and just ordered tacos for lunch. Wait, but why can I smell tacos in this memory?

November 10, 2086, 01:37 pm

"James, Is my artificial nose turning on the light right now? I can feel the vibration!"

"Oh, I'm sorry. I didn't know that your artificial nose was on my chair. I think I captured it accidentally when I was sitting.."

"Then I can't save the exact smell of the mint spaghetti!"

Taco. To others, it might be just a taco smell, this smell is very meaningful to us. When I just got a new job, maybe I was around 31 years old, I was waiting in line at the taco truck during my lunchtime.

February 21, 2046, 12:03 pm

Winter is still here but the light of the afternoon's sun adds warmth. It's been two weeks since I started my new work here. When I think about when I just graduated from college and started looking for a job, it seems that human labor - *both physical and intellectual* - is still recognized compared to the present, even though labor automation has progressed a lot. However, now that the boundaries between machines and human possibilities have become unclear, I can only get a job by proving that I am superior to machines. This is not a guaranteed job either. My place can be replaced at any time by AI, which develops and learns remarkably day by day and this is why this is my fifth job since graduation.

Ironic. The wages we can get while working have increased very much, but the door to opportunity has narrowed that much. In order to get through that narrow door, we have to prove that we are better than others, and this perception

probably became the purpose of my life. I have to prove to myself that I have that much value to society depending on my salary. I spent most of my youth's education until college - *pretty sure it was not only me.* - to prove I'm better than AI. I'm worth it to be hired. **Growth is not simply an economic phenomenon, but a cultural concept, linked to the vision of the future as infinite expansion.**¹⁰

Due to these changes in the labor market, it is now difficult to find a street food culture that is served directly by human labor, such as taco trucks, which were sometimes seen when I was young. This is because installing an automated machine like a taco vending machine is much cheaper to maintain, so they don't want to serve it with human labor at a loss. So I was envious to see my friends who shared their experiences of seeing these taco trucks.

'And yes, I just got this rare opportunity too, I should post it!!!!'¹¹

I don't have time to think about whether I want to eat tacos now.¹² Before this taco truck left, I had to quickly record this moment and order tacos to get evidence that I was there. Looking around, the people who received the tacos

¹⁰ Yang Jonghoe, "Colonial Legacy and Modern Economic Growth in Korea: A Critical Examination of Their Relationships."

¹¹ Have you ever posted your moment on social media? If anything, how does it relate to the fact that you exist there at that moment?

One of my friends went to Japan. After she came back, she was stressed out about choosing her travel photos for posting. I said "Then you don't have to post them." She answered, **"Then I can't prove to others that I was there if I don't post them on social media."**

I'm not trying to say this in a dichotomous way like it's positive or negative. It's just a question of the way of how you prove to be alive.

"Social comparison takes place in our everyday lives almost all the time because people are easily exposed to or can effortlessly obtain information of others through various routes; e.g. by directly interacting with others and by consuming media."

- Sang Yup Lee, "How Do People Compare Themselves with Others on Social Network Sites?: The Case of Facebook,"

¹² Because this is a **HAND-MADE** taco!

they ordered were busy capturing tacos and taco trucks with a portable VR device. Those who had already recorded it were busy sharing it online, so the tacos they ordered were just sitting next to them.

'Should I ask them to borrow that taco for a second?'

I trembled with anxiety that the waiting line would not decrease quickly and that the taco truck would leave. Sighing in anxiety that he might not prove this moment, he diligently recorded a taco truck as a portable VR device. I didn't use it because it was not a direct proof to capture it with an artificial nose, but when I took out the cartridge of my saved nose and tried to capture the odor memory, someone tapped me on the shoulder and talked to me.

"I'm sorry to disturb you. I just wanted to tell you to stay calm. I keep this moment for you. What a waste to waste your artificial nose cartridge for this moment when your choice will be proved by others."

"Then what should I do?"

"Take your time and breathe in and out first.

Then take the new cartridge out of the storage on your wristband for this moment and put it in the back of your artificial nose.

