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Baekseujin reporter

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Why did an eighty-five year old Oxford scholar leave f or Korean Mountain Temples?



2 years ago, Denis Noble (right) met Monk Jeong Gwan at Cheonjin hermitage of Baek Yang temple located in Jeonnam. When professor Noble asked to listen to the sutra chanting, Monk Jeong Gwan gladly accepted his request. Professor Noble said, "I woke up at 4AM to meditate while listening to Monk Jeong Gwan's sutra chants. It was one of the most enjoyable moments in this trip."

'Why do we have painful happenings in our lives?' 'How should one manage one's mind?'

There was an unresolved question even for an eighty-five year old Oxford Scholar. The destinations that Denis Noble, an Emeritus Professor of Physiology at Oxford University, chose to tour with his lifelong questions were Korean Temples. The trip started from Bongeun Temple of Seoul, and ran through a variety of mountain temples. The journey of professor Noble was recently published in the book 'Old questions' (Dasan publishing), and is currently being produced into the documentary 'Noble Asks'.

Professor Noble is a pioneer who integrated mathematics and computers with physiology. In 1960, when even the word “computer” was unfamiliar, he developed a virtual heart that implemented cardiac cells and muscles for the first time in the world. Using the virtual heart, testing side effects of new drugs at low costs and developing new therapies became available. It offered an immense innovation to the physiology field. He received the British Commander Medal (CBE), and is a Fellow of the British Royal Society.

He has been invited all over the world to lecture at places such as Yale University and Tokyo University, under the theme of life. He argues that "our lives are like music. If our genes are like the pipes of a huge organ, our lives are the beautiful sounds played using those three billion pipes. In 2006, he published a book called 'The Music of Life', in which he discovered similarities between Buddhist philosophy and his research, and started to delve into Buddhist philosophies.



If one ages and starts to think that one does not have many more days to live, one would naturally focus on two questions. What is life, and what is death? Personally as a scientist, I had many more follow-up questions. What am I? What is this flower? What is that tree? (Old questions, p. 300)

When a Korean documentary production team suggested this trip, he was delighted to have the opportunity to do something he had been dreaming of for a long time. "I was looking for a common point between modern science and Buddhism, and I thought the trip was a chance to get closer to the truth of life".

"I traveled to Korea for a month in May 2019, to find myself attending the morning meditation at 4AM, then sweeping the grounds of the temple. I discussed the ideas of reality, and learned meditation methods. I experienced Temple food prepared by the Monk Jong Gwan, who starred in Netflix 'chef's table', and found myself gathering vegetables and preparing for cooking in her garden."

We (Chosunilbo reporters) were able to meet him through the video meeting app 'Zoom'. His eyes lit up and the voice sounded so clear that it was difficult to believe his age.

(Q)As a foreigner aged eighty-five, perhaps it would not have been easy to travel to the temples?

It was not so difficult. I am used to visiting East Asian countries, and I have experience in sitting and sleeping on the floor. The only hard thing was that I could not drink coffee in the morning! (laughs) I was glad that I could at least drink green tea.

(Q)Did you have a hard time sitting in lotus position? It's considered difficult even for some Koreans.

It was okay as I had experienced it from the Buddhist temple in Oxford. It was harder to stand up than to sit down. In Korea, when people do sutra chants or refer to Buddha, they stand and sit to show respect. But, as an eighty-five year old, when I stand up my knees were uncomfortable ... (laugh).

(Q)Is there a particular characteristic of Korean temples?

I often encountered the Diamond Sutra, which I had never heard in Thai temples. Theravada Buddhism [Thailand, Burma, Sri Lanka] is a little different from Mahayana Buddhism [Korea, China, Japan], but the common tradition is big enough to cover for both. In my opinion, what is common is that Buddhism can show how to help people, to behave less selfishly, to be less troubled, and how to be together with each other.

(Q)Can you introduce some of the conversations you had with the monks?

At Sil-Sang temple I shared with Monk Do Beob an interesting conversation about Monk Wonhyo (7th century monk in Korea). Monk Won Hyo wrote a poem on the relationship between seeds and fruit during his commentary on the Diamond Sutra. Seeds are causes of fruits, and fruits are the causes of the seeds, they cannot be independent. Even in the seventh century, his idea is similar to the relativity perspective of modern biological science that emphasizes processes of life, not a fixed reality. The seeds and fruits are not looked at as independent objects, but rather, depend on each other. The endless circulation of seeds and fruit is comparable to the circular causation of DNA and the human (organism).



(Q) Was there something else that was different from what you had expected?

Before leaving, I thought that the monks, surrounded by nature, might be distant from actual people living in the world. But at least in the Korean temples I visited, they are not. Particularly, when they were meeting ordinary people who visited temples, I was able to see the sincerity of the monks who worried about the problems they had.