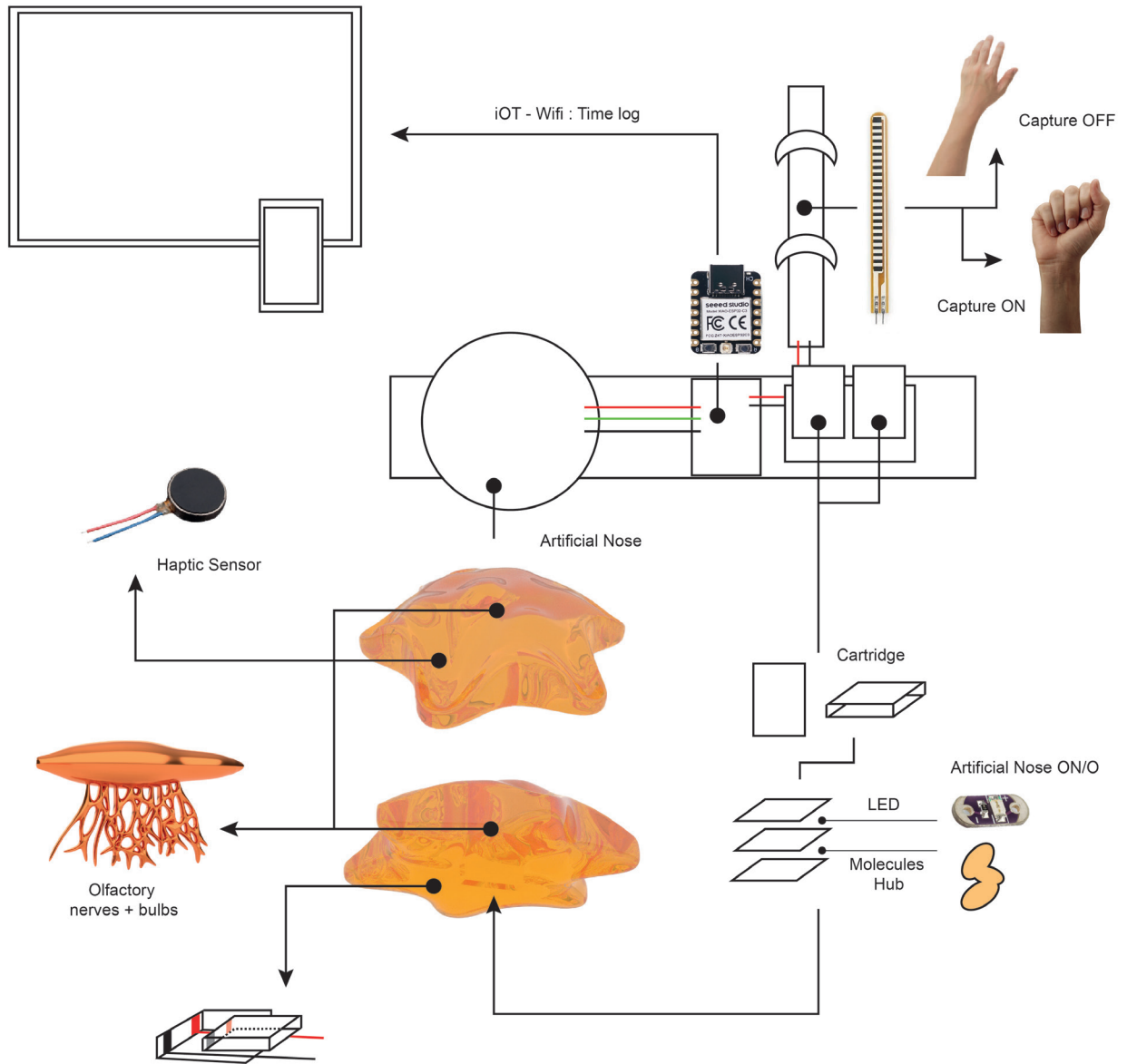
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And focus on this moment you want to keep.

Put your hands wide open, bend your fingers one by one, and come toward the artificial nose.

The vibrations from the nose along with the rattling when all the fingers wrap around it will tickle your gripped fingers and the surface of your palms.

Whirrrrrrrrrrrrr



From vibrations, the artificial nose tells you that this moment of your choice becomes a smell and is absorbed into the olfactory bulb through olfactory nerves. Taco trucks you're looking at, the body odor of a Taco chef sweating from the heat of the fire, the people lining up, the breeze you're feeling now, and the perfume I'm wearing now.

- *"By the way, your perfume smells like cucumber ocean!"* -

Molecules, derived from their own beings, become the smell of their existence and settle in your memory.

It's okay if you don't remember this moment exactly.

From the moment you made up your mind to capture this moment, the moment you used your artificial nose to capture it and put the cartridge back in the storage made this moment even more special for you.

There's no moment just for this moment. It's just your actions, decisions, and the emotion coming together to make this moment."

Ah.

Sometimes, I felt I was missing something in my life. And that it was.