(Q) Did you talk to those who visited the temples?

Everyone was wondering why a British scientist came here. At Sil-Sang temple there was a young child who was about twelve, I remember. I believe he had a developmental disability, and of course there was the language barrier, but he always came to hold my hand and so we just held hands and communicated togetherness. As you all know, it would not be possible to do so nowadays with the problem of corona viruses that may be transmitted. Now that I think back, before the pandemic, simple contact like that enabled me to feel that I was in contact with the people.

(Q) When was the best moment of the trip?

When I visited Monk Jeong Gwan, I asked whether I could listen to her chanting. So we woke up at 4 o'clock in the morning and I heard her chanting the "Diamond Sutra" while I was in meditation. Before we left, we drank tea. Like Buddhist teachings, we were never alone and it was a chance for me to realize that we were together.

(Q) You cooked temple food with Monk Jeong Gwan, did you?

I went to the forest along with Monk Jeong Gwan, where she has a garden that grew vegetables. I learned how to gather the right amount that we can consume without hurting the plants. Among her dishes, the mushroom dish was the best. I missed the food when I came back to England, so I make it using maple syrup. Oh, I should have explained why she never uses onions and garlic. It seems that Buddha thought that it would arouse the monks' sexual desire!

(Q)What was the reason for you to be interested in Buddhism?

About 20 years ago, while writing a book called "The Music of Life", I realized that what I was thinking is similar to Buddhist ideas. I think that life is not a fixed entity like a DNA or brain, but a big system. Multiple elements such as proteins, cells, organs are tightly connected and affect each other. In Buddhism, there is a similar answer to the question 'What is life?'. Everything is a continuing process, and there is nothing that permanently exists, which is very similar to the Systems biology that I have been studying.

(Q)How did you start studying Buddhism?

I looked for books, and I talked to a world-class Buddhist Scholar Richard Gombrich. I also visited a Thai temple in Oxford and conducted meditation. I found that it was of great help in the painful moments of my life.



Professor Denis Noble and his colleague Professor Earm of Seoul National University/ Old questions

Through helping my wife's long years of medical treatments, I came to realize what was important. It is the fact that you have to take care of

yourself to take care of others. To help my wife and help myself, I had to find a way to overcome the emotion of despair at the end of a long follow-up period.

Professor Noble's wife passed away in 2015, suffering from medication side effects and complications for a long time. As he watched her suffer through medical treatments, he said that there were moments that he was really angry: 'Why should I suffer this pain?' 'Why did this happen to me?' But that was not the end of his pain. He was open to the harsh criticism when he opposed to the idea of 'selfish gene' by an evolutionary biologist Richard Dawkins. In his book 'selfish gene', Dawkins claimed that "human beings act according to the desire of genes". On the other hand, Professor Noble said, "The genes are merely molecules, and cannot be selfish. We are not born selfish. I have argued that we can control our own bodies and are not a prisoner of selfish genes. "

(Q) Did you find a way to reduce the pain?

I experienced very painful times in recent years: Not only the pain of losing my loved ones, but also a long time of watching her in pain. I meditated for 30 to 45 minutes every morning. I was able to concentrate on the really important things in my life through meditation. I was then able to neglect the pain, and have the strength to endure the next day.

(Q) What are the truly important things in your life?

Every time I meditated, I told myself "this pain is not really me". So where is the original 'I'? The original 'I' exist in relationships with the people I love and the friends I love. Focusing on the relationships in my social contexts, I did not suffer so much. Pain may not be completely dispelled, but Meditation not only helps you to face a tough moment, but also raises the compassion for others and make you more friendly around those you are with.

(Q) When you do meditation, do you not have distracting thoughts?

There is no need to try to stop them from happening as it happens naturally. But you can let it become less important to you. You just sit down and stay focused on the same thing, such as as a flickering candle or the sound of a bell.

(Q) What was the evidence of opposing the idea of 'Selfish Gene' by Richard Dawkins?

The impact of "genes on our behavior, health, and diseases is the biggest topic for biologists today. But as shown in the results of many studies, most of the genes are found to have only low associations with our actions. The genes do not control us, and we can control our genes. For example, what should one do to be a good athlete? If the muscles are increased through long training, more proteins in cells are also made and

can then grow more muscle. Good athletes change the molecules that control genes at the end of the training. It is important to note that humans are not simply determined by genes. It is in our hands to live our lives. Do not blame everything on the genes.



Professor Dennis Noble speaking about medical research that utilizes AI technology in the 2019 Asian leadership conference. / Chosun Ilbo DB

Denis Noble was born as a son of a poor tailor in London, UK. He was the first person who went to university in his family. He was the eldest son of four brothers. Because his father passed away, he had to take care of his siblings while continuing his studies. as his mother had to make money outside. After he was admitted to the Medical School of the University of London, he started to be recognized as a notable 'genius' through his publications in the journal Nature about his study on heart muscle and heart rate at the young age of 23.