"By bringing your hand out to this world, you begin to communicate with the world. The sense that starts at your fingertips and another sense of smell that comes through it is the way you experience and understand this world and the intersection between you and the world."¹³

¹³Merleau-Ponty maintains that the body itself is a "knower", being "the fabric into which all objects are woven", and, at least in relation to the perceived world, "the general instrument of my 'comprehension'". The body, then, is the subject, **a meaning-giving existence, pre-conscious and pre-personal. It manifests me to the world, and puts me in the world by means of my various senses.**

- Malighetti, R. "Merleau-Ponty's Concept of the Body."

The surroundings began to catch my eye. Some people are using artificial noses to capture images between people busy taking pictures with a portable VR device. After recording the moment, they appeared to enjoy the taco itself. Maybe it's because their records are for them. This is because odor memories, even though they are shared, simply evoke memories of their experiences for those who have not experienced the moment and do not convey what I have experienced as they are.

The result was that we ate the same tacos, but the process of our choice was different. The process of his choice was the process of exploring his existence by him and my choice was the process of proving my existence by others. I've been focused too much on proving myself to others. I missed focusing on who I am and what I truly feel.

The smell of tacos to me was the first time I met my husband and the first time I started thinking about who I really was and how I was alive in this world.¹⁴

May 18, 2089, 3:21 pm

"Do you remember this smell memory?"

This memory contains the smells of the day when the family went on a picnic before the daughter's college entrance. Smelling the green grass scent and avocado sandwiches prepared in the morning reminded me of the red dress my daughter wore that day. My daughter's warm sunlit cheeks, where excitement

¹⁴ **Ok. Here I really want to ask you.**

Are you alive? How can you explain you're alive, except for the fact that you breathe and are biologically alive? Do you exist? What does it mean to this world that you exist?

and fear coexisted at the thought of living alone apart from the home to enter college, turned red like that red dress. It was a day when I felt sorry and proud to think that a newborn baby, who was barely using the word "mother," is now making his way as an adult. If it was a special day, maybe it was. If it was just a day like that, maybe it was too. It was less special than the day I heard that my daughter passed the college and more special than the day I took a walk in the park alone. **Or maybe the fact that I captured this moment made this moment special.** When the occasional wind made my hair dance, I picked up my artificial nose in the warm sunlight. The vibration I felt when I put on the cartridge and grabbed the artificial nose with my fingers just for that moment. Back home, press the button to extract the smell memory and move to the bacterial cloud of my choice. The smell memory in molecular form is stored and digested by my bacteria. I feed and check the temperature every morning so that this smell memory coexists in my bacteria and grow together and live their lives. At that time, the process of the moment and the subsequent processes are combined to make this moment of smell memory special that I captured.

"Yes, I remember. I lost my favorite pillow that day."

But maybe not to my daughter. Now my daughter, who is raising her own daughter, had a pillow she'd been fond of since she was a child, and I must have accidentally thrown it away while helping her pack her stuff for moving out.

September 10, 2057, 12:03 pm

Because of college, it was a time when I had packed to move out of my home where I lived with my parents from when I was born until now. Today,

before I left, my family decided to go on a picnic in a park near the neighborhood where I often went when I was young. My mother helped me pack while my father packed for the picnic. A week later, I'm leaving this house where I've lived with my parents.... It doesn't feel very real. I've been packing up in a hurry these days, but I left my favorite pillows on the living room table so I could take them with me. The feel of the pillow, which has been with me for 10 years, was already optimized for me, and the smell of our home detergent and the unique scent of my childhood permeated me, so I always hugged and slept on days whenever I had a bad day. I put my clothes and blankets in the suitcase and I went out to the living room to take my pillow back.

"Mom, did you see my pillow?"

"Yes, I'm laundering right now. I'll pack for you after the picnic."

"Sounds great."

"By the way, this trash bag is for the stuff you want to throw away. I'm going to throw it away soon so if you have any stuff you want to get rid of it, put it in now."

"Ok, I'll do it now."

I put on my cherished red dress to go on a picnic with my family after organizing and throwing away things I won't use anymore. Even though there was intense summer sunlight, the cool wind that signaled autumn helped our family's picnic successfully. After we back home and I was packing again, I heard my mother calling me.

"I'm so sorry sweetheart.... I think I put your pillow in the trash bag by accident... I couldn't find it in the dryer."

"What?? Where is the trash bag!"

"I already threw away that trash bag... I'm so sorry."