(Q)Why did you change career path from a medical doctor to a biology researcher?

I had initially dreamed of being a doctor due to the influence of my family doctor. My family always admired the doctor. So when I decided to study medicine, my family were very pleased. But the professors I learnt from continued to stimulate me to find the answer to the question “what is life”. I realized in this process that the path that I really wanted was biolmedical research.

(Q)But it would not have been easy to study on the computer at that time

In the 1960s there was only one computer on the University campus, and the biological science students were not easily allowed to use it. At that time, the computer was much slower than today's desktops or laptops. There was no Windows operating system, and there was no keyboard or screen. I had to make a computer program by punching holes on a paper tape using a machine called a teleprinter. People had to put the paper tape into the computer and then wait for one or two hours until the result is came out. It was difficult to learn how to do coding, and it was more difficult to use the machine to obtain mathematical solutions to a problem.

(Q) Did you create a virtual heart with that primitive machine?

Yes, that is right. I made a virtual heart to study the heartbeat. I developed a mathematical models, and I found out on how the cells make heartbeats.

(Q) At the early days of the virtual cardiac study, you didnot get enthusiastic response, did you?

At that time, computers were very expensive, and it was difficult to get permission to use them. I searched for mathematicians and computer experts alone and learned programming all by myself. But I could not give up. Heart beats can be observed even in the embryo stage. I thought I was looking for the birth of life since I was looking for the secret of the heartbeat.



Two professors who are learning the Zen Meditation from Monk Geumkang (right)/ Old questions

We are now facing the largest crisis in the history of mankind's civilization. Many of the world's young people are angry about the tardy

response toward the serious problems caused by the misuse of the planet. I think they are right. It's right to be angry enough. This is their future. (Old questions, p. 269)

(Q) You have emphasized education through active face-to face communication introducing the 'tutorial' class, which is the way of one professor discussing with 1~3 students. Where should the education go in the pandemic crisis?

Teacher and student discussions in Oxford's tutorial classes are very similar to the training method of monks. The purpose is to make a student think for themselves. I think this purpose is also applicable in the corona period. In the same way, 'The Diamond Sutra' in Buddhism has a similar role. The Buddha asks 'Do you think you understand the world? Think again. You do not understand enough.'

(Q) Why was the UK able to get ahead in Corona vaccination?

Oxford University and AstraZeneca's outstanding researchers were able to make a vaccine very quickly by working 24 hours without rest. One of them is also one of my old students. It was thanks to these great scientists that the UK was able to go ahead first in vaccination. The second is because AstraZeneca has supplied the vaccine at an affordable price without considering its profits. Finally, I think it was more thanks to the UK's national health service that the vaccine has been distributed efficiently.

(Q) What will the Corona Pandemic be like in the future.

I think that humans should learn to live with a variety of viruses. There will be different kinds of viruses, not just one virus, and the variants will be quick to develop. It will be difficult to live in a world in which coronavirus is fully dispelled. Like a flu vaccine, we may have to be vaccinated every year.

(Q) What comfort can you give as a scientist to those who suffer from CoronaVirus?

Corona Virus is a global challenge. Many countries around the world must cooperate. We must fight against viruses through collaboration, not through fighting each other. If the variants continue to spread in India or Brazil, for example, the world will also be suffering from the virus again and again being unable to control the virus. Another thing is that in the light of my personal experience, meditation will be a great help when you lose a loved one. Furthermore, Korean Buddhist practices are a great tradition for coping with the suffering of mankind. Please keep the tradition of Korea, which has been maintained for more than 2000 years. My travel to Korea was a beautiful time that allowed me to take a break from the complex world, and I was privileged to be able to meet and discuss with your great teachers.

Professor Noble introduced one story which led him to encounter and explore Buddhism. About 2500 years ago, one of Buddha's disciples asked "What happens after death? Is the world eternal?" Buddha replied, 'if someone receives a wound through a

poisoned arrow, it is pointless to ask "Who shot the arrow **at** me?" or "What wood material was used for this arrow, and what is the poisonous ingredient on the arrowhead?" What would happen if you spend all of your time on these questions?' The disciples answered. "The poison will spread through the whole body." The Buddha said again. "We are already wounded by the poisoned arrows. Are you going to treat the wound, or to wonder who shot the arrow?"

Professor Noble said, "Life is always anxious and in pain, but it is not our essence." "We are involved in the pain and we are able to solve the problem. We can find a way to remain untouched even if the pain does not completely disappear. " There was a carefree smile as if he got an answer to the old questions.

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