May 18, 2089, 3:21 pm

For me, this smell memory is more intense about forgetting my favorite pillow and crying my eyes out than the memory of a family picnic. Sharing smell memories with my mother is to bring the times we shared to this moment and reopen them.

"Did you remember this smell? You captured three weeks ago."

"Mmm... No.. Do you know why I captured it?"

"You lost the way back to home that day. So you wanted to capture the smell of the way home. You don't remember?"

"No... But I remember this smell! You were probably around 13 years old. We went to the smell memory museum together!"

"Haha yes, I remember. We had a really good time there."

"How about this smell? We went to the picnic before you left for the college!"

"Well, yes. Because we just shared that memory!"

It was probably around this time. Even though my mother had been sharing the present with me, that's when her time began to stay in the past.

June 24, 2095, 11:18 am

Technological advances have made tons of diseases curable, but as with everything, the word "perfect" is hard to exist. Even if a treatment is invented, new aftereffects and other diseases are likely to be derived. My mother started to think about how to prepare for her end after my father's death and often shared it with me.¹⁵ My mother said she wanted to spend her last day at her home. If it becomes impossible to treat at home now that the guardian is only me, a child, she probably has to move to a hospice, but my mother said she doesn't want it. I think she is afraid that, even if it's okay now, things will get worse and another illness will make it impossible for my mother to do something on her own.

"Sweetheart, If the moment comes when I have my last moment, please help me bloom and wither away naturally like my favorite flower, the rose. In my ending scene, I don't want to go back to sleep after getting up in a hospice bed and only rolling my eyes. I don't even want to inject the nutrients I need to just be alive through a hose connected to my nose. And I don't want to dispose of the excrement from the silicone tube connected to my organs with the help of a nurse."¹⁶

As my mother's memory begins to deteriorate, I stop by her whenever I have time and take out smell memories together and help her remember those moments for a little longer.

"I really like this smell memory. It was the day when I met your father."

¹⁵ **being-towards-death.**

- Heidegger, M. "Being and Time."

¹⁶ This is a true story and seeing my grandmother experience this was pretty much most of my teenage years.

"Oh, I remember this smell too. It was the day when you said mama for the first time. Your dad and I were struggling to make the baby food. I can smell the baby powder here."

"Is it the smell of the day we planted the new rose in our backyard? I remember you stepped on the rose we planted haha. You were a really active kid."

Whenever she smells the smell memory captured by her in the past, my mother's face looks comfortable.

Maybe these smell memories are her Nostalgia¹⁷.

We shared the time together and are now sharing the time again. The shared past has changed over time to suit **each individual's breathing¹⁸**, but in some form, the essence will remain for each individual. And it is the bridge between the past and the present and it allows us to be in the future.

May 21, 2097, 10:33 am

It's been 6 months since my mother passed away because of complications. The roses in my mother's favorite backyard are about to bloom again around the season. Today is the day that I promised my daughter to visit the memory museum. She seems so excited. I guess because it is her first visit. As soon as we arrived at the museum, we received protective suits and gloves given out before entering the building to prevent contamination of the memories of the smell of donations caused by personal bacteria.

"Mom! Look! It's like a Tetris game here! It's all in square glass!"

¹⁷ I am from Korea. And in Korean, the word "향수(hyang-su)" can mean either perfume(scent) or nostalgia. To me, this is one of the key reasons why I used the smell memory in my fiction.

¹⁸ **It could be you, it could be your bacteria cloud and it could be environment around you.**

Each donated smell memory is double-stored with another glass membrane to protect after storage in the least deformed bacterial cloud, and only the sample smell memory is extracted and connected to a hose for visitors to experience and taken out of the protective glass. The museum is donated in a variety of ways, from smell memories containing individual daily lives to smell memories that have experienced major social issues. My mother donated memories of the smell of the first day the artificial nose was released to the museum. The museum was built in the year when the artificial nose was first released, so the mother's smell memory was located in the first section. I put the smelling artificial nose on my nose for smelling.

The smell of excitement at the thought of using an artificial nose.

The smell of mold-mixed glue was popular as a sustainable building material at that time.

The smell of the mixture of unfamiliar grass perfume - my mother's description, which is attached to the prevention square glass, said it was her favorite perfume when she often wore it in college.

And the smell of early spring roses and mints which I used to smell from my mom since I was young.

She was there, She is here, She will be here, in my smell memory.¹⁹

¹⁹ Thank you for your journey to here. Do you remember the first question in the beginning?

What does 'being' mean to you? And what does 'Time' mean to you?

Are you ready to answer it?

From, wishing your smell memory makes your present.

